Virginia Polytechnic Institute and State University

ANNUAL FINANCIAL REPORT

2018-2019

Contents

FINANCIAL HIGHLIGHTS

For the years ended June 30, 2015—2019 *(all dollars are in millions; square feet in thousands)*

	2014-15	2015-16	2016-17	2017-18	2018-19
REVENUES, EXPENSES, AND CHANGES IN NET POSITION					
Operating revenues	$ 965.0	$ 1,020.6	$ 1,031.5	$ 1,099.9	$ 1,160.4
Operating expenses	1,259.5	1,315.4	1,364.7	1,423.4	1,467.9
Operating loss (1)	(294.5)	(294.8)	(333.2)	(323.5)	(307.5)
Non-operating revenues and expenses (1)	316.0	318.0	355.2	363.5	360.0
Other revenues, expenses, gains or losses	51.8	98.4	42.0	51.8	78.0
Net increase in net position	$ 73.3	$ 121.6	$ 64.0	$ 91.8	$ 130.5
UNIVERSITY NET POSITION					
Net investment in capital assets	$ 1,112.1	$ 1,163.8	$ 1,201.3	$ 1,273.2	$ 1,326.1
Restricted	$ 178.9	$ 209.8	$ 224.5	$ 212.5	$ 214.9
Unrestricted (2)	$ (74.3)	$ (35.3)	$ (23.5)	$ (226.4)	$ (150.7)
ASSETS AND FACILITIES					
Total university assets	$ 2,369.2	$ 2,503.3	$ 2,528.4	$ 2,632.9	$ 2,757.2
Capital assets, net of accumulated depreciation	$ 1,625.1	$ 1,666.9	$ 1,680.5	$ 1,731.9	$ 1,786.0
Facilities—owned gross square feet	11,209	11,394	11,374	11,669	11,735
Facilities—leased square feet	1,913	1,922	1,993	2,067	2,204
SPONSORED PROGRAMS					
Number of awards received	2,189	2,291	2,423	2,533	2,364
Value of awards received	$ 296.6	$ 278.1	$ 304.3	$ 336.8	$ 323.7
Research expenditures reported to NSF (3)	$ 504.3	$ 521.8	$ 522.4	$ 531.6	N/A
VIRGINIA TECH FOUNDATION					
Gifts and bequests received	$ 98.5	$ 93.2	$ 145.1	$ 130.4	$ 137.0
Expended in support of the university	$ 166.5	$ 184.9	$ 164.6	$ 179.6	$ 170.0
Total assets and managed funds	$ 1,508.0	$ 1,510.6	$ 1,726.4	$ 1,891.0	$ 2,107.1
ENDOWMENTS (AT MARKET VALUE)					
Owned by Virginia Tech Foundation (VTF)	$ 713.7	$ 705.6	$ 795.7	$ 849.9	$ 970.1
Owned by Virginia Tech	96.5	130.2	191.9	287.0	378.4
Managed by VTF under agency agreements	7.9	7.5	8.6	9.5	9.5
Total endowments supporting the university	$ 818.1	$ 843.3	$ 996.2	$ 1,146.4	$ 1,358.0
STUDENT FINANCIAL AID					
Number of students receiving selected types of financial aid					
Loans	12,253	12,282	12,430	12,947	13,075
Grants, scholarships and waivers	18,242	18,409	18,746	19,493	19,484
Employment opportunities	10,437	10,934	11,201	11,193	12,717
Total amounts by major category					
Loans	$ 161.5	$ 165.9	$ 171.4	$ 181.3	$ 191.9
Grants, scholarships and waivers	182.0	194.8	203.6	215.6	227.7
Employment opportunities	81.3	85.5	87.2	89.5	92.3
Total financial aid	$ 424.8	$ 446.2	$ 462.2	$ 486.4	$ 511.9

(1) The university will always be expected to show an operating loss since significant recurring revenues are shown as non-operating. Major revenue sources reported as non-operating include state appropriations, gifts, and investment income. These revenue sources are used for general operations in support of the learning, discovery, and engagement missions of the university.

(2) Unrestricted Net Position is negative due to the implementation of GASB 68 in 2014-2015 and GASB 75 in 2017-2018.

(3) Total research expenditures reported to the National Science Foundation for the current year were not available at publication date.

UNIVERSITY HIGHLIGHTS

For the years ended June 30, 2013-2019

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 [(1)]	2018-19 [(2)]
STUDENT ADMISSIONS							
Total applications received (including transfers)							
Undergraduate	23,101	21,738	23,504	25,095	27,890	30,299	35,002
Graduate	9,544	9,622	9,474	8,916	8,635	9,250	7,523
Offers, as a percentage of applications							
Undergraduate	69.0%	69.6%	70.2%	70.9%	68.7%	68.1%	63.6%
Graduate	31.2%	31.1%	29.4%	33.1%	31.8%	32.5%	43.5%
New enrollment, as a percentage of offers							
Undergraduate	40.7%	42.0%	39.1%	41.0%	36.2%	37.8%	32.9%
Graduate	62.5%	60.9%	60.3%	67.3%	68.9%	58.8%	49.3%
STUDENT ENROLLMENT							
Enrollment by classification							
Undergraduate	23,859	24,034	24,247	25,384	25,791	27,193	27,811
Graduate and first professional	7,228	7,171	6,977	7,279	7,379	7,247	7,039
Enrollment by campus							
Blacksburg campus	28,836	29,071	29,173	30,598	31,090	32,304	32,704
National Capital region	1,018	925	884	861	842	799	768
Other off-campus locations	1,233	1,209	1,167	1,204	1,238	1,337	1,378
Enrollment by residence							
Virginia	21,478	21,319	21,145	21,583	22,093	22,715	22,925
Other states	6,975	7,038	7,066	7,521	7,370	7,875	8,079
Other countries	2,634	2,848	3,013	3,559	3,707	3,850	3,846
DEGREES CONFERRED							
Undergraduate (first majors)	5,604	5,722	5,890	5,940	5,952	6,111	6,835
Graduate and first professional	2,041	2,163	2,021	1,973	2,149	2,120	2,130
FACULTY AND STAFF [(3)]							
Full-time instructional faculty	1,422	1,427	1,443	1,479	1,520	1,554	1,948
Other faculty and research associates	2,083	2,263	2,418	2,505	2,554	2,711	2,783
Part-time/temporary faculty	249	238	218	236	220	230	231
Support staff	3,509	3,519	3,467	3,425	3,404	3,390	3,433
Total faculty and support staff	7,263	7,447	7,546	7,645	7,698	7,885	8,395
Percent of instructional faculty tenured	61%	62%	61%	60%	57%	55%	54%

(1) 2017-18 Admissions data updated to reflect changes in methodology.

(2) Virginia Tech Carilion School of Medicine data included, beginning with 2018-19.

(3) 2018-19 Faculty and staff definitions updated to align with Integrated Postsecondary Education Data System (IPEDS) guidelines.

Message from the Vice President for Finance and Chief Financial Officer

Fiscal year 2019 will be marked as a transformational year in Virginia Tech's history. The university gained significant momentum on multiple strategic initiatives. On November 13, 2018, Amazon Inc. announced the selection of Crystal City in Arlington, Virginia as the coveted location for its second headquarters. The landmark economic development opportunity, poised to bring approximately 25,000 jobs to the region, will significantly alter the landscape of the region and the state. Virginia Tech was a principal partner with the Commonwealth of Virginia in its successful bid to attract Amazon HQ2 to Northern Virginia. A key linchpin of the state's HQ2 application package was the creation of the Tech Talent Investment Program to significantly increase the number of graduates in Computer Science and related fields. Virginia Tech officials were partners with the state in the development of sustainable enrollment and funding models in the higher education portion of the proposal. As the largest producer of engineering and STEM-related graduates in the state, Virginia Tech is well positioned to play a crucial role in delivering on the commonwealth's vision and commitment for the Tech Talent Investment Program.

Virginia Tech announced the development of an Innovation Campus in Northern Virginia in November 2018. Integrally related to the development success of the Tech Talent Investment Program, the $1 billion new campus is envisioned to serve as the innovation hub to deliver graduate education in computer science and computer engineering and to support expanded research, partnerships, and graduate education programs and new partnerships with private sector businesses. The Innovation Campus will be located two miles from the Amazon headquarters, and is envisioned to generate up to one million square feet of space to house private companies, start-ups and public partners and provide opportunities for collaboration. Virginia Tech and the state each will contribute $250 million towards the construction and operation of the campus. The university is in its strongest financial position as it embarks on this monumental opportunity.

M. Dwight Shelton Jr.

Propelled by the momentum created by the Innovation Campus and strategic changes to the admissions process geared to provide accessibility to a wider range of students, Virginia Tech received an unprecedented number of undergraduate applications acceptances for the Fall 2019 semester. The university expects to welcome approximately 7,500 to 7,585 freshman students for Fall 2019, a 15 percent increase from the original goal. While the enrollment increase is considerably more than anticipated, the university is implementing strategies and programs to provide the high-quality academic and student life experience expected at Virginia Tech. The incoming student class also reflects progress towards the university's strategic goal of expanding access to underrepresented students. First-generation students are projected to increase by 48 percent, along with significant increases in African American students (28 percent), Hispanic/Latino students (49 percent) and students who identified as two or more races that indicate African-American (21 percent). Tech also saw increases in key areas such as Pell-eligible students (27 percent) and veterans. Currently, 36 percent of Virginia Tech's student population come from under-served or underrepresented communities. With the steady annual progress in enrolling under-served students, the university is on a path to reaching its goal of 40% by 2022.

Virginia Tech is deeply committed to its land-grant mission. In addition to expanding access to a high-quality Virginia Tech education, the university is dedicated to maintaining the affordability of such education. For Fall 2018, the university continued its slowing trend of tuition increases, implementing a modest 2.9 percent increase for undergraduate students. The total cost of education (including room and board) for a Virginia resident undergraduate at Virginia Tech for 2018-19 was $22,554 placing the university 16th among the state-established peer group of 24 national public institutions.

In a significant action regarding affordability, for fiscal year 2019-20, the Virginia General Assembly approved optional funding to support "Resident Undergraduate Affordability." Allocations from this pool were granted to public universities in Virginia that committed to maintaining tuition and mandatory Educational & General (E&G) fees for in-state undergraduate students at the same levels as in 2018-19. The university accepted the General Assembly optional funding program, holding in-state undergraduate tuition and fees level with the prior year, and receiving $6.3 million in additional general fund support from the state.

In addition to minimizing the tuition and fees increase, providing competitive financial aid packages to students is a crucial component for making a Virginia Tech education affordable. Virginia Tech has consistently increased the total institutional aid to students over the past decade. For fiscal year 2019-20, the university plans to allocate approximately $5 million in additional resources, the largest one-year increase in university history, towards financial aid programs. This increase brings the total institutional support for student financial aid to more than $55 million in 2019-20. These additional resources will enhance the university's signature financial aid program, Funds for the Future. The program, designed to mitigate the impact of tuition and fee increases for low- and middle-class families, was enhanced for Fall 2019 to provide 100 percent protection from tuition and fee increases for returning students with a family income of up to $100,000 (up from $80,000 in the prior fiscal year). In addition, the university's Presidential Scholarship Program will provide full four-year scholarships to 85 incoming resident students from first-generation and underrepresented student groups in Fall 2019, growing the total enrollment in the program to more than 330 students.

In fiscal year 2019, Virginia Tech continued to provide leadership on another strategic research collaboration with potential for long-reaching impact. Launched in 2018 with the commonwealth and other Virginia universities, the Commonwealth Cyber Initiative (CCI) is a research alliance with a vision to build a statewide ecosystem of cyber-related research, education, and engagement that will position Virginia as a global leader in cyber security. The 2018-20 biennial state budget seeded the project with a $25 million appropriation. Since CCI's inception, Virginia Tech was asked by the commonwealth to serve as an anchoring collaborator throughout the visioning and implementation process. The university has committed a total of $1.4 million throughout 2018 and 2019 and expects to invest another $2 million in 2020, while also covering CCI's central administrative functions, such as payroll and procurement. The university worked with the General Assembly during the 2019 session to ensure the ongoing nature of this funding. As a result, this alliance has great potential as the state leverages its competitive advantage to address the challenges of the next generation.

Virginia Tech has built a robust research environment with a diversified portfolio of sponsored project funding. Over the last 20 years, the university has sustained strong growth in total research and development expenditures (R&D) as reported in the NSF Higher Education R&D HERD survey. For fiscal year 2018, Virginia Tech reported over $531.6 million in research expenditures, an increase of $9.2 million or 1.76 percent over fiscal year 2017 totals of $522.4 million. The university ranks 48th in R&D expenditures among all research universities for fiscal year 2018. The university anticipates reporting a further increase in research activity for 2018-19.

During fiscal year 2019, Virginia Tech undertook a comprehensive campus-wide engagement to develop the next strategic plan for the university. Building on President Sands' Beyond Boundaries vision, the new strategic plan titled "The Virginia Tech Difference: Advancing Beyond Boundaries" was approved by the board of visitors in June 2019. The new plan sets the trajectory for achieving the university's vision for becoming a comprehensive global land-grant university by affirming and advancing the institution's vision, mission, and core values; defining university priorities; and outlining the goals and milestones for achieving each priority. The plan establishes four overarching strategic priorities: Advance Regional, National, and Global Impact; Elevate the *Ut Prosim* (That I May Serve) Difference; Be a Destination for Talent; and Ensure Institutional Excellence. Each strategic priority has goals and specific measurable milestones outlined to assist colleges and departments to develop strategies and plans to align with the overall university strategic plan.

As Virginia Tech embarks upon implementing the bold vision and strategies laid out in the new strategic plan, the university's financial position is stronger than ever. In fiscal year 2019, Virginia Tech received $266.2 million in General Fund appropriations for its academic division, cooperative extension and agricultural experiment station division, student financial assistance, research, and Corps of Cadet programs. This represents an increase of $3.1 million over the fiscal year 2018 budget. General Fund appropriations represent 21.6 percent of the university's Educational and General (E&G) budget or 17 percent of the total university budget. Strong enrollment growth accompanied with a vibrant research portfolio and partnerships, and enhanced private philanthropy are building the foundation for an expanding, diversified resource base for the university.

Private philanthropy is rapidly becoming an important resource to advance university strategic initiatives. The quality of the academic and research programs, the university's diversity and inclusion initiatives, our talented students and faculty, and the overall impact of university programs on the region and the state are resonating with our generous donors. Total new gifts and commitments in fiscal year 2019 was approximately $182 million, an increase of $29 million or 18 percent over fiscal year 2018 philanthropic giving. The total value of Virginia Tech Foundation's endowed assets grew to $1.36 billion as of June 30, 2019, an increase of approximately $211.9 million over the previous year. Continued strong philanthropy, coupled with a growing endowment, will provide flexible financial support for university initiatives and expand financial aid resources to students.

The ethos of Virginia Tech and its *Ut Prosim* spirit lies in its people – the dedicated faculty and staff who are committed to the success and well-being of our students. The university strives to reward, recognize, and retain our hard-working employees and provide competitive compensation to our faculty and staff. In fiscal year 2019, the university implemented a state-authorized salary increase for all employees, and facilitated a merit-based faculty salary review program. In addition, Tech implemented a staff merit program for eligible staff employees. The university continues to analyze market trends for competitive compensation, with the goal of achieving an overall faculty salary average equivalent to the 60th percentile of SCHEV peer institutions. The most recent SCHEV data available projects Tech in the 32nd percentile for FY18 and the 35th percentile for FY17. This year's salary increases help to make incremental progress towards achieving the goal, and position the university to recruit and retain a talented workforce. We are very appreciative of the state for providing its share of funding for the faculty and staff merit programs.

Virginia Tech's remarkable progress in the academic, research, and outreach areas is enabled by steady investments in the physical infrastructure of the campus. The university's portfolio of active capital projects during fiscal year 2019 included over $108 million of expenditures on 33 projects which have a combined budget of $124.3 million. Major capital projects under construction during the year include the Health Sciences and Technology project. The project, being delivered under a public-private partnership with Carilion Clinic, will provide state-of-the-art research laboratories and experiential learning spaces. Two other significant projects include: (1) the construction of the Creativity and Innovation District residence hall, a new 596-bed residential community with combined spaces for student athletes and academic collaborative spaces to support creativity and innovation programs; and (2) the ACC Network studio project to improve and expand broadcasting facilities supporting the ACC Network channel to be launched in Fall 2019.

Virginia Tech's capital program has grown significantly over the past two decades. Within the 21-year period from fiscal year 2000 to fiiscal year 2020, the university has been able to advance 124 capital projects that total $2.42 billion of funding. This includes obtaining $1.02 billion of General Fund appropriations for 42 capital projects, which reflects 13 percent of all higher education capital project funding within the state system. The university has also obtained $143.3 million of General Fund appropriations for maintenance reserve, which reflects 17 percent of all of the higher education funding for the program. Maintenance reserve funding is designed to address deferred maintenance needs in the university's academic, research, and administrative facilities. Virginia Tech has obtained the highest cumulative total in the system for a university for both capital outlay and maintenance reserve funding within this time frame. The university has also been able to advance 67 non-general fund projects over this same period that total $1.12 billion in funding plans as well as 14 capital lease projects with funding plans totaling $135 million.

The university's capital program receives support from strategic state investment for academic buildings, self-generated revenues from auxiliary enterprises, private support, judicious use of fees, and strategic deployment of debt resources. The university reported a debt ratio of 3.44 percent for fiscal year 2019 with a long-term debt liability of $478.3 million. The university's forward-looking capital outlay planning and debt allocation planning processes ensure capacity will be available for high priority projects in the future while complying with the university's performance measures of managing the debt program within a five percent debt ratio and maintaining a credit rating of AA- or better. The university currently maintains a credit rating of Aa1 from Moody's and AA from Standard and Poor's. The phenomenal growth of the university's capital program over the decades, while maintaining an effective debt ratio and credit rating and ensuring resource availability for university priorities, is a testament to the astute and deliberate management of university resources.

As we look back to celebrate the phenomenal impact of our academic, research, outreach, and economic development programs across the region achieved in a financially responsible and sustainable manner, Virginia Tech stands at the cusp of unparalleled growth. This multi-dimensional growth across disciplines, geography, and stakeholders brings many opportunities and challenges. The historical trajectory of the university is testament to the fact that our faculty and staff have always risen admirably to address the challenges and capitalize on the opportunities. Virginia Tech stands strong to serve our students, citizens, and the commonwealth in pursuit of becoming a global land-grant institution.

M. Dwight Shelton Jr.

Management's Responsibility for Financial Reporting and Internal Controls

The information in this Annual Financial Report, including the accompanying basic financial statements, notes, management's discussion and analysis, and other information is the responsibility of Virginia Tech executive management. Responsibility for the accuracy of the financial information and fairness of its presentation, including all disclosures, rests with the management of the university. Management believes the information is accurate in all material respects and fairly presents the university's revenues, expenses, and changes in net position as well as its overall financial condition. This report was prepared in accordance with generally accepted accounting principles for public colleges and universities in the United States of America as prescribed by the Governmental Accounting Standards Board. Management is responsible for the objectivity and integrity of all representations herein. The Annual Financial Report includes all disclosures necessary for the reader of this report to gain a broad understanding of the university's operations for the year ended June 30, 2019.

The administration is responsible for establishing and maintaining the university's system of internal controls. Key elements of the university's system of internal controls include: careful selection and training of administrative personnel; organizational structure that provides appropriate division of duties; thorough and continuous monitoring, control, and reporting of operating budgets versus actual operating results; well communicated written policies and procedures; annual self-assessments led by the Office of the University Controller; a growing management services segment; and an extensive internal audit function. Although there are inherent limitations to the effectiveness of any system of accounting controls, management believes that the university's system provides reasonable, but not absolute, assurances that assets are safeguarded from unauthorized use or disposition, and accounting records are sufficiently reliable to permit preparation of financial statements and appropriate accountability for assets and liabilities.

The Finance and Resource Management Committee of the Virginia Tech Board of Visitors reviews and monitors the university's financial reporting and accounting practices. The committee meets with external independent auditors annually to review the Annual Financial Report and results of audit examinations. The committee also meets with internal auditors and university financial officers at least quarterly. These meetings include a review of the scope, quality, and results of the internal audit program, and a review of issues related to internal controls and quality of financial reporting.

The Auditor of Public Accounts (APA), the office of the Commonwealth of Virginia's auditors, has examined these annual financial statements and the report thereon appears on the facing page. The APA examination includes a study and evaluation of the university's system of internal controls, financial systems, policies, and procedures, resulting in the issuance of a management letter describing various issues considered worthy of management's attention. The university has implemented policies and procedures for the adequate and timely resolution of such issues. No material weaknesses were found on internal control matters by the APA for the fiscal year ended June 30, 2019.

M. Dwight Shelton Jr.

Vice President for Finance and Chief Financial Officer

Commonwealth of Virginia

Auditor of Public Accounts

Martha S. Mavredes, CPA
Auditor of Public Accounts

P.O. Box 1295
Richmond, Virginia 23218

December 13, 2019

The Honorable Ralph S. Northam, Governor of Virginia

The Honorable Thomas K. Norment, Jr. Chairman, Joint Legislative Audit and Review Commission

Board of Visitors, Virginia Polytechnic Institute and State University

INDEPENDENT AUDITOR'S REPORT

Report on Financial Statements

We have audited the accompanying financial statements of the business-type activities and aggregate discretely presented component units of Virginia Polytechnic Institute and State University, a component unit of the Commonwealth of Virginia, as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise Virginia Tech's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements 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 financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We did not audit the financial statements of the aggregate discretely presented component units of Virginia Tech, which are discussed in Notes 1 and 25. Those financial statements were audited by other auditors whose reports thereon have been furnished to us, and our opinion, insofar as it relates to the amounts included for the component units of Virginia Tech, is based on the reports of the other auditors.

We conducted our audit 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. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The financial statements of the component units of Virginia Tech that were audited by other auditors upon whose reports we are relying were audited in accordance with auditing standards generally accepted in the United States of America, but not in accordance with Government Auditing Standards.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, 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 financial statements 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 management, as well as evaluating the overall financial statement presentation.

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

Opinion

In our opinion, based on our audit and the reports of other auditors, the financial statements referred to above present fairly, in all material respects, the financial position of the business-type activities and aggregate discretely presented component units of the Virginia Polytechnic Institute and State University as of June 30, 2019, and the respective changes in financial position and cash flows, where applicable, thereof for the year then ended, in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Prior-Year Summarized Comparative Information

We have previously audited Virginia Tech's 2018 financial statements, and we expressed an unmodified audit opinion on the respective financial statements in our report dated November 28, 2018. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2018, is consistent, in all material respects, with the audited financial statements from which it has been derived.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the following be presented to supplement the basic financial statements: Management's Discussion and Analysis on pages 7 through 15; the Schedules of Virginia Tech's Share of Net Pension Liability, the Schedule of Virginia Tech's Pension Contributions, and the Notes to Required Supplementary Information for Pension Plans on pages 55 through 56; the Schedule of Virginia Tech's Share of OPEB Liability (Asset), the Schedule of Virginia Tech's OPEB Contributions, and the Notes to the Required Supplementary Information for OPEB Plans for the Pre-Medicare Retiree Healthcare (PMRH), Health Insurance Credit (HIC), Group Life Insurance (GLI), Disability Insurance (VSDP), and Line of Duty (LODA) programs, as applicable, on pages 56 through 58. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of the financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary and Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise Virginia Tech's basic financial statements. The supplementary information such as the Virginia Tech Foundation, Inc. information, Affiliated Corporations Financial Highlights, and Consolidating Schedules and the other information such as the University Highlights and Financial Highlights are presented for the purpose of additional analysis and is not a required part of the basic financial statements.

The Virginia Tech Foundation, Inc. information, Affiliated Corporations Financial Highlights, and Consolidating Schedules are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Virginia Tech Foundation, Inc. information, Affiliated Corporations Financial Highlights, and Consolidating Schedules are fairly stated, in all material respects, in relation to the basic financial statements taken as a whole.

The University Highlights and Financial Highlights have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with Government Auditing Standards, we have also issued our report dated December 13, 2019 on our consideration of Virginia Tech's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering Virginia Tech's internal control over financial reporting and compliance.

Martha S. Mavredes
AUDITOR OF PUBLIC ACCOUNTS

DBC/clj

Management's Discussion and Analysis
(unaudited)

Virginia Polytechnic Institute and State University, popularly known as Virginia Tech, is a comprehensive, land-grant university located in Blacksburg, Virginia. The university offers 204 graduate, undergraduate, and professional degree programs through its nine academic colleges: Agriculture and Life Sciences, Architecture and Urban Studies, Engineering, Liberal Arts and Human Sciences, Natural Resources and Environment, Pamplin College of Business, Science, the Virginia-Maryland College of Veterinary Medicine, and the Virginia Tech Carilion School of Medicine.

Virginia Tech has evolved into a position of increasing national prominence since its founding in 1872, consistently ranking among the nation's top universities for undergraduate and graduate programs. The university's research program was ranked 48th among the top research institutions in the United States by the National Science Foundation in its latest survey measuring annual research expenditures.

The university is an agency of the Commonwealth of Virginia, and therefore included as a component unit in the Commonwealth of Virginia's *Comprehensive Annual Financial Report*. The 14 members of the Virginia Tech Board of Visitors govern university operations. Members of the board are appointed by the Governor of Virginia.

OVERVIEW

This unaudited *Management's Discussion and Analysis* (MD&A) is required supplemental information under the Governmental Accounting Standards Board's (GASB) reporting model. It is designed to assist readers in understanding the accompanying financial statements and provide an overall view of the university's financial activities based on currently known facts, decisions, and conditions. This discussion includes an analysis of the university's financial condition and results of operations for the fiscal year ended June 30, 2019. Comparative numbers are included for the fiscal year ended June 30, 2018. Since this presentation includes highly summarized data, it should be read in conjunction with the accompanying basic financial statements, including notes and other supplementary information. The university's management is responsible for all of the financial information presented, including this discussion and analysis.

The university's financial statements have been prepared in accordance with GASB Statement 35, *Basic Financial Statements—and Management's Discussion and Analysis—for Public Colleges and Universities*, as amended by GASB Statements 37, 38, and 63. The three required financial statements are the *Statement of Net Position* (balance sheet), the *Statement of Revenues, Expenses, and Changes in Net Position* (operating statement), and the *Statement of Cash Flows*. These statements are summarized and analyzed in the following sections. Combining schedules included in *Optional Supplementary Information* indicate how major fund groups were aggregated to arrive at the single column totals presented on the *Statement of Net Position* and the *Statement of Revenues, Expenses, and Changes in Net Position*.

Using criteria provided in GASB Statement 39, *Determining Whether Certain Organizations Are Component Units*, and GASB Statement 60, *The Financial Reporting Entity: Omnibus,* amendments of GASB Statement 14, the university's nine affiliated corporations were evaluated on the nature and significance of their relationship to the university. The Virginia Tech Foundation Inc. (VTF or 'the foundation') and Virginia Tech Services Inc. (VTS) were determined to be component units and are presented in a separate column on the university's financial statements. VTF serves the university by generating significant funding from private sources and aggressively managing its assets to provide supplemental funding to the university. VTS operates the university bookstores and provides other services for the use and benefit of students, faculty and staff. The foundation and VTS are not part of this MD&A, but detail regarding their financial activities can be found in Note 25 of the *Notes to Financial Statements*. Transactions between the university and these component units have not been eliminated in this year's financial statements.

The following GASB statements of standards became effective in fiscal year 2019: Statement 83, *Certain Asset Retirement Obligations;* and Statement 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*. GASB Statement 83 established standards of accounting and financial reporting related to the timing and pattern of recognition associated with legally enforceable liabilities in connection with the retirement of tangible capital assets. The university determined that it did not have any material asset retirement obligations and the financial

The Virginia Tech Carilion (VTC) campus in Roanoke, Virginia includes the VTC School of Medicine and the Fralin Biomedical Research Institute. The School of Medicine is a fully accredited, four-year medical school which became Tech's ninth college in FY19. The Research Institute, devoted solely to biomedical research, is currently undergoing significant expansion.

statements were not affected by the implementation of GASB Statement 83. GASB Statement 88 improved the information disclosed in the notes that accompany the university's financial statements related to debt, including direct borrowings and direct placements. These enhanced disclosures provide more information regarding the credit worthiness of the university and the Commonwealth of Virginia, as well as information about the university's unused lines of credit.

STATEMENT OF NET POSITION

The *Statement of Net Position* (SNP) presents the assets, liabilities, and net position of the university as of the end of the fiscal year. The purpose of this statement is to present a snapshot of the university's financial position to readers of the financial statements.

The data presented aids readers in determining the assets available to continue operations of the university. It also allows readers to see what the university owes to vendors, investors, and lending institutions. Finally, the SNP provides a picture of the university's net position and the restrictions for expenditure of the components of net position. Sustained increase in net position over time is one indicator of the financial health of the organization.

The university's net position is classified as follows:

Net investment in capital assets — Net investment in capital assets represents the university's total investment in capital assets, net of accumulated depreciation, amortization, and outstanding debt obligations related to those capital assets. Debt incurred, but not yet expended for capital assets, is not included as a component of net investment in capital assets.

Restricted component of net position, expendable — The expendable category of the restricted component of net position includes resources the university is legally or contractually obligated to expend, with restrictions imposed by external third parties. This category partially consists of quasi-endowments totaling $55.4 million. The investment of quasi-endowments is managed by VTF.

Restricted component of net position, nonexpendable — The nonexpendable category of the restricted component of net position consists of endowment and similar type funds where donors or other outside sources have stipulated, as a condition of the gift instrument, the principal is to be maintained inviolate and in perpetuity, and invested for the purpose of producing present and future income to be expended or added to principal. The university's nonexpendable endowments of $14.0 million are included in its column on the SNP.

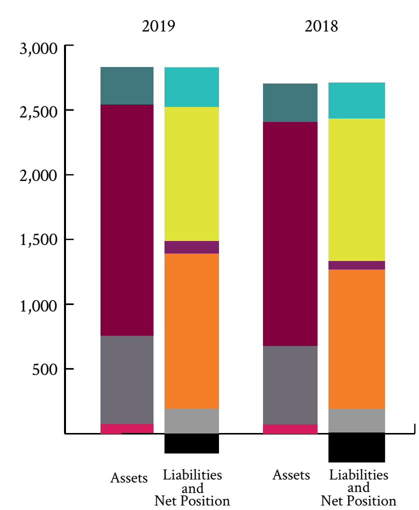
Unrestricted component of net position — The unrestricted component of net position represents resources used for transactions relating to academic departments and general operations of the university, and may be used at the discretion of the university's board of visitors to meet current expenses for any lawful purpose in support of the university's primary missions of instruction, research and outreach. These resources are derived from student tuition and fees, state appropriations, recoveries of facilities and administrative (indirect) costs, and sales and services of auxiliary enterprises and educational departments. The auxiliary enterprises are self-supporting entities that provide services for students, faculty and staff. Examples of the university's auxiliaries are intercollegiate athletics and student residential and dining programs.

Total university assets increased by $124.3 million or 4.7% during fiscal year 2019, bringing the total to $2,757.2 million at year-end. Current assets decreased by $8.7 million. The decline is the result of a decrease in cash and cash equivalents ($3.8 million) due to transfers to longer-term investments for greater investment returns and a decrease in accounts receivable of

Summary of Net Position

Assets, Liabilities and Net Position
For the years ended June 30, 2019 and 2018
(all dollars in millions)

	2019	2018	Change Amount	Change Percent
Current assets	$ 289.4	$ 298.1	$ (8.7)	(2.9)%
Capital assets, net	1,786.0	1,731.9	54.1	3.1 %
Other assets	681.8	602.9	78.9	13.1 %
Total assets	2,757.2	2,632.9	124.3	4.7 %
Deferred outflow of resources [1]	71.1	70.0	1.1	1.6 %
Current liabilities	305.8	279.3	26.5	9.5 %
Noncurrent liabilities	1,037.1	1,099.1	(62.0)	(5.6)%
Total liabilities	1,342.9	1,378.4	(35.5)	(2.6)%
Deferred inflow of resources [2]	95.2	65.2	30.0	46.0 %
Invested in capital assets, net	1,326.1	1,273.2	52.9	4.2 %
Restricted	214.9	212.5	2.4	1.1 %
Unrestricted	(150.7)	(226.4)	75.7	33.4 %
Total net position	$ 1,390.3	$ 1,259.3	$ 131.0	10.4 %



(1) Deferred outflows of resources are included with assets in the adjacent graph.
(2) Deferred inflows of resources are included with liabilities in the adjacent graph.

$4.9 million. Noncurrent assets grew by $133.0 million. Capital assets, net, increased by $54.1 million reflecting the ongoing construction of university research and instructional facilities, and the capitalization of completed facilities discussed in detail in the following section, Capital Asset and Debt Administration. Long-term investments grew by $85.6 million reflecting the university's transition to long-term investments for increased returns. Additionally, other assets grew by $0.9 million largely due to an increase in the VSDP postemployment benefit asset. These increases were offset by small decreases in notes receivable ($3.5 million), accounts receivable ($1.4 million), due from the commonwealth ($2.0 million), cash and cash equivalents ($0.2 million), and short term investments ($0.5 million).

Total university liabilities decreased by $35.5 million or 2.6% during fiscal year 2019. The current liabilities category increased $26.5 million and the noncurrent liabilities category decreased by $62.0 million. The increase in current liabilities was due to a rise of $19.1 million in commercial paper used to temporarily fund capital projects, growth in accounts payable of $5.4 million, an increase of $3.7 million in the current portion of the accrued compensated absences, an increase of $2.4 million in the current portion of long-term debt, as well as an increase in the current portion of the OPEB liability ($0.7 million). These increases were offset by decreases in unearned revenue ($2.6 million) and funds held in custody for others ($2.2 million). The decrease in noncurrent liabilities is primarily due to decreases in the pension liability ($32.2 million), the OPEB liability ($20.3 million), and long-term debt ($8.5 million), with only minor increases and decreases in the remaining categories.

The increase in total assets along with the decrease in total liabilities is reflected in the year-over-year increase of the university's net position of $131.0 million (10.4%). Net position in the category of net investment in capital assets increased $52.9 million, reflecting the university's continued investment in new facilities and equipment supporting the university's mission as well as the prudent management of fiscal resources.

Unrestricted net position rose by $75.7 million in this fiscal year. This increase can be attributed to several factors including growth in returned overhead balances, increases in the unrestricted portion of the system funds, and an overall decrease in the actuarially determined pension and OPEB liabilities, deferred inflows, and deferred outflows.

Funding for Authorized Current and Future Capital Projects

As of June 30, 2019

(all dollars in millions)

	State Funds (1)	Other Funds (2)	University Debt Issued Before June 30, 2019	University Debt To Be Issued After June 30, 2019	Total Funding	Cash Basis Project-To-Date Expenses
Current education and general	$ 109.1	$ 21.3	$ 40.1	$ 10.3	$ 180.8	$ 65.1
Current auxiliary enterprise	-	29.9	4.5	99.6	134.0	30.3
Total current	109.1	51.2	44.6	109.9	314.8	95.4
Future education and general	78.0	31.9	-	46.7	156.6	9.4
Future auxiliary enterprise	-	39.2	-	165.0	204.2	5.4
Total future	78.0	71.1	-	211.7	360.8	14.8
Total authorized	$ 187.1	$ 122.3	$ 44.6	$ 321.6	$ 675.6	$ 110.2

(1) Includes the general fund, capital appropriations, and the general obligation bonds of the Commonwealth of Virginia.

(2) Includes private gifts, auxiliary surpluses, student fees, and other customer revenues.

Capital Asset and Debt Administration

One of the critical factors in ensuring the quality of the university's academic, research, and residential life functions is the development and renewal of its capital assets. The university continues to maintain and upgrade current structures, as well as pursue opportunities for additional facilities. Investment in new structures and the upgrade of current structures serve to enrich high-quality instructional programs, residential lifestyles, and research activities.

Note 7 of the *Notes to Financial Statements* describes the university's significant investment in depreciable capital assets with gross additions of $176.5 million during fiscal year 2019. Major projects included the completion of several athletic facility improvements ($31.9 million); the renovation of Sandy Hall, the Liberal Arts Building, and the front section of Davidson Hall ($30.6 million); and the renovation of O'Shaughnessy Hall ($19.8 million). Ongoing investments in instructional, research, and computer equipment totaled $42.6 million. Depreciation and amortization expense related to capital assets was $108.2 million with net asset retirements of $1.9 million. The net increase in depreciable capital assets for this period was $66.4 million. The net decrease in nondepreciable capital assets ($12.6 million) was primarily due to fewer construction in progress expenses during the current year for major building projects to be completed after fiscal year 2019. The major projects remaining in the construction-in-progress category include the expansion of the Virginia Tech Carilion health sciences and technology campus in Roanoke ($44.1 million), the construction of a residence hall in the Creativity and Innovation District ($12.8 million), the renovation of seven undergraduate laboratories in Derring and Hahn Halls ($6.2 million), the renovation and expansion of Holden Hall ($4.0 million), and other ongoing capital improvements and renovations throughout the university ($57.9 million). In addition, $3.3 million was withheld as retainage payable on major projects under construction. This retainage amount will be moved to the building asset category once final payments are made to the construction contractors. Proceeds from the sale of commercial paper were used to provide temporary funding for some projects under construction. The majority of the temporary financing will be replaced by permanent debt with the issuance of long-term bonds and notes.

Noncurrent liabilities related to debt experienced a net decrease of $8.5 million during fiscal year 2019. The major cause of this decrease is a result of the reclassification of long-term debt from the noncurrent to current liabilities category ($34.1 million), offset by the issuance of long-term debt ($29.7 million). See Notes 12 and 13 of the *Notes to Financial Statements* for more details.

The educational and general (E&G) portion of the university's capital outlay program represents five projects currently under construction. These projects include a public-private partnership to expand the Virginia Tech Carilion health sciences and technology campus in Roanoke ($91.7 million), an upgrade to the university's chiller system ($43.0 million), improvements to facilities at Kentland Farm ($12.5 million), the renovation of seven undergraduate laboratories in Derring and Hahn halls ($10.0 million), and the installation of a gas-fired boiler at the university's central steam plant ($8.2 million). In addition to the capital projects underway, there were several new construction and renovation projects approved for instructional and research facilities. The new capital projects include renovation and expansion of Holden Hall ($72.3 million), the construction of the Corps Leadership and Military Science Building ($52.0 million), and the first of two phases to renew existing livestock and poultry facilities ($22.1 million). The Commonwealth of Virginia will provide partial funding for several of these E&G projects. In addition to funding received from the commonwealth, the projects may also be funded from a combination of private gifts, student fees, other customer revenues, and debt financing.

The auxiliary enterprises portion of the university's capital outlay program represents three projects currently under construction. These projects include the construction of a residence hall in the Creativity and Innovation District ($105.5 million), expansion of broadcasting facilities for the new ACC Network channel ($10.0 million), and the expansion of the Lane substation ($6.5 million). Future capital projects include construction of three residence halls, improvements to facilities housing student wellness services, and the renovation of Jamerson Athletic Center for a student-athlete performance center. Since auxiliaries are required to be self-supporting, no state general funds or capital appropriations are provided for these projects. These projects will be funded by a combination of private gifts, student fees, other customer revenues, and debt financing.

Virginia Tech had a total authorization of $675.6 million in capital building projects as of June 30, 2019, requiring approximately $321.6 million in additional debt financing. Capital projects in progress carried commitments to construction contractors, architects, and engineers totaling $133.2 million at June 30, 2019. These obligations are for future effort and as such have not been accrued as expenses or liabilities on the university's financial statements. The majority of the financial commitment is attributed to the construction of a residence hall in the Creativity and Innovation District ($77.1 million) and the expansion of the Virginia Tech Carilion health sciences and technology campus ($35.8 million). These commitments represent only a portion of the university's capital projects currently under construction or authorized by the commonwealth.

The university's bond ratings of Aa1 and AA from Moody's and Standard & Poor's, respectively, reflect strong student demand, balanced operating performance, and adequate reserves to address unforeseen expenses.

Construction is underway for the Creativity and Innovation District residence hall, which will offer housing for 600 students and a wide variety of academic, social, research, and collaboration spaces. The 225,000-gross-square-foot building is designed around two living-learning communities for the arts and entrepreneurship, while also weaving in housing for varsity student-athletes.

Improvements to Kentland Farm facilities include construction of three new buildings to replace six deteriorated buildings. The new buildings include an 11,000 gross square foot (GSF) Metabolism Research Laboratory, a 7,700 GSF Applied Reproduction Facility, and 10,200 GSF of arena and animal holding spaces. The scope of the project is based on replacing the scope of existing facilities for an established herd with equal-capacity new facilities.

Revenues, Expenses, and Changes in Net Position
For the years ended June 30, 2019 and 2018
(all dollars in millions)

	2019	2018	Change Amount	Change Percent
Operating revenues	$ 1,160.4	$ 1,099.9	$ 60.5	5.5 %
Operating expenses	1,467.9	1,423.4	44.5	3.1 %
Operating loss	(307.5)	(323.5)	16.0	4.9 %
Non-operating revenues and expenses	360.0	363.5	(3.5)	(1.0)%
Income (loss) before other revenues, expenses, gains or losses	52.5	40.0	12.5	31.3 %
Other revenues, expenses, gains or losses	78.0	51.8	26.2	50.6 %
Increase in net position	130.5	91.8	38.7	42.2 %
Net position - beginning of year	1,259.8	1,167.5	92.3	7.9 %
Net position - end of year	$ 1,390.3	$ 1,259.3	$ 131.0	10.4 %

STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

Operating and non-operating activities creating changes in the university's total net position are presented in the *Statement of Revenues, Expenses, and Changes in Net Position*, found on page 17. The purpose of the statement is to present all revenues received and accrued, all expenses paid and accrued, and gains or losses from investments and capital assets.

Operating revenues are generally received through providing goods and services to the various customers and constituencies of the university. Operating expenses are expenditures made to acquire or produce the goods and services provided in return for the operating revenues, and to carry out the missions of the university. Salaries and fringe benefits for faculty and staff are the largest type of operating expense. Non-operating revenues are revenues received for which goods and services are not directly provided. Included in this category are state appropriations and gifts which supplement the payment of operating expenses of the university and support student scholarships. Therefore, the university, like most public institutions, expects to show an operating loss.

Operating Revenues

Total operating revenues increased by $60.5 million or 5.5% from the prior fiscal year. The growth in operating revenues came predominantly from three categories: student tuition and fees, auxiliary enterprise revenue, and sponsored grants and contracts. The increase in student tuition and fees ($34.2 million or 6.8%) was expected given an increasing student population and the rise in both in-state and out-of-state tuition and fees rates. The growth in auxiliary enterprise revenue ($7.0 million or 2.6%) follows the increasing student population and reflects the high level of satisfaction with the services provided by Tech's auxiliaries. Sponsored grants and contracts increased by $14.7 million or 4.8%. Grants and contracts awarded by federal sponsors grew by $12.8 million and nongovernmental grants and contracts rose by $2.0 million while state grants and contracts rose minimally ($0.3 million) and local grants and contracts decreased by $0.8 million. Other operating revenue rose by $4.6 million due to $2.8 million related to the student insurance settlement that will be invested with the foundation

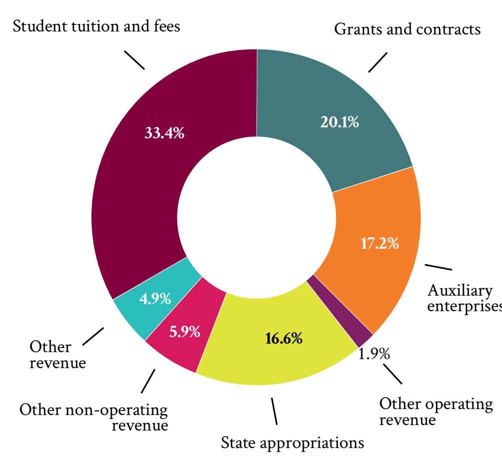
Summary of Revenues

Increase (Decrease) in Revenue
For the years ended June 30, 2019 and 2018
(all dollars in millions)

	2019	2018	Change Amount	Change Percent
Operating revenue				
Student tuition and fees, net	$ 534.2	$ 500.0	$ 34.2	6.8 %
Grants and contracts	321.4	306.7	14.7	4.8 %
Auxiliary enterprises	274.4	267.4	7.0	2.6 %
Other operating revenue	30.4	25.8	4.6	17.8 %
Total operating revenue	1,160.4	1,099.9	60.5	5.5 %
Non-operating revenue				
State appropriations	266.2	263.1	3.1	1.2 %
Other non-operating revenue*	93.8	100.4	(6.6)	(6.6)%
Total non-operating revenue	360.0	363.5	(3.5)	(1.0)%
Other revenue				
Capital appropriations	-	(32.9)	32.9	100.0 %
Capital grants and gifts	79.2	85.1	(5.9)	(6.9)%
Loss on disposal of capital assets	(1.2)	(0.4)	(0.8)	(200.0) %
Total other revenue	78.0	51.8	26.2	50.6 %
Total revenue	$ 1,598.4	$ 1,515.2	$ 83.2	5.5 %

* *Includes gifts, investment income, interest expense on debt related to capital assets, federal Pell grants, and other non-operating revenue.*

Total Revenue by Source
For the year ended June 30, 2019



and used for student scholarships as well as a small increase in sales and services of education activities of $1.8 million. Overall, the university's operating revenues increased to $1,160.4 million in fiscal year 2019, compared to $1,099.9 million in fiscal year 2018.

Non-operating and Other Revenues and Expenses

Non-operating revenue and expenses totaled $360.0 million, a decrease of $3.5 million from the previous year's total. The revenue reduction in this category resulted primarily from decreases in other non-operating revenue ($6.5 million) and a decline in gift funding transferred from the Virginia Tech Foundation ($4.7 million), with small decreases in federal student financial aid ($0.2 million) and non-operating grants and contracts ($0.3 million). Investment income increased $4.3 million due to market conditions and a shift to longer-term investments for better returns. Additionally, state appropriations rose slightly ($3.0 million) while net interest expense on debt related to capital assets fell by $0.9 million.

Total other revenue, expenses, gains and losses grew by $26.2 million compared to the past fiscal year, due to changes in capital appropriations as well as capital grants and gifts. In the previous year, the commonwealth supplanted the capital appropriations received in previous years with VCBA 21st century funding. This resulted in a negative amount for capital appropriations and an increased amount in capital grants and gifts for the previous fiscal year. The current year did not have any similar anomalies.

Revenues from all sources (operating, non-operating, and other) for fiscal year 2019 totaled $1,598.4 million, increasing by $83.2 million from the prior year. Operating expenses (shown below and in the chart on the next page) totaled $1,467.9 million for fiscal year 2019, reflecting a year-over-year increase of $44.5 million. Total revenues less total operating expenses resulted in an increase to total net position of $130.5 million.

Total Expenses

The university is committed to recruiting and retaining outstanding faculty and staff. The personnel compensation package is one way to successfully compete with peer institutions and nonacademic employers. The natural expense category, compensation and benefits, comprises $931.6 million or 63.5% of the university's total operating expenses. This category increased by $19.9 million (2.2%) over the previous year, with compensation growing by $30.6 million and benefits decreasing by $10.8 million. Generally, changes to expenses in the compensation and benefits category come from three sources: increases or reductions in the number of personnel, annual salary increases, and the general trends in the costs of fringe benefits. The decrease in benefits is misleading as the cost of benefit programs such as health insurance continue to climb. In this case the decrease in benefits expense is due to the actuarially determined GASB 68 pension expense and GASB 75 OPEB expense for the current year being significantly less than in prior years. The GASB 68 pension expense declined by $14.6 million while the GASB 75 OPEB expense decreased by $7.6 million. A second category with a significant increase over the prior year was other operating expenses ($13.8 million). This category includes building and equipment leases as well as utility charges and expenses for insurance. Growth in this category was spread across several different areas.

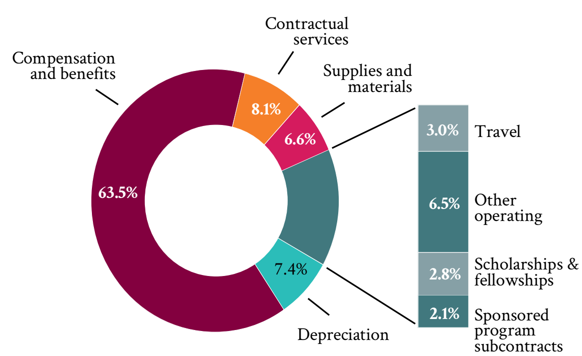
Summary of Expenses by Natural Classification

Increase (Decrease) in Expenses by Natural Classification
For the years ended June 30, 2019 and 2018
(all dollars in millions)

			Change	
	2019	2018	Amount	Percent
Compensation and benefits	$ 931.6	$ 911.7	$ 19.9	2.2 %
Contractual services	118.9	115.2	3.7	3.2 %
Supplies and materials	97.5	100.7	(3.2)	(3.2)%
Travel	44.1	43.6	0.5	1.1 %
Other operating expenses	96.1	82.3	13.8	16.8 %
Scholarships and fellowships*	40.7	37.1	3.6	9.7 %
Sponsored program subcontracts	30.8	26.7	4.1	15.4 %
Depreciation and amortization	108.2	106.1	2.1	2.0 %
Total operating expenses	$ 1,467.9	$ 1,423.4	$ 44.5	3.1 %

** Includes loan administrative fees and collection costs.*

Total Expense by Natural Classification
For the year ended June 30, 2019



Operating expenses for fiscal year 2019 totaled $1,467.9 million, up $44.5 million, or 3.1%, from fiscal year 2018. The functional category of instruction had the largest increase ($21.4 million). The majority of the increase was in compensation and benefits reflecting the university's commitment to maintaining high-quality faculty and staff. The addition of the school of medicine as well as a growing student enrollment contributed to this increase. The research category experienced an increase of $7.9 million, reflecting the rise in grants and contracts coming into the university. Public service expenditures saw a decrease of $5.2 million while expenditures by Tech's auxiliary enterprises remained flat.

In the functional categories for support activities, there were moderate increases in both academic support ($7.7 million) and operations and maintenance of plant ($7.0 million). The addition of the school of medicine was the major factor in the increase in the academic support area.

In summary, the university's operating revenues grew by $60.5 million or 5.5% over the preceding year, while operating expenses increased by $44.5 million or 3.1%. This resulted in an operating loss for the current fiscal year of $307.5 million in comparison to the operating loss of $323.5 million generated during the previous year. The primary reason for the decline in the operating loss was the growth in tuition and fees revenue and auxiliary enterprise revenue. State appropriations and other net non-operating revenues were used to meet operating expenses not offset by operating revenues.

STATEMENT OF CASH FLOWS

The *Statement of Cash Flows* presents detailed information about the cash activity of the university during the year. Cash flows from operating activities will always be different from the operating loss on the *Statement of Revenues, Expenses, and Changes in Net Position* (SRECNP). This difference occurs because the SRECNP is prepared on the accrual basis of accounting and includes noncash items, such as depreciation expenses, whereas the *Statement of Cash Flows* presents cash inflows and outflows without regard to accrual items. The *Statement of Cash Flows* should help readers assess the ability of an institution to generate sufficient cash flows necessary to meet its obligations.

The statement is divided into five sections. The first section, *Cash flows from operating activities*, deals with operating cash flows and shows net cash used by operating activities of the university. The *Cash flows from noncapital financing activities* section reflects cash received and disbursed for purposes other than operating, investing, and capital financing. GASB requires general appropriations from the commonwealth and noncapital gifts be shown as cash flows from noncapital financing activities. *Cash flows from capital and related financing activities* presents cash used for the acquisition and construction of capital and related items. Plant funds and related long-term debt activities (except depreciation and amortization), as well as gifts to endowments, are included in cash flows from capital financing activities. *Cash flows from investing activities* reflect the cash flows generated from investments which include purchases, proceeds,

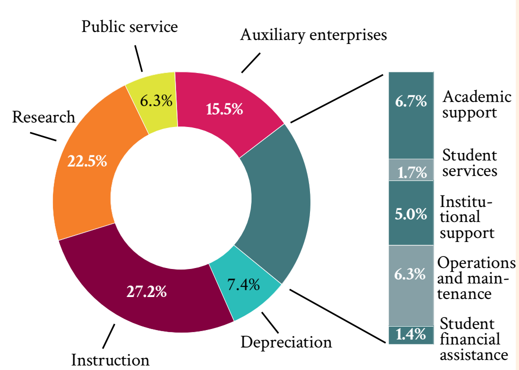
Summary of Expenses by Function

Increase (Decrease) in Expenses by Function
For the years ended June 30, 2019 and 2018
(all dollars in millions)

	2019	2018	Change Amount	Change Percent
Instruction	$ 398.9	$ 377.5	$ 21.4	5.7 %
Research	330.9	323.0	7.9	2.5 %
Public service	92.8	98.0	(5.2)	(5.3)%
Auxiliary enterprises	227.9	227.8	0.1	0.0 %
Depreciation and amortization	108.2	106.1	2.1	2.0 %
Subtotal	1,158.7	1,132.3	26.4	2.3 %
Support, maintenance, and other expenses				
Academic support	98.9	91.2	7.7	8.4 %
Student services	24.5	20.8	3.7	17.6 %
Institutional support	73.4	75.9	(2.5)	(3.3)%
Operations and maintenance of plant	91.8	84.8	7.0	8.3 %
Student financial assistance*	20.6	18.3	2.3	12.6 %
Total support, maintenance, and other	309.2	291.1	18.1	6.2 %
Total operating expenses	$ 1,467.9	$ 1,423.4	$ 44.5	3.1 %

**Includes loan administrative fees and collection costs.*

Total Expense by Function
For the year ended June 30, 2019



and interest. The last section reconciles the operating income or loss reflected on the *Statement of Revenues, Expenses, and Changes in Net Position* for fiscal year 2019 to net cash used by operating activities.

Net cash used by operating activities was $218.6 million, a $13.1 million increase from prior year. Total cash inflow for operating activities rose by $38.2 million with the largest inflow increases in student tuition and fees ($30.4 million), and grants and contracts ($20.2 million). Total cash outflows increased by $51.2 million with the major increases in operating activity uses of cash being compensation and benefits ($38.4 million) and operating expenses ($13.2 million). Operating activity uses of cash significantly exceeded operating activity sources of cash due to classification of state appropriations ($265.8 million) and gifts ($66.8 million) as noncapital financial activities.

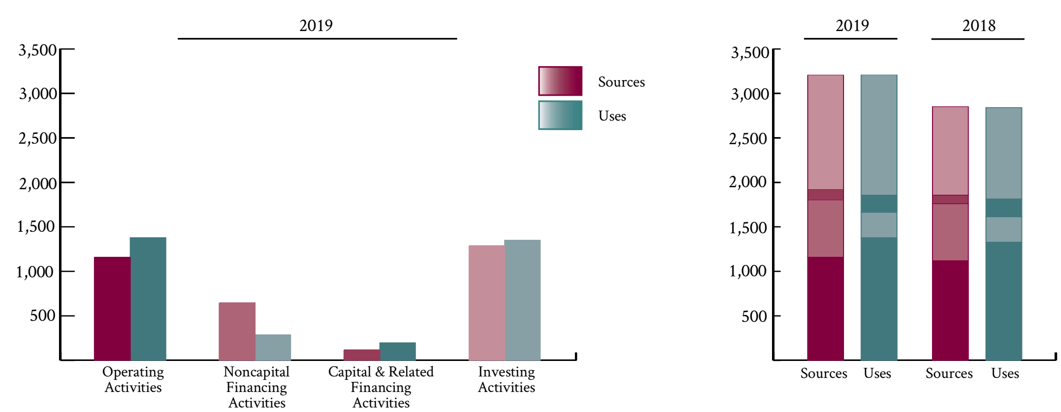
Net cash used by capital financing decreased $22.9 million. Increases of cash inflows in the capital financing area were for gifts for capital assets ($17.6 million) and for commercial paper ($10.4 million). Outflows of cash for the acquisition and construction of capital assets increased slightly ($1.7 million) while principal and interest paid on capital related debt saw a small decrease.

ECONOMIC OUTLOOK

As a public land grant institution, Virginia Tech is both a key contributor to and a beneficiary of the economic prosperity of the Commonwealth of Virginia. Stable and growing economic trends in Virginia have allowed the state to make recent strategic investments into its talent pipeline, resulting in new support for Virginia Tech's growing science and technology-related academic programs. This investment in both operating and capital support will allow Virginia Tech to open a new Innovation Campus in northern Virginia, capitalizing on the growing need for computer science graduates in the Virginia economy. The state has also made new investments into statewide research programs, including the recently established Commonwealth Cyber Initiative led by Virginia Tech.

The commonwealth currently supports 18 percent of the university's budget through general fund appropriations. New general fund support allowed the university to keep Fall Semester 2020 in-state undergraduate tuition and fees at their 2019 levels, and the state supported an FY20 compensation increase for all employees. The university continues to explore opportunities to contain costs and develop new strategies for revenue enhancement, including increased philanthropy, industry partnerships, and enrollment growth to meet the needs of the university and the citizens of the commonwealth. The Virginia Tech Board of Visitors maintains its authority to establish tuition and fee rates, and significant national, state, and institutional emphasis continues to focus on reducing the financial barriers to higher education and the resultant debt levels of graduates, particularly those from Virginia.

Summary of Cash Flows



Summary of Cash Flows
For the years ended June 30, 2019 and 2018
(all dollars in millions)

	2019	2018	Change Amount	Change Percent
Net cash used by operating activities	$ (218.6)	$ (205.5)	$ (13.1)	(6.4)%
Net cash provided by noncapital activities	360.2	352.5	7.7	2.2 %
Net cash used by capital and related financing activities	(80.9)	(103.9)	23.0	22.1 %
Net cash provided (used) by investing activities	(64.6)	21.1	(85.7)	(406.2)%
Net increase (decrease) in cash and cash equivalents	(3.9)	64.2	(68.1)	(106.1)%
Cash and cash equivalents - beginning of year	215.6	151.4	64.2	42.4 %
Cash and cash equivalents - end of year	$ 211.7	$ 215.6	$ (3.9)	(1.8)%

The graphs above demonstrate the relationship between sources and uses of cash. The graph on the left shows activity for fiscal year 2019 only, grouped by related sources and uses of cash, while the graph on the right displays that same activity for fiscal years 2019 and 2018 in a stacked format.

Demand for a Virginia Tech education continues to grow, providing a stable and growing source of revenue to support instructional activities. Tuition and fees now provide 35 percent of the total university budget. The university experienced greater than anticipated acceptance yield for the fall 2019 incoming freshman class, exceeding projections and bucking national trends of declining yield rates. Undergraduate enrollment is expected to continue to grow, helping to fulfill the university's mission as a land grant institution. Demand from both resident and nonresident students contributes to this growth, as Virginia Tech continues to work to extend access to qualified students. As the largest producer of STEM-H graduates in the commonwealth, Virginia Tech is well-positioned to further advance instruction and research in this growing domain and to strengthen Virginia's talent pipeline in the knowledge-driven economy.

An additional major input to the university budget is federal support. University leadership monitors the potential impact of the federal budget process on both the state and national economies as well as university program funding, including externally sponsored research, land-grant activities, and student financial aid.

While significant focus is placed on sustainable revenue sources, the university also continues to employ cost containment and innovative resource enhancement strategies to successfully advance the institution and its strategic priorities. As compared to peer institutions, internal benchmarking demonstrates that Virginia Tech operates an administratively lean organization, directing a larger share of overall resources towards academic activities than peers, and a lower overall proportion of resources directed to administrative activities, on average. The university will continue to employ strategic planning processes to advance its core missions of instruction, research, and public service and manage university resources to achieve critical priorities.

Virginia Tech, along with all other Virginia institutions of higher education, continues to benefit from significant decentralized authority from the Commonwealth of Virginia through the requested restructuring of higher education. Restructuring provides additional flexibility and authority to the participating institutions with the potential for increased efficiencies and cost savings. The university works to leverage existing authorities to drive efficiencies for cost savings. To build on the demonstrated success of restructuring, the university is working with state officials to explore additional opportunities to partner to achieve mutual goals and expand and enhance institutional autonomy to allow the university to better meet the needs of the commonwealth and its citizens.

To manage its exposure to risk, the university's investment policy, established by the board of visitors and monitored by the board's Finance and Resource Management Committee, requires that its public funds be invested in accordance with the *Investment of Public Funds Act* (Section 2.2-4500 through 2.2-4516, et seq., *Code of Virginia*). The university has limited its investment in securities outside the scope of the *Investment in Public Funds Act* to restricted gift funds, local funds, and nongeneral fund reserves and balances designated by management as quasi-endowments. These funds are invested in the Virginia Tech Foundation's consolidated endowment fund and managed in accordance with the provisions of the *Uniform Prudent Management of Institutional Funds Act* (Section 64.2-1100, et seq., *Code of Virginia*). At the end of the fiscal year, the value of the university's quasi-endowments invested in the foundation totaled $382.2 million, an increase of $92.5 million over the preceding year.

The university continually monitors the valuation of its investments. At June 30, 2019, the market value for the university's non-endowed cash, cash equivalents, and investments totaled $345.1 million, including unrealized gains on investments of $1.9 million, compared to the market value of its investments at September 30, 2019 of $451.6 million and unrealized gains of $1.9 million. Growth of investments during this time period is due to the normal cyclical collections of tuition and fees.

Executive management believes that the university will maintain its solid financial foundation and is positioned to continue to advance excellence in teaching, research, and public service. Management's policies of cost containment and investing in strategic initiatives will ensure the university is prepared to manage the changing environment of higher education while continuing to advance the university's strategic plan. The financial position of the university is strong as evidenced by its diversified portfolio of research funding, National Science Foundation research ranking, strong student demand from increasingly talented students, auxiliary enterprises with high customer satisfaction, record philanthropy, growing contributions to endowments, increased assets, and quality debt ratings from Moody's (Aa1) and Standard and Poor's (AA). These debt ratings allow the university to obtain funding for capital projects with advantageous terms.

The university's overall financial position remains strong. Management continues to maintain a close watch over university resources to ensure its ability to strategically respond to unknown internal and external issues and sustain its current high-quality educational programs and favorable financial position.

With its thriving and engaged community of students, faculty, and staff, Virginia Tech's future remains bright as the commonwealth's largest public university.

The Virginia Department of Transportation (VDOT) delivered in 2019 a new interchange to replace the intersection of Southgate Drive, U.S. 460 bypass and relocated Research Center Drive. This will allow for the expansion of the Virginia Tech Montgomery Executive Airport, to include a 1,000 foot runway and safety zone extension which will permit use by larger airplanes and help support the region's economic development efforts.

Statement of Net Position

As of June 30, 2019, with comparative financial information as of June 30, 2018
(all dollars in thousands)

	2019		2018	
Assets	Virginia Tech	Component Units	Virginia Tech	Component Units
Current assets				
Cash and cash equivalents (Note 4)	$ 177,096	$ 17,109	$ 180,841	$ 10,429
Short-term investments (Notes 4, 25)	-	16,633	-	26,360
Accounts and contributions receivable, net (Notes 1, 5, 25)	68,381	61,407	73,312	56,641
Notes receivable, net (Notes 1, 6)	1,538	665	1,661	587
Due from Commonwealth of Virginia (Note 10)	15,390	-	15,424	-
Inventories	11,984	343	10,323	4,665
Prepaid expenses	14,997	1,810	16,516	1,031
Other assets	3	2,227	-	1,218
Total current assets	289,389	100,194	298,077	100,931
Noncurrent assets				
Cash and cash equivalents (Note 4)	34,618	78,985	34,768	79,371
Short-term investments (Note 4)	-	-	544	-
Due from Commonwealth of Virginia (Note 10)	6,174	-	8,204	-
Accounts and contributions receivable, net (Notes 1, 5, 25)	12,233	98,212	13,646	74,469
Notes receivable, net (Notes 1, 6)	14,794	21,831	18,359	22,931
Net investments in direct financing leases	-	77,533	-	68,390
Irrevocable trusts held by others, net	-	7,652	-	8,209
Long-term investments (Notes 4, 25)	605,134	1,444,294	519,462	1,257,017
Depreciable capital assets, net (Notes 7, 25)	1,602,330	195,363	1,535,581	199,054
Nondepreciable capital assets (Notes 7, 25)	183,716	84,337	196,345	84,106
Intangible assets, net	-	634	-	553
Other assets	8,835	4,702	7,937	4,749
Total noncurrent assets	2,467,834	2,013,543	2,334,846	1,798,849
Total assets	2,757,223	2,113,737	2,632,923	1,899,780
Deferred Outflows of Resources				
Deferred loss on long-term debt defeasance (Note 14)	7,768	-	8,758	-
Deferred outflow for VRS pension (Note 18)	39,583	-	45,601	-
Deferred outflow for other postemployment benefits (Note 20)	23,747	-	15,623	-
Total deferred outflows	71,098	-	69,982	-
Liabilities				
Current liabilities				
Accounts payable and accrued liabilities (Note 8)	145,906	8,783	140,543	10,892
Accrued compensated absences (Notes 1, 15)	28,202	631	24,461	793
Unearned revenue (Notes 1, 9)	46,398	6,992	48,956	4,673
Funds held in custody for others	13,420	-	15,616	-
Commercial paper (Note 11)	34,275	-	15,200	-
Long-term debt payable (Notes 12, 13, 25)	34,086	22,557	31,648	20,172
Other postemployment benefits liabilities (Note 20)	3,551	-	2,871	-
Other liabilities	-	2,402	-	1,950
Total current liabilities	305,838	41,365	279,295	38,480
Noncurrent liabilities				
Accrued compensated absences (Notes 1, 15)	19,372	151	20,947	180
Federal student loan program contributions refundable (Note 15)	13,013	-	12,954	-
Unearned revenue	-	1,310	-	1,393
Long-term debt payable (Notes 12, 13, 25)	444,174	205,864	452,657	224,983
Liabilities under trust agreements	-	23,938	-	25,344
Agency deposits held in trust (Note 25)	-	446,093	-	301,950
Pension liability (Note 18)	353,955	-	386,163	-
Other postemployment benefits liabilities (Note 20)	203,567	-	223,872	-
Other liabilities	2,945	9,607	2,527	9,631
Total noncurrent liabilities	1,037,026	686,963	1,099,120	563,481
Total liabilities	1,342,864	728,328	1,378,415	601,961
Deferred Inflows of Resources				
Deferred gain on long-term debt defeasance (Note 14)	852	-	944	-
Deferred inflow for VRS pension (Note 18)	35,419	-	29,466	-
Deferred inflow for other postemployment benefits (Note 20)	58,933	-	34,775	-
Total deferred inflows	95,204	-	65,185	-
Net Position				
Investment in capital assets	1,326,057	141,970	1,273,212	134,137
Restricted, nonexpendable	14,034	638,881	14,414	567,456
Restricted, expendable				
Scholarships, research, instruction, and other	118,997	487,414	115,206	496,836
Capital projects	6,159	-	11,533	-
Debt service and auxiliary operations	75,703	-	71,338	-
Unrestricted	(150,697)	117,144	(226,398)	99,390
Total net position	$ 1,390,253	$ 1,385,409	$ 1,259,305	$ 1,297,819

The accompanying Notes to Financial Statements are an integral part of this statement.

Statement of Revenues, Expenses, and Changes in Net Position

For the year ended June 30, 2019 with comparative financial information for the year ended June 30, 2018

(all dollars in thousands)

	2019		2018	
	Virginia Tech	Component Units	Virginia Tech	Component Units
Operating Revenues				
Student tuition and fees, net (Note 1)	$ 534,212	$ -	$ 499,984	$ -
Gifts and contributions	-	54,070	-	74,731
Federal appropriations	14,919	-	14,726	-
Federal grants and contracts	221,460	-	208,643	-
State grants and contracts	13,108	-	12,815	-
Local grants and contracts (Note 3)	13,737	-	14,536	-
Nongovernmental grants and contracts	58,149	-	55,972	-
Sales and services of educational activities	20,109	-	18,292	-
Auxiliary enterprise revenue, net (Note 1)	274,355	43,187	267,441	47,840
Other operating revenues	10,394	57,433	7,480	57,030
Total operating revenues	1,160,443	154,690	1,099,889	179,601
Operating Expenses				
Instruction	398,907	403	377,490	6,805
Research	330,947	7,964	322,962	11,158
Public service	92,826	5,325	97,954	5,749
Academic support	98,926	26,989	91,219	24,118
Student services	24,456	-	20,839	-
Institutional support	73,437	41,314	75,940	41,161
Operation and maintenance of plant	91,764	13,918	84,821	14,025
Student financial assistance	19,366	29,426	18,307	30,624
Auxiliary enterprises	227,918	35,339	227,792	39,071
Depreciation and amortization (Note 7)	108,190	10,968	106,059	10,929
Other operating expenses	1,200	9,028	4	9,815
Total operating expenses (Note 24)	1,467,937	180,674	1,423,387	193,455
Operating Loss	(307,494)	(25,984)	(323,498)	(13,854)
Non-operating revenues (expenses)				
State appropriations (Note 23)	266,163	-	263,127	-
Gifts	66,860	-	71,532	-
Non-operating grants and contracts	550	-	806	-
Federal student financial aid (Pell)	19,635	-	19,826	-
Investment income, net	20,458	18,743	16,324	13,565
Net gain on investments	-	19,518	-	40,013
Interest expense on debt related to capital assets	(15,102)	(8,236)	(16,004)	(8,245)
Other non-operating revenue	1,450	-	7,893	-
Net non-operating revenues (expenses)	360,014	30,025	363,504	45,333
Income before other revenues, expenses, gains, or losses	52,520	4,041	40,006	31,479
Change in valuation of split interest agreements	-	1,062	-	2,701
Capital appropriations	-	-	(32,896)	-
Capital grants and gifts (Note 10)	79,212	12,329	85,088	12,391
Gain (loss) on disposal of capital assets	(1,236)	(58)	(369)	(79)
Additions to permanent endowments	-	70,589	-	43,249
Other revenues (expenses)	-	(416)	-	330
Total other revenues, expenses, gains, and losses	77,976	83,506	51,823	58,592
Increase in net position	130,496	87,547	91,829	90,071
Net position—beginning of year (Note 1)	1,259,757	1,297,862	1,167,476	1,207,748
Net position—end of year	$ 1,390,253	$ 1,385,409	$ 1,259,305	$ 1,297,819

The accompanying Notes to Financial Statements are an integral part of this statement.

Statement of Cash Flows

For the year ended June 30, 2019, with comparative financial information as of June 30, 2018
(all dollars in thousands)

	2019	2018
Cash flows from operating activities:		
Tuition and fees	$ 531,224	$ 500,755
Federal appropriations	14,834	16,887
Grants and contracts	307,769	287,538
Sales and services of education departments	20,109	18,292
Auxiliary enterprise charges	268,799	286,351
Other operating receipts	10,844	7,030
Payments for operating expenses	(405,143)	(391,862)
Payments to employees and fringe benefits	(950,477)	(912,090)
Payments for scholarships and fellowships	(19,084)	(17,961)
Loans issued to students	(2,447)	(4,021)
Collection of loans to students	4,994	3,512
Net cash used by operating activities	(218,578)	(205,569)
Cash flows from noncapital financing activities:		
State appropriations	265,790	263,277
Payment to commonwealth for VRS	-	(2,740)
Non operating grants & contracts	550	806
Direct lending receipts	143,901	138,829
Direct lending disbursements	(143,829)	(138,869)
Agency receipts	138,423	144,899
Agency disbursements	(140,691)	(144,998)
Federal student financial aid (Pell)	19,635	19,826
Gifts for other than capital purposes	66,756	71,420
Other non-operating receipts	9,650	-
Net cash provided by noncapital financing activities	360,185	352,450
Cash flows from capital financing activities:		
Capital appropriations	-	(3,279)
Gifts for capital assets	79,728	62,081
Proceeds from issuance capital debt	16,705	24,847
Proceeds from the sale of capital assets	839	1,430
Acquisition and construction of capital assets	(146,179)	(144,449)
Commercial paper	19,075	8,680
Principal paid on capital-related debt	(31,647)	(33,095)
Interest paid on capital-related debt	(19,437)	(20,070)
Net cash used by capital financing activities	(80,916)	(103,855)
Cash flows from investing activities:		
Proceeds from sales and maturities of investments	1,275,323	989,193
Interest on investments	10,458	4,486
Purchases of investments	(1,350,367)	(972,535)
Net cash provided (used) by investing activities	(64,586)	21,144
Net increase (decrease) in cash and cash equivalents	(3,895)	64,170
Cash and cash equivalents - beginning of year	215,609	151,439
Cash and cash equivalents - end of year	$ 211,714	$ 215,609

The accompanying Notes to Financial Statements are an integral part of this statement.

Statement of Cash Flows *(continued)*

For the year ended June 30, 2019, with comparative financial information as of June 30, 2018
(all dollars in thousands)

RECONCILIATION OF NET OPERATING EXPENSES TO NET CASH USED BY OPERATING ACTIVITIES	2019	2018
Operating loss	$ (307,494)	$ (323,498)
Adjustments to reconcile net gain (loss) to net cash used by operating activities		
Depreciation expense	108,190	106,059
Changes in assets, deferred outflows, liabilities and deferred inflows		
Receivables, net	(4,307)	11,243
Inventories	(1,661)	(174)
Prepaid and other asset items	1,414	7
OPEB asset	(793)	(1,416)
Notes receivable, net	3,688	245
Deferred outflow for VRS pension	6,018	29,236
Deferred outflow for other postemployment benefits	(8,124)	(5,830)
Accounts payable and other liabilities	2,979	(4,002)
Accrued payroll	3,567	142
Compensated absences	2,166	1,835
Unearned revenue	(2,558)	5,720
Pension liability	(32,208)	(52,413)
Other post employment benefits liability	(19,625)	(24,281)
Federal loan contributions refundable	59	(740)
Deferred inflow for VRS pension	5,953	17,523
Deferred inflow for other postemployment benefits	24,158	34,775
Total adjustments	88,916	117,929
Net cash used by operating activities	$ (218,578)	$ (205,569)
Noncash investing, capital, and financing activities		
Change in accounts receivable related to non-operating income	$ (10,651)	$ 21,034
Capital assets acquired through in-kind donations as a component of capital gifts and grants income	$ 3,321	$ 5,918
Change in fair value of investments recognized as a component of investment income	$ (263)	$ (2,661)
Change in value of interest payable affecting interest paid	$ (163)	$ (244)
Capital assets acquired through the assumption of a liability	$ 12,974	$ 2,483
Change in interest receivable affecting interest income	$ 296	$ 274
Loss on disposal of capital assets	$ (1,236)	$ (369)
Capitalization of interest revenue and expense (net)	$ (613)	$ (439)
Amortization of bond premium/discount and gain/loss on debt refunding	$ (3,179)	$ (3,245)

The accompanying Notes to Financial Statements are an integral part of this statement.

Notes to Financial Statements

CONTENTS

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Reporting Entity

Virginia Polytechnic Institute and State University is a public land-grant university serving the Commonwealth of Virginia, the nation, and the world community. The discovery and dissemination of new knowledge are central to its mission. Through its focus on teaching and learning, research, and discovery, outreach and engagement, the university creates, conveys, and applies knowledge to expand personal growth and opportunity, advance social and community development, foster economic competitiveness, and improve the quality of life.

The university includes all funds and entities over which the university exercises or has the ability to exercise oversight authority for financial reporting purposes.

Under Governmental Accounting Standards Board (GASB) Statement 39, Virginia Tech Foundation Inc. (VTF) and Virginia Tech Services Inc. (VTS) are included as component units of the university.

A separate report is prepared for the Commonwealth of Virginia that includes all agencies, boards, commissions, and authorities over which the commonwealth exercises or has the ability to exercise oversight authority. The university is a component unit of the Commonwealth of Virginia and is included in the basic financial statements of the commonwealth.

Virginia Tech Foundation Inc.

The foundation is a legally separate, tax-exempt organization established in 1948 to receive, manage, and disburse private gifts in support of Virginia Tech programs. The foundation is governed by a 35-member board of directors. The bylaws of the foundation provide that the rector of the board of visitors, the president of the alumni association, the president of the athletic fund, and the president of the university shall serve as ex-officio members of the VTF board. The remainder of the board is composed of alumni and friends of the university who actively provide private support for university programs. Directors are elected by a vote of the membership of the foundation. Membership is obtained by making gifts at or above a specified level to the foundation.

The foundation serves the university by generating significant funding from private sources and aggressively managing its assets to provide funding which supplements state appropriations. It provides additional operating support to colleges and departments, assists in the funding of major building projects, and provides seed capital for new university initiatives. Although the university does not control the timing or amount of receipts from the foundation, the majority of resources, or income which the foundation holds and invests, is restricted to the activities of the university by the donors. Because these restricted resources held by the foundation can only be used by or for the benefit of the university, the foundation is considered a component unit of the university and is discretely presented in the financial statements. The administrative offices of Virginia Tech Foundation Inc. are located at University Gateway Center, 902 Prices Fork Road, Blacksburg, Virginia 24061.

During this fiscal year, the foundation distributed $75,181,000 to the university, for both restricted and unrestricted purposes.

Virginia Tech Services Inc.

Virginia Tech Services Inc. was formed as a separate nonprofit corporation to own and operate bookstores and provide other services for the use and benefit of the students, faculty, staff, and alumni of Virginia Tech. VTS transfers any surplus funds to the university or the foundation for allocation and use by the university as the president of the university and board of visitors deem appropriate. Although the university does not control the timing or amount of receipts from VTS, the majority of its resources or income is for the benefit of the university. Because of this, VTS is considered a component unit of the university and is discretely presented in the financial statements. The administrative offices of Virginia Tech Services Inc. are located in the University Bookstore, 115 Kent Street, Blacksburg, Virginia 24061.

In March 2019, Follett Higher Education Group Inc. took over operations of many VTS sales-type activities. As a result, VTS's scope of activities is now primarily concerned with contract and vendor management as they will continue to oversee retail and vending contract performance, while Follett will operate and manage all retail sites and operations.

During the fiscal year, VTS paid $934,000 to the university, primarily for the rental of facilities and sale of items benefiting the Student Government Association.

Financial Statement Presentation

GASB Statement 35, *Basic Financial Statements—and Management's Discussion and Analysis—for Public Colleges and Universities*, issued November 1999, establishes accounting and financial reporting standards for public colleges and universities within the financial reporting guidelines of GASB Statement 34, *Basic Financial Statements—and Management's Discussion and Analysis—for State and Local Governments.* The standards are designed to provide financial information that responds to the needs of three groups of primary users of general-purpose external financial reports: the citizenry, legislative and oversight bodies, and investors and creditors. The university is required under this guidance to include *Management's Discussion and Analysis*, and basic financial statements, including notes, in its financial statement presentation.

In fiscal year 2019 the following GASB statements of standards became effective: Statement 83, *Certain Asset Retirement Obligations;* and Statement 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements.* GASB Statement 83 established standards of accounting and financial reporting related to the timing and pattern of recognition associated with legally enforceable liabilities in connection with the retirement of tangible capital assets. Accordingly, the university determined that it did not have any material asset retirement obligations and the financial statements were unaffected by the implementation of GASB Statement 83. GASB Statement 88 improved the information disclosed in the notes that accompany the university's financial statements related to debt, including direct borrowings and direct placements. These enhanced disclosures provide more information regarding the credit worthiness of the university and the Commonwealth of Virginia, as well as information about the university's unused lines of credit.

Basis of Accounting

For financial reporting purposes, the university is considered a special-purpose government engaged only in business-type activities. Accordingly, the university's financial statements are being presented using the economic resources measurement focus and the accrual basis of accounting. Under the accrual basis, revenues are recognized when earned, and expenses are recorded when an obligation has been incurred. All significant intra-agency transactions have been eliminated.

Cash Equivalents

For purposes of the statements of net position and cash flows, the university considers all highly liquid investments with an original maturity of 90 days or less to be cash equivalents.

Short-term Investments

Short-term investments include securities that have an original maturity over 90 days but less than or equal to one year at the time of purchase.

Investments

GASB Statement 31, *Accounting and Financial Reporting for Certain Investments and for External Investment Pools*, as modified by GASB Statement 59, and GASB Statement 72, *Fair Value Measurement and Application*, require that purchased investments, interest-bearing temporary investments classified with cash and investments received as gifts be recorded at fair value (see Note 4). Changes in unrealized gain or loss on the carrying value of the investments are reported as a part of investment income in the *Statement of Revenues, Expenses, and Changes in Net Position.*

Accounts Receivable

Accounts receivable consists of tuition and fee charges to students, and auxiliary enterprise services provided to students, faculty, and staff. Accounts receivable also include amounts due from federal, state and local governments, as well as nongovernmental sources, in connection with reimbursement of allowable expenses made pursuant to the university's grants and contracts. Accounts receivable are recorded net of allowance for doubtful accounts. See Note 5 for a detailed list of accounts receivable amounts by major categories.

Notes Receivable

Notes receivable consists of amounts due from the Federal Perkins Loan Program, the Health Professional Student Loan Program, other student loans, and loans to affiliated organizations. See Note 6 for a list of notes receivable amounts by major categories.

Inventories

Inventories are stated at the lower of cost or market (primarily first-in, first-out method) and consist mainly of expendable supplies for operations of auxiliary enterprises and fuel for the physical plant.

Prepaid Expenses

Prepaid expenses are expenses for future fiscal years that were paid in advance of June 30, 2019. Payments of expenses that extend beyond fiscal year 2020 are classified as noncurrent assets. Prepaid expenses consist primarily of library serial subscriptions, information technology contracts, property leases, and insurance.

Noncurrent Cash and Investments

Noncurrent cash and investments are reported as restricted because restrictions change the nature or normal understanding of the availability of the asset. This includes resources restricted for the acquisition or construction of capital assets, resources legally segregated for the payment of principal and interest as required by debt covenants, unspent debt proceeds and other restricted investments, to make debt service payments or purchase other noncurrent assets.

Capital Assets

Capital assets consisting of land, buildings, infrastructure and equipment are stated at appraised historical cost or actual cost where determinable. Construction in progress, equipment in process and software in development are capitalized at actual cost as expenses are incurred. Library materials are valued using published average prices for library acquisitions, and livestock is stated at estimated market value. All gifts of capital assets are recorded at acquisition value as of the date of donation.

Equipment is capitalized when the unit acquisition cost is $2,000 or greater and the estimated useful life is one year or more. Software is capitalized when the acquisition and/or the development costs exceed $100,000. Renovation costs are capitalized when expenses total more than $100,000, the asset value significantly increases, or the useful life is significantly extended. Routine repairs and maintenance are charged to operating expense in the year the expense is incurred.

Depreciation is computed using the straight-line method over the useful life of the assets. The useful life is 40 to 60 years for buildings, 10 to 50 years for infrastructure and land improvements, 10 years for library books, and 3 to 30 years for fixed and movable equipment. Livestock is not depreciated, as it tends to appreciate over the university's normal holding period.

Special collections are not capitalized due to the collections being: (1) held for public exhibition, education, or research in the furtherance of public service rather than financial gain; (2) protected, kept unencumbered, cared for and preserved; and (3) subject to university policy requiring the proceeds from the sales of collection items to be used to acquire other items for collections.

Interest Capitalization
Interest expense incurred during the construction of capital assets is capitalized, if material, net of interest income earned on resources set aside for this purpose. The university incurred and capitalized net interest expense related to the construction of capital assets totaling $612,000 for this fiscal year.

Pensions
The Virginia Retirement System (VRS) State Employees Retirement Plan and the Virginia Law Officers' Retirement System (VaLORS) Retirement Plan are single employer pension plans that are treated like cost-sharing plans. For the purpose 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 VRS plan and the VaLORS plan, and the additions to/deductions from the VRS plan's and the VaLORS 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.

Other Postemployment Benefits

- **Pre-Medicare Retiree Healthcare Plan** — Pre-Medicare Retiree Healthcare is a single-employer defined benefit OPEB plan that is treated like a cost-sharing plan for financial reporting purposes. This program was established by Title 2.2, Chapter 28 of the *Code of Virginia* for retirees who are not yet eligible to participate in Medicare. It is the same health insurance program offered to active employees and managed by the Virginia Department of Human Resources Management. After retirement, Virginia Tech no longer subsidizes the retiree's premium; however, since both active employees and retirees are included in the same pool for purposes of determining health insurance rates, retiree rates are effectively lower than what might otherwise be available outside of this benefit.
- **Group Life Insurance** — The Virginia Retirement System (VRS) Group Life Insurance (GLI) program is a multiple employer, cost-sharing plan. It provides coverage to state employees, teachers, and employees of participating political subdivisions. The GLI program was established pursuant to §51.1-500 et seq. of the *Code of Virginia*, as amended, which provides the authority under which benefit terms are established or may be amended. The GLI program is a defined benefit plan that provides a group life insurance benefit for employees of participating employers.
- **State Employee Health Insurance Credit Program** — The Virginia Retirement System (VRS) State Employee Health Insurance Credit (HIC) program is a single employer plan that is presented as a multiple-employer, cost-sharing plan. The HIC program was established pursuant to §51.1-1400 et seq. of the *Code of Virginia*, as amended, and which provides the authority under which benefit terms are established or may be amended. The HIC program is a defined benefit plan that provides a credit toward the cost of health insurance coverage for retired state employees.
- **Line of Duty Act Program** — The Virginia Retirement System (VRS) Line of Duty Act (LODA) program is a multiple-employer, cost-sharing plan. The LODA program was established pursuant to §9.1-400 et seq. of the *Code of Virginia*, as amended, and which provides the authority under which benefit terms are established or may be amended. The LODA program provides death and health insurance benefits to eligible state employees and local government employees, including volunteers, who die or become disabled as a result of the performance of their duties as a public safety officer. In addition, health insurance benefits are provided to eligible survivors and family members.
- **VRS Disability Insurance Program** — The Virginia Retirement System (VRS) Disability Insurance Program (Virginia Sickness and Disability Program, VSDP) is a single employer plan that is presented as a multiple-employer, cost-sharing plan. The Disability Insurance Program was established pursuant to §51.1-1100 et seq. of the *Code of Virginia*, as amended, and which provides the authority under which benefit terms are established or may be amended. The Disability Insurance Program is a managed care program that provides sick, family and personal leave and short-term and long-term disability benefits for state police officers, state employees, and VaLORS employees.

For purposes of measuring the net liability of these OPEB programs, their expenses and deferred outflows/inflows of resources, information about their fiduciary net positions, and additions to/deductions from their net fiduciary positions have been determined on the same basis as reported by VRS. In addition, benefit payments for these programs are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Accrued Compensated Absences
Certain salaried employees' attendance and leave regulations make provisions for the granting of a specified number of days of leave with pay each year. The amount reflects all unused vacation leave, sabbatical leave and the amount payable upon termination under the Commonwealth of Virginia's sick leave pay out policy. The applicable share of employer related taxes payable on the eventual termination payments is also included. The university's liability and expense for the amount of leave earned by employees, but not taken, as of June 30, 2019 is recorded in the *Statement of Net Position*, and is included in the various functional categories of operating expenses in the *Statement of Revenues, Expenses, and Changes in Net Position*.

Unearned Revenues
Unearned revenue represents revenue collected but not earned as of June 30, 2019, primarily composed of revenue for grants and contracts, prepaid athletic ticket sales, and prepaid student tuition and fees. Summer Session I tuition and fees received during the fiscal year are considered earned at the end of the refund period, approximately June 15th of each year. Tuition and fees received prior to year-end for Summer Session II are unearned and recognized as revenue in the next fiscal year. See Note 9 for a detailed list of unearned revenue amounts.

Funds Held in Custody for Others
Funds held in custody for others represents funds held by the university on behalf of others as a result of agency relationships with various groups and organizations.

Noncurrent Liabilities
Noncurrent liabilities include: (1) the principal amounts of revenue bonds payable, notes payable and capital lease obligations with maturities greater than one year, (2) pension plan liabilities, (3) OPEB liabilities, and (4) estimated amounts for accrued compensated absences and other liabilities that will not be paid within the next fiscal year.

Deferred Outflows of Resources
Deferred outflows of resources are defined as the consumption of net assets applicable to a future reporting period. The deferred outflows of resources have a positive effect on net position similar to assets.

Deferred Inflows of Resources
Deferred inflows of resources are defined as the acquisition of net assets applicable to a future reporting period. The deferred inflows of resources have a negative effect on net position similar to liabilities.

Net Position
The university's net position is classified as follows:

- **Net investment in capital assets** — Net investment in capital assets represents the university's total investment in capital assets, net of accumulated depreciation and outstanding debt obligations related to those capital assets. To the extent debt has been incurred but not yet expended for capital assets, such amounts are not included as a component of net investment in capital assets.

- **Restricted component of net position, expendable** — The expendable category of the restricted component of net position includes resources for which the university is legally or contractually obligated to spend in accordance with restrictions imposed by external third parties.
- **Restricted component of net position, nonexpendable** — The nonexpendable category of the restricted component of net position is comprised of endowment and similar type funds where donors or other external sources have stipulated, as a condition of the gift instrument, that the principal is to be maintained inviolate and in perpetuity, and invested for the purpose of producing present and future income to be expended or added to principal.
- **Unrestricted component of net position** — Unrestricted net position represents resources derived from student tuition and fees, state appropriations, recoveries of facilities and administrative (indirect) costs, and sales and services of educational departments and auxiliary enterprises. These resources are used for transactions relating to educational departments and general operations of the university, and may be used at the discretion of the university's board of visitors to meet current expenses for any lawful purpose.

When an expense is incurred that can be paid using either restricted or unrestricted resources, the university's policy is to apply the expense towards restricted resources before unrestricted resources.

Income Taxes
The university is considered an integral part of the Commonwealth of Virginia and as such is excluded from federal income taxes.

Classifications of Revenues and Expenses
The university has classified its revenues and expenses as either operating or non-operating, according to the following criteria:

- **Operating revenues** — Operating revenues include activities that have the characteristics of exchange transactions, such as (1) student tuition and fees, net of scholarship allowance; (2) sales and services of auxiliary enterprises, net of scholarship allowance; (3) most federal, state, local, and nongovernmental grants and contracts and federal appropriations; and (4) interest on institutional student loans.
- **Non-operating revenues** — Non-operating revenues are revenues received for which goods and services are not provided. State appropriations, gifts, and other revenue sources that are defined as non-operating revenues by GASB Statement 9, *Reporting Cash Flows of Proprietary and Nonexpendable Trust Funds and Governmental Entities That Use Proprietary Fund Accounting*, and GASB Statement 34, *Basic Financial Statements-and Management's Discussion and Analysis—for State and Local Governments* are included in this category.
- **Operating and non-operating expenses** – Non-operating expenses include interest on debt related to the purchase of capital assets and losses on disposal of capital assets. All other expenses are classified as operating expenses.

Scholarship Allowance
Student tuition and fees, certain auxiliary revenues and student financial assistance expenses are reported net of scholarship allowance in the *Statement of Revenues, Expenses, and Changes in Net Position*. Scholarship allowance is the difference between the stated charge for goods and services provided by the university and the amount paid by students and/or third parties making payments on the students' behalf. For the fiscal year ended June 30, 2019, the scholarship allowance for student tuition and fee revenue and auxiliary enterprise revenue totaled $117,831,000 and $25,165,000, respectively. Scholarship allowance to students is reported using the alternative method as prescribed by the National Association of College and University Business Officers (NACUBO). The alternative method is an algorithm that computes scholarship allowance on a university-wide basis rather than on an individual student basis.

Beginning Balance Adjustment- Virginia Tech Carilion School of Medicine
The Virginia Tech Carilion School of Medicine opened as a public-private partnership between the university and Carilion Clinic in 2008. On August 29, 2016, the Virginia Tech Board of Visitors affirmed its intent to acquire and integrate the Virginia Tech Carilion School of Medicine into Virginia Tech as its ninth college. On November 6, 2017, the board approved a resolution to implement the processes necessary to complete the assimilation effective July 1, 2018. In June 2018, the university received approval from the Southern Association of Colleges and Schools Commissions on Colleges (SACS_COC) and the State Council of Higher Education from Virginia (SCHEV) for the integration.

On July 1, 2018, the Virginia Tech Carilion School of Medicine officially became a college within the university. As part of this process, the university received certain fixed and movable equipment, library books and prepaid expenses from the School of Medicine. The university received no other assets or any liabilities as part of the agreement. The university made adjustments to asset values to account for items that could not be located and differences in capitalization thresholds. The university booked the following as a result of the process:

Net position, July 1, 2018	$	1,259,305
Prepaid expenses		92
Depreciable capital assets, net		360
Adjusted net position, July 1, 2018	$	1,259,757

Comparative Data
The university presents its financial information on a comparative basis. The basic financial statements include certain prior year summarized comparative information in total, but not at the level of detail required for a presentation in conformity with generally accepted accounting principles. Accordingly, the prior year information should be read in conjunction with the university's financial statements for the year ended June 30, 2018, from which the summarized information was derived.

The renovated and expanded Baseball Facilities include renovations to the stadium, a new press box, additional seating, modernized concession areas, and a new patio area, as well as a new entrance. Premium seating areas for fans and a new clubhouse for the team are also among the enhancements.

2. RELATED PARTIES

In addition to the component units discussed in Note 1, Virginia Tech also has related parties that were not considered significant. These financial statements do not include the assets, liabilities, and net position of the related parties that support university programs. The related parties of the university are: Virginia Tech Alumni Association, Virginia Tech Athletic Fund Inc., Virginia Tech Intellectual Properties Inc., Virginia Tech Corps of Cadets Alumni Inc., Virginia Tech Applied Research Corporation (VTARC), Virginia Tech Innovations Corporation (VTIC), Virginia Tech India Research and Education Forum (VTIREF) and any of the subsidiaries of these corporations.

The organizations are related to the university by affiliation agreements. These agreements require an annual audit to be performed by independent auditors. Affiliated organizations that hold no financial assets and certify all financial activities or transactions through the Virginia Tech Foundation Inc. may be exempt from the independent audit requirement. Exemption requirements are met by Virginia Tech Alumni Association, Virginia Tech Athletic Fund Inc., and Virginia Tech Corp of Cadets Alumni Inc. They are therefore not required to have an annual audit. Virginia Tech Intellectual Properties Inc., Virginia Tech Applied Research Corporation, Virginia Tech Innovations Corporation, and Virginia Tech India Research and Education Forum are required to have an annual audit. Auditors have examined the financial records of these organizations and a copy of their audit reports have or will be provided to the university.

3. LOCAL GOVERNMENT SUPPORT

The university, through the operation of its Cooperative Extension Service, maintains offices in numerous cities and counties throughout the Commonwealth of Virginia. Personnel assigned to these locations receive a portion of their compensation from local governments. Also included in the expenses of these extension offices are unit support services, which include such items as rent, telephone, supplies, equipment, and extension program expenses. The estimated amount contributed by the various local governments totaled $11,385,000 in 2019, and has been included in revenues and expenses of the accompanying financial statements. The university received other local government support of $2,352,000 in 2019.

4. CASH, CASH EQUIVALENTS, AND INVESTMENTS

The following information is provided with respect to the university's cash, cash equivalents and investments as of June 30, 2019. The following risk disclosures are required by GASB Statement 40, *Deposit and Investment Risk Disclosures*:

- **Custodial credit risk** (Category 3 deposits and investments) - The custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, a government will not be able to recover deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, a government will not be able to recover the value of investment or collateral securities that are in the possession of an outside party. The university had no category 3 deposits or investments for 2019.
- **Credit risk** – Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. GASB Statement 40 requires the disclosure of the credit quality rating on any investments subject to credit risk.
- **Concentration of credit risk** - The risk of loss attributed to the magnitude of a government's investment in a single issuer is referred to as concentration of credit risk. GASB Statement 40 requires disclosure of any issuer with which more than five percent of total investments are held. More than five percent of the university's investments are in the Federal Home Loan Banks (FHLB). These compromise 16.08% of the university's total investments. The university's investment policy requires that each individual portfolio within the primary liquidity or extended duration allocations be diversified so that not more than three percent of the value of the respective portfolios will be invested in the securities or individual trusts of any single issuer. The limitation shall not apply to securities of the U.S. Government, an agency thereof, U.S. Government sponsored enterprises, securities fully insured or fully guaranteed by the U.S. Government, or money market funds.
- **Interest rate risk** – This is the risk that interest rate changes will adversely affect the fair value of an investment. GASB Statement 40 requires disclosure of maturities for any investments subject to interest rate risk. The university uses a duration methodology to measure the maturities of its investment portfolios. The university's *Statement of Policy Governing the Investment of University Funds* established two major allocations, Primary Liquidity and Extended Duration, managed by external investment firms. Asset allocations to Primary Liquidity are targeted at 45% of total investments with a target duration of approximately 55 days. The Extended Duration allocation may be structured into three sub-portfolios: a Short Duration Portfolio, an Intermediate Duration Portfolio and a Long Duration Portfolio.
- **Foreign currency risk** – This risk refers to the possibility that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The university had no foreign investments or deposits for 2019.

Cash and Cash Equivalents

Cash deposits held by the university are maintained in accounts that are collateralized in accordance with the Virginia Security for Public Deposits Act, Section 2.2-4400, et seq., *Code of Virginia*. Cash and cash equivalents represent cash with the treasurer, cash on hand, certificates of deposit and temporary investments with original maturities of 90 days or less, and cash equivalents with the Virginia State Non-Arbitrage Program (SNAP®). SNAP® offers a professionally-managed money market mutual fund, which provides a temporary pooled investment vehicle for proceeds pending expenditure, and with record keeping, depository and arbitrage rebate calculations. SNAP ® complies with all standards of GASB Statement 79. SNAP® investments are reported using the net asset value per share, which is calculated on an amortized cost basis that provides an NAV per share that approximates fair value. Cash and cash equivalents reporting requirements are defined by GASB Statement 9, *Reporting Cash Flows of Proprietary and Nonexpendable Trust Funds and Governmental Entities that Use Proprietary Fund Accounting.*

Investments

A categorization of university investments follows. Short-term investments have an original maturity of over 90 days but less than or equal to one year. Long-term investments have an original maturity greater than one year.

Summary of investments
As of June 30, 2019
(all dollars in thousands)

	Current Assets	Noncurrent Assets	Total
Cash and cash equivalents	$ 177,096	$ 34,618	$ 211,714
Long-term investments	-	605,134	605,134
Cash and investments	$ 177,096	$ 639,752	816,848
Less cash			20,605
Total investments			$ 796,243

The investment policy of the university is established by the board of visitors and monitored by the board's Finance and Resource Management Committee. Authorized investments are set forth in the Investment of Public Funds Act, Section 2.2-4500 through 2.2-4516, et seq., *Code of Virginia*. Authorized investments include: U.S. Treasury and agency securities, corporate debt securities, asset-backed securities, mortgage-backed securities, AAA rated obligations of foreign governments, bankers acceptances and bank notes, negotiable certificates of deposit, repurchase agreements and money market funds.

All gifts, local funds, and nongeneral fund reserves and balances the university determines appropriate and permitted by law may be invested in the VTF Consolidated Endowment Program. These funds are governed by the foundation's investment and spending policies, and managed in accordance with the provisions of the Virginia Uniform Prudent Management of Institutional Funds Act.

Goodwin Hall houses the College of Engineering, including 40 instructional and research labs, eight classrooms, 150 offices, and an auditorium. The largest single donation in Virginia Tech history helped to fund construction of the 155,000-square-foot, $95.2 million facility.

Investments Measured at Fair Value including categorizaton of credit quality and interest rate risk

Investments held on June 30, 2019

(*all dollars in thousands*)

	Credit Rating	Less than 1 Year	1-5 Years	6/30/2019	Fair Value Measurement* Level 1	Level 2
Investments by fair value level						
U.S. Treasury and Agency securities (1)	N/A	$ 14,019	$ 32,409	$ 46,428	$ 45,828	$ 600
Debt securities						
Corporate bonds & notes	A1	535	8,239	8,774	-	8,774
Corporate bonds & notes	A2	3,298	12,728	16,026	-	16,026
Corporate bonds & notes	A3	2,343	12,100	14,443	-	14,443
Corporate bonds & notes	Aa2	5,391	3,466	8,857	-	8,857
Corporate bonds & notes	Aa3	5,230	4,804	10,034	-	10,034
Repurchase agreements	N/A	8,069	-	8,069	-	8,069
Asset backed securities	Aaa	7,530	31,828	39,358	-	39,358
Asset backed securities (2)	AAA	7,140	19,738	26,878	-	26,878
Federal agency securities						
Unsecured bonds and notes	Aaa	161,152	10,465	171,617	-	171,617
Mortgage backed securities	A3	-	1,016	1,016	-	1,016
Mortgage backed securities	Aaa	767	18,080	18,847	-	18,847
Mortgage backed securities (2)	AAA	-	1,367	1,367	-	1,367
Money market & mutual funds	Aaa	141	-	141	141	-
Money market & mutual funds (2)	AAA	3,822	-	3,822	3,822	-
Total investments by fair value level		219,437	156,240	375,677	$ 49,791	$ 325,886
Investments measured at net asset value (NAV)						
Deposits with VTF		3,789	-	3,789		
Dairymen's Equity w/o specific maturity				63		
Investments w/o specific maturities, held with VTF				378,387		
Total investments measured at NAV		3,789	-	382,239		
Investments not measured at fair value						
Money market fund	Aaa-mf	17,327	-	17,327		
Virginia SNAP fund (3)	AAAm	20,844	-	20,844		
Short-term investment fund (2)	AA+	156	-	156		
Total investments not measured at fair value		38,327	-	38,327		
Total investments		$ 261,553	$ 156,240	- $ 796,243		

*Debt and equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Debt securities classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the securities ' relationship to benchmark quoted prices.

(1) Credit quality ratings are not required for U.S. Government securities that are explicitly guaranteed by the U.S. Government.

(2) Rating provided by Fitch Ratings. All other ratings provided by Moody's Investor Service unless noted otherwise.

(3) Rating provided by Standard & Poor's Financial Services. All other ratings provided by Moody's Investor Service unless noted otherwise.

5. ACCOUNTS RECEIVABLE

Accounts receivable as of June 30, 2019
(all dollars in thousands)

Current receivables	
Grants and contracts	$ 52,046
Federal appropriations	6,735
Student tuition and fees	2,663
Accrued investment interest	1,300
Auxiliary enterprises and other operating activities	7,279
Total current accounts receivable before allowance	70,023
Less allowance for doubtful accounts	1,642
Net current accounts receivable	68,381
Noncurrent receivables	
Capital gifts, grants, and other receivables	11,864
Accrued investment interest	222
Build America Bond interest receivable	147
Total noncurrent accounts receivable	12,233
Total accounts receivable	$ 80,614

6. NOTES RECEIVABLE

Notes receivable as of June 30, 2019
(all dollars in thousands)

Current notes receivable	
Federal Perkins students loan program	$ 989
VTT LLC operating & equipment loan	384
Brookings student loan programs	151
Other short-term loans	385
Total current notes receivable	1,909
Less allowance for doubtful accounts	371
Net current notes receivable	1,538
Noncurrent notes receivable	
Federal Perkins students loan program	10,756
VTT LLC operating & equipment loan	3,276
Brookings student loan programs	1,479
Health Professional student loan program	593
Other short-term loans	101
Total noncurrent notes receivable	16,205
Less allowance for doubtful accounts	1,411
Net noncurrent notes receivable	14,794
Total notes receivable	$ 16,332

7. CAPITAL ASSETS

A summary of changes in capital assets for the year ending June 30, 2019
(all dollars in thousands)

	Beginning Balance	Additions	Retirements	Ending Balance
Depreciable capital assets				
Buildings	$ 1,807,883	$ 111,742	$ 2,465	$ 1,917,160
Buildings - capital leases	95,408	12,974	-	108,382
Moveable equipment	564,971	42,594	20,248	587,317
Capitalized software and other intangible assets	28,324	228	220	28,332
Fixed equipment	138,333	7,338	638	145,033
Infrastructure	128,025	411	1,029	127,407
Infrastructure - capital leases	2,483	-	-	2,483
Library books	76,975	1,221	865	77,331
Total depreciable capital assets, at cost	2,842,402	176,508	25,465	2,993,445
Less accumulated depreciation and amortization				
Buildings	581,908	46,870	2,242	626,536
Buildings - capital leases	38,962	4,984	-	43,946
Moveable equipment	418,946	40,967	18,788	441,125
Capitalized software and other intangible assets	20,843	4,572	220	25,195
Fixed equipment	74,356	6,228	397	80,187
Infrastructure	101,240	2,573	1,023	102,790
Infrastructure - capital leases	310	310	-	620
Library books	69,896	1,686	866	70,716
Total accumulated depreciation and amortization	1,306,461	108,190	23,536	1,391,115
Total depreciable capital assets, net of accumulated depreciation and amortization	1,535,941	68,318	1,929	1,602,330
Non-depreciable capital assets				
Land	46,822	-	-	46,822
Livestock	390	-	69	321
Construction in progress	144,210	94,497	113,686	125,021
Equipment in process	4,466	10,302	4,004	10,764
Software in development	457	331	-	788
Total non-depreciable capital assets	196,345	105,130	117,759	183,716
Total capital assets, net of accumulated deprecation and amortization	$ 1,732,286	$ 173,448	$ 119,688	$ 1,786,046

8. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

Accounts payable and accrued liabilities at June 30, 2019
(all dollars in thousands)

Accounts payable	$ 40,473
Accounts payable, capital projects	17,980
Accrued salaries and wages payable	84,104
Retainage payable	3,349
Total current accounts payable and accrued liabilities	$ 145,906

Retainage payable represents funds held by the university as retainage on various construction contracts for work performed. Funds retained will be remitted as agreed upon satisfactory completion of the projects.

9. UNEARNED REVENUE

Unearned revenue at June 30, 2019
(all dollars in thousands)

Grants and contracts	$ 21,846
Prepaid athletic tickets	10,788
Prepaid tuition and fees	8,175
Other auxiliary enterprises	5,589
Total unearned revenue	$ 46,398

10. COMMONWEALTH CAPITAL REIMBURSEMENT PROGRAMS AND CAPITAL GIFTS

The commonwealth has established several programs to provide state-supported institutions of higher education with bond proceeds for financing the acquisition and replacement of instructional and research equipment and facilities. During fiscal year 2019, funding has been provided to the university from three programs (21st Century program, Central Maintenance Reserve program and the Equipment Trust Fund program) managed by the Virginia College Building Authority (VCBA). The VCBA issues bonds and uses the proceeds to reimburse the university and other institutions of higher education for expenses incurred in the acquisition of equipment and facilities. The university also receives capital funding for equipment and facilities from private gifts, grants, and contracts.

The *Statement of Revenues, Expenses, and Changes in Net Position* includes the amounts listed below for the year ended June 30, 2019, in "Capital Grants and Gifts" line item for equipment and facilities. Part of the funding for these programs is a receivable from the commonwealth at June 30, 2019 as shown in the subsequent paragraph *(all dollars in thousands)*:

VCBA 21st Century program	$	46,138
VCBA Central Maintenance Reserve program		10,466
VCBA Equipment Trust Fund program		15,165
Private gifts		5,356
Grants and contracts		2,087
	$	79,212

The line items, "Due from the Commonwealth of Virginia", on the *Statement of Net Position* for the year ended June 30, 2019, include pending reimbursements from the following programs *(all dollars in thousands)*:

	Current	Noncurrent
VCBA Equipment Trust Fund program	$ 15,017	$ -
VCBA 21st Century program	-	6,174
	$ 15,017	$ 6,174

11. SHORT-TERM DEBT

On March 31, 2008, the Virginia Tech Board of Visitors approved the short-term financing of capital projects with commercial paper issued through the Virginia Municipal League/Virginia Association of Counties (VML/VACo) commercial paper program. This tax-exempt commercial paper financing program gives the university access to a revolving facility to finance or refinance up to $50 million for capital projects under construction that have been previously approved for debt financing by either the board of visitors or the General Assembly of the Commonwealth of Virginia.

At June 30, 2019, the amount outstanding was $34,275,000. The average days-to-maturity was 28 days with a weighted average effective interest rate of 2.34%.

12. SUMMARY OF LONG-TERM INDEBTEDNESS

Bonds Payable

The university has issued two categories of bonds pursuant to section 9 of Article X of the *Constitution of Virginia*.

Section 9(d) bonds are revenue bonds which are limited obligations of the university, payable exclusively from pledged general revenues, and which are not legal or moral debts of the Commonwealth of Virginia. Pledged general revenues include general fund appropriations, student tuition and fees, facilities and administrative (indirect) cost recoveries, auxiliary enterprise revenues, and other revenues not required by law to be used for another purpose. The university has issued section 9(d) bonds directly through underwriters and also participates in the Public Higher Education Financing Program (Pooled Bond Program) created by the Virginia General Assembly in 1996. Through the Pooled Bond Program, the Virginia College Building Authority issues section 9(d) bonds with the proceeds used to purchase debt obligations (notes) of the university and other institutions of higher education. The notes are secured by pledged general revenues of the university.

Section 9(c) bonds are general obligation revenue bonds issued by the Commonwealth of Virginia on behalf of the university and secured by the net revenues of the completed project and the full faith, credit, and taxing power of the Commonwealth of Virginia.

Bond covenants related to some of these bonds, both 9(c) and 9(d), require the use of established groups of funds called systems. The Virginia Tech Foundation Inc. and the investment firms of Standish Mellon and Merganser hold these funds in trust for managing the net revenues and debt service of certain university auxiliaries. The revenue bonds issued by the Dormitory and Dining Hall System, the Athletic Facilities System, the University Services System (includes Career and Professional Development, Center for the Arts, Health Services, Recreational Sports, Student Engagement and Campus Life, Student Organizations, and Rescue Squad), and the Utility System (includes Virginia Tech Electric Service) are secured by a pledge of each system's net revenues generated from student or customer fees, and are further secured by the pledged general revenues of the university.

Notes Payable

Notes payable are debt obligations between the Virginia College Building Authority (VCBA) and the university. VCBA issues bonds through the Pooled Bond Program and uses the proceeds to purchase debt obligations (notes) of the university. The notes are secured by the pledged general revenues of the university.

Capital Leases

Capital leases represent the university's obligation primarily to the Virginia Tech Foundation Inc. for lease agreements related to facilities. The leased facilities include the Student Services building, the Public Safety building, the Hunter Andrews Information Systems building addition, the Integrated Life Sciences building (ILSB) which includes a separate lease for a vivarium located in the ILSB, the North End Center building and parking garage, the Prince Street building in Alexandria, Virginia, the Kentland Dairy complex, the Advanced Propulsion and Power Lab, the Virginia Automation park, the Applied Projects building, and the VTTI Intern Hub. The assets under capital leases are recorded at the net present value of the minimum lease payments during the lease term.

Revolving Lines of Credit

The university has revolving lines of credit with Branch Banking and Trust Company; The First Bank and Trust Company; and Wells Fargo Bank, N.A. with maximum principal amounts totaling $190,000,000. As of June 30, 2019, the university has not requested any advances on these revolving lines of credit.

Long-term Debt Payable Activity
As of June 30, 2019
(all dollars in thousands)

	Beginning Balance	Additions	Retirements	Ending Balance	Current Portion
Bonds payable					
Section 9(c) general obligation revenue bonds	$ 124,480	$ -	$ 9,621	$ 114,859	$ 8,108
Section 9(d) revenue bonds	58,588	-	3,122	55,466	3,050
Notes payable	233,585	16,705	19,191	231,099	18,415
Capital lease obligations	67,652	12,974	3,790	76,836	4,513
Total long-term debt payable	$ 484,305	$ 29,679	$ 35,724	$ 478,260	$ 34,086

Future Principal Commitments
For fiscal years subsequent to 2019
(all dollars in thousands)

	Section 9(c) Bonds	Section 9(d) Bonds	Notes Payable	Capital Lease Obligations	Total Long-term Debt Payable
2020	$ 8,108	$ 3,050	$ 18,415	$ 4,513	$ 34,086
2021	8,442	2,440	16,215	4,730	31,827
2022	8,804	2,560	16,850	3,928	32,142
2023	9,173	2,650	16,800	3,930	32,553
2024	9,554	2,760	15,830	4,127	32,271
2025 - 2029	47,492	15,955	77,215	22,549	163,211
2030 - 2034	12,595	18,675	35,070	20,155	86,495
2035 - 2039	-	4,425	17,670	12,904	34,999
Unamortized premiums (discounts)	10,691	2,951	17,034	-	30,676
Total future principal requirements	$ 114,859	$ 55,466	$ 231,099	$ 76,836	$ 478,260

Future Interest Commitments
For fiscal years subsequent to 2019
(*all dollars in thousands*)

	Section 9(c) Bonds	Section 9(d) Bonds	Notes Payable	Capital Lease Obligations	Total Long-term Debt Payable
2020	$ 4,431	$ 1,994	$ 8,566	$ 3,511	$ 18,502
2021	4,082	1,890	7,750	3,234	16,956
2022	3,707	1,772	6,956	2,962	15,397
2023	3,318	1,674	6,154	2,777	13,923
2024	2,905	1,570	5,416	2,580	12,471
2025 - 2029	7,976	5,916	18,174	9,657	41,723
2030 - 2034	995	2,934	6,553	4,966	15,448
2035 - 2039	-	155	1,348	1,043	2,546
Total future interest requirements	$ 27,414	$ 17,905	$ 60,917	$ 30,730	$ 136,966

Future Principal Commitments by System
For fiscal years subsequent to 2019
(all dollars in thousands)

	Section 9(c) Bonds	Section 9(d) Bonds	Notes Payable	Capital Lease Obligations	Total Long-term Debt Payable
Athletic system					
Principal	$ -	$ 510	$ 37,640	$ -	$ 38,150
Unamortized premiums (discounts)	-	(3)	4,524	-	4,521
Total for athletic system	-	507	42,164	-	42,671
Dormitory and dining hall system					
Principal	83,666	44,720	20,395	-	148,781
Unamortized premiums (discounts)	8,493	2,764	1,609	-	12,866
Total for dormitory and dining hall system	92,159	47,484	22,004	-	161,647
Electric service utility system					
Principal	-	3,790	1,261	-	5,051
Unamortized premiums (discounts)	-	122	53	-	175
Total for utility system	-	3,912	1,314	-	5,226
University services system					
Principal	-	2,805	45,314	-	48,119
Unamortized premiums (discounts)	-	38	3,106	-	3,144
Total for university services system	-	2,843	48,420	-	51,263
All systems					
Principal	83,666	51,825	104,610	-	240,101
Unamortized premiums (discounts)	8,493	2,921	9,292	-	20,706
Total for all systems	92,159	54,746	113,902	-	260,807
Other nonsystem debt					
Principal	20,502	690	109,455	76,836	207,483
Unamortized premiums (discounts)	2,198	30	7,742	-	9,970
Total for other nonsystem debt	22,700	720	117,197	76,836	217,453
Total future principal requirements	$ 114,859	$ 55,466	$ 231,099	$ 76,836	$ 478,260

13. DETAIL OF LONG-TERM INDEBTEDNESS

As of June 30, 2019
(all dollars in thousands)

	Interest rates	Maturity	Principal Payable	Unamortized Premium (Discount)	Ending Balance
Bonds Payable					
Revenue bonds - Section 9(d)					
Athletic system					
Series 2015B, issued $510	2.50% - 3.50%	2035	$ 510	$ (3)	$ 507
Dormitory and dining hall system					
Series 2015A, issued $51,425	2.00% - 5.00%	2035	44,720	2,764	47,484
Electric service utility system					
Series 2015D, issued $4,390	2.75% - 4.00%	2035	3,790	122	3,912
University services system					
Recreational Sports auxiliary					
Series 2015C, issued $3,280	2.00% - 4.00%	2035	2,805	38	2,843
Other nonsystem debt					
Northern Virginia Graduate Center					
Series 2015E, issued $2,635 - refunding series 2004A	3.00%	2020	690	30	720
Total revenue bonds			$ 52,515	$ 2,951	$ 55,466
General obligation revenue bonds - Section 9(c)					
Dormitory and dining hall system					
Series 2009D, issued $1,891 - partial refunding series 2004A	5.00%	2022	945	95	1,040
Series 2012A, issued $942 - partial refunding series 2004A	5.00%	2024	704	99	803
Series 2013B, issued $3,576 - partial refunding series 2007A	4.00% - 5.00%	2027	3,242	378	3,620
Series 2013B, issued $7,842 - partial refunding series 2007A	4.00% - 5.00%	2027	7,115	828	7,943
Series 2015B, issued $10,671 - partial refunding series 2008B	4.00% - 5.00%	2028	9,820	1,589	11,409
Series 2016B, issued $24,200 - partial refunding series 2009B	2.00% - 5.00%	2029	24,200	3,702	27,902
Series 2016B, issued $2,310 - partial refunding series 2009B	2.00% - 5.00%	2029	2,310	353	2,663
Series 2010A, issued $34,650	3.00% - 5.00%	2030	21,935	361	22,296
Series 2011A, issued $18,860	4.34%	2031	13,395	1,088	14,483
Total dormitory and dining hall system			83,666	8,493	92,159
Other nonsystem general obligation revenue bonds					
Parking facilities					
Series 2009D, issued $190 - partial refunding series 2006B	5.00%	2022	120	9	129
Series 2013B, issued $218 - partial refunding series 2006B	4.00% - 5.00%	2026	184	19	203
Series 2015B, issued $921 - partial refunding series 2008B	4.00% - 5.00%	2028	848	137	985
Series 2010A, issued $745	2.00% - 5.00%	2030	460	7	467
Series 2016B, issued $18,890 - partial refunding series 2009B	2.00% - 5.00%	2034	18,890	2,026	20,916
Total other nonsystem general obligation revenue bonds			20,502	2,198	22,700
Total general obligation revenue bonds			104,168	10,691	114,859
Total bonds payable			$ 156,683	$ 13,642	$ 170,325
Notes Payable					
Athletic system					
Series 2007B, issued $2,860 - partial refunding series 2001A	4.00% - 4.50%	2020	$ 965	$ -	$ 965
Series 2009B, issued $8,705	2.00% - 5.00%	2020	405	41	446
Series 2010B, issued $11,540 - partial refunding series 2001A	4.00% - 5.00%	2027	7,625	499	8,124
Series 2012B, issued $32,365 - refunding series 2004D revenue bond	3.00% - 5.00%	2029	23,260	3,112	26,372
Series 2016A, issued $5,385 - partial refunding series 2009B	3.00% - 5.00%	2030	5,385	872	6,257
Total athletic system			37,640	4,524	42,164
Dormitory and dining hall system					
Series 2014B, issued $3,695 - refunding series 2004B	3.00% - 5.00%	2020	785	68	853
Series 2012A, issued $1,350 - partial refunding series 2005	5.00%	2025	1,060	129	1,189
Series 2014B, issued $340 - partial refunding series 2005	3.00% - 5.00%	2026	205	23	228
Series 2010A, issued $9,650	3.75% - 5.50%	2031	6,840	263	7,103
Series 2018A, issued $11,505	4.00% - 5.00%	2039	11,505	1,126	12,631
Total dormitory and dining hall system			20,395	1,609	22,004
Electric service utility system					
Series 2007B, issued $646 - partial refunding series 2000A	4.00% - 5.00%	2020	222	-	222
Series 2007B, issued $1,060 - partial refunding series 2002A	4.00% - 4.50%	2020	189	2	191
Series 2010B, issued $345 - partial refunding series 2000A	5.00% - 5.75%	2021	215	9	224
Series 2010B, issued $770 - partial refunding series 2002A	5.25%	2023	635	42	677
Total electric service utility system			1,261	53	1,314

University services system					
Career Services auxiliary					
Series 2007B, issued $1,621 - partial refunding series 2002A	4.00% - 4.50%	2020	289	4	293
Series 2010B, issued $1,190 - partial refunding series 2002A	5.25%	2023	975	64	1,039
Center for the Arts auxiliary					
Series 2010A, issued $19,445	3.75% - 5.60%	2036	15,390	430	15,820
Series 2011A, issued $19,375	3.00% - 5.00%	2037	16,250	677	16,927
Health Services auxiliary					
Series 2009B, issued $4,365	2.00% - 5.00%	2020	210	22	232
Series 2009B, issued $12,420	2.00% - 5.00%	2020	600	64	664
Series 2009A, issued $1,475	2.75% - 5.00%	2021	75	4	79
Series 20015B, issued $800 - partial refunding series 2009A	3.00% - 5.00%	2029	800	103	903
Series 2016A, issued $2,780 - partial refunding series 2009B	3.00% - 5.00%	2030	2,780	451	3,231
Series 2016A, issued $7,945 - partial refunding series 2009B	3.00% - 5.00%	2030	7,945	1,287	9,232
Total university services system			45,314	3,106	48,420
Other nonsystem notes payable					
Boiler pollution controls					
Series 2014B, issued $720 - partial refunding series 2006A	3.00% - 5.00%	2024	535	66	601
Series 2016A, issued $375 - partial refunding series 2006A	3.00%	2027	375	30	405
Campus heating plant					
Series 2009B, issued $5,875	2.00% - 5.00%	2020	275	28	303
Series 2014B, issued $1,790 - partial refunding series 2007A	3.00% - 5.00%	2026	1,605	199	1,804
Series 2016A, issued $575 - partial refunding series 2007A	3.00% - 5.00%	2028	575	89	664
Series 2016A, issued $3,625 - partial refunding series 2009B	3.00% - 5.00%	2030	3,625	587	4,212
Chiller plant					
Series 2011A, issued $7,515	3.00% - 5.00%	2032	5,785	378	6,163
Infectious waste facility					
Series 2007B, issued $359 - partial refunding series 2000A	4.00% - 4.50%	2020	123	-	123
Series 2010B, issued $190 - partial refunding series 2000A	5.00% - 5.75%	2021	120	5	125
Goodwin Hall					
Series 2011A, issued $13,410	5.00%	2020	2,215	226	2,441
Series 2011A, issued $12,695	3.00% - 5.00%	2032	9,780	639	10,419
Holtzman Alumni Center and Skelton Conference Center					
Series 2010B, issued $3,215 - partial refunding series 2003A	4.38% - 5.00%	2021	1,685	122	1,807
Series 2012A, issued $12,320 - partial refunding series 2003A	4.75%	2031	10,115	743	10,858
ICTAS II					
Series 2009B, issued $13,045	2.00% - 5.00%	2020	630	67	697
Series 2016A, issued $8,345 - partial refunding series 2009B	3.00% - 5.00%	2030	8,345	1,351	9,696
Kelly Hall					
Series 2014B, issued $6,040 - partial refunding series 2006A	3.00% - 5.00%	2024	4,515	556	5,071
Series 2016A, issued $3,180 - partial refunding series 2006A	3.00%	2027	3,180	252	3,432
Life Sciences I Facility					
Series 2012A, issued $3,985 - partial refunding series 2005	5.00%	2025	3,130	382	3,512
Series 2014B, issued $1,005 - partial refunding series 2005	3.00% - 5.00%	2026	615	69	684
Steger Hall					
Series 2007B, issued $5,649 - partial refunding series 2002A	4.00% - 4.50%	2020	1,007	13	1,020
Series 2010B, issued $10,155 - partial refunding series 2002A	4.00% - 5.25%	2028	9,405	315	9,720
Surge space building					
Series 2014B, issued $2,730 - partial refunding series 2006A	3.00% - 5.00%	2022	1,720	173	1,893
Unified Communications					
Series 2015A, issued $6,160	5.00%	2023	3,780	413	4,193
Veterinary medicine instruction addition					
Series 2012B, issued $9,820	3.00% - 5.00%	2033	7,720	799	8,519
Virginia Tech Carilion biosciences addition					
Series 2017A and 2017B, issued $24,630	2.75% - 3.30%	2038	24,630	190	24,820
Series 2018B, issued $3,965	3.12% - 5.00%	2039	3,965	50	4,015
Total other nonsystem notes payable			109,455	7,742	117,197
Total notes payable			$ 214,065	$ 17,034	$ 231,099

Capital leases payable

North End Center building and parking garage	$ 35,977	$ -	$ 35,977
Kentland Farm dairy complex	12,405	-	12,405
Integrated Life Sciences (ILSB) building and vivarium	10,738	-	10,738
Applied Projects Building	10,384	-	10,384
Student Services building, Public Safety building, Hunter Andrews addition, Prince Street building, and VTTI Intern Hub	7,332	-	7,332
Total capital leases payable	$ 76,836	$ -	$ 76,836

14. LONG-TERM DEBT DEFEASANCE

Previous Years

In previous fiscal years, in accordance with GASB Statement 7, *Advance Refundings Resulting in the Defeasance of Debt,* the university excluded from its financial statements the assets in escrow and the debt payable that were defeased in-substance. For the year ended June 30, 2019, bonds and notes payable considered defeased in previous years totaled $28,910,000.

Debt Defeasance – Gains (Losses)

Prior to fiscal year 2014, gains and losses from the defeasance of long-term debt were netted and included in the long-term debt payable (current and noncurrent) and depreciable capital assets, net categories on the *Statement of Net Position.* Beginning in fiscal year 2014, GASB 65, *Items Previously Reported as Assets and Liabilities*, reclassifies gains and losses on defeased debt to deferred outflows of resources or deferred inflows of resources. The tables below provide detail on the unamortized gains and losses included in the deferred outflows of resources and deferred inflows of resources by bond category for defeased outstanding debt from prior years.

Deferred Outflows for Debt Defeasance
As of June 30, 2019
(all dollars in thousands)

	Beginning Balance	Additions	Retirements	Ending Balance
Bonds payable				
Section 9(c) general obligation revenue bonds	$ (2,648)	$ -	$ 282	$ (2,366)
Section 9(d) revenue bonds	(56)	-	28	(28)
Notes payable	(6,054)	-	680	(5,374)
Total deferred outflows for debt defeasance	$ (8,758)	$ -	$ 990	$ (7,768)

Deferred Inflows for Debt Defeasance
As of June 30, 2019
(all dollars in thousands)

	Beginning Balance	Additions	Retirements	Ending Balance
Bonds payable				
Section 9(c) general obligation revenue bonds	$ 138	$ -	$ (20)	$ 118
Notes payable	806	-	(72)	734
Total deferred inflows for debt defeasance	$ 944	$ -	$ (92)	$ 852

15. CHANGE IN OTHER LIABILITIES

A summary of the changes in other liabilities for the year ended June 30, 2019
(all dollars in thousands)

	Beginning Balance	Additions	Reductions	Ending Balance	Current Portion
Accrued compensated absences	$ 45,408	$ 41,338	$ 39,172	$ 47,574	$ 28,202
Federal student loan program contribution refundable	12,954	236	177	13,013	
Net pension liability	386,163		32,208	353,955	
Other postemployment benefits	226,743		19,625	207,118	3,551
Total other liabilities	$ 671,268	$ 41,574	$ 91,182	$ 621,660	$ 31,753

16. LEASE COMMITMENTS

The university has entered into numerous agreements to lease land, buildings, and equipment. With some of these agreements, the university is committed under various operating leases for equipment and space. In general, the leases are for three- to ten-year terms with renewal options. The university expects similar leases to replace these leases during the normal course of business. The total lease expense was approximately $26,745,000 for the year ended June 30, 2019. This amount includes approximately $15,058,000 in lease payments to the Virginia Tech Foundation Inc. for office and laboratory space. In addition, the total lease expense includes approximately $3,364,000 of short-term equipment rentals that can be terminated at any time.

A summary of future minimum lease payments under operating leases as of June 30, 2019, follows *(all dollars in thousands):*

2020	$	22,130
2021		17,782
2022		9,790
2023		6,172
2024		3,065
2025 – 2029		11,547
2030 – 2034		3,250
2035 – 2039		2,550
2040 – 2044		2,220
2045 – 2049		2,231
2050 – 2054		2,242
2055 – 2059		2,039
2060 – 2063		1,171
Total	$	86,189

17. CAPITAL IMPROVEMENT COMMITMENTS

The amounts listed in the following tables represent the value of obligations remaining on capital improvement project contracts. These obligations are for future effort and as such have not been accrued as expenses or liabilities on the university's financial statements. Outstanding contractual commitments for capital improvement projects at June 30, 2019 are listed below.

Capital Commitments by Project
(all dollars in thousands)

Creativity and innovation district	$	77,146
Virginia Tech Carilion health sciences expansion		35,819
Kentland, Phase II		5,815
Undergraduate science labs – new building		3,913
Student wellness improvements		2,514
Other projects		8,002
Total	$	133,209

Capital Commitments by Funding Source
(all dollars in thousands)

VCBA 21st Century bonds (commonwealth)	$	26,198
Bonds and notes payable (university)		95,792
University cost recoveries		6,069
Auxiliary enterprise funds		3,143
Other funding sources		2,007
Total	$	133,209

18. PENSION PLAN

Plan Descriptions

All full-time, salaried, permanent employees of state agencies are automatically covered by the VRS State Employee Retirement Plan (SERP) or the Virginia Law Officer's Retirement System (VaLORS) retirement plans upon employment, unless they are eligible faculty and choose to enroll in the optional retirement program described in Note 19. These plans are single-employer plans treated as cost-sharing plans for financial reporting purposes. They are administered by the Virginia Retirement System (VRS, or the System) along with plans for other employer groups in the Commonwealth of Virginia. 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 as 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 State Employee Retirement Plan – Plan 1, Plan 2, and, Hybrid and two different benefit structures for covered employees in the VaLORS Retirement Plan – Plan 1 and Plan 2. 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 described below:

Retirement Plan Provisions by Plan Structure

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.

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.

Hybrid Retirement Plan

The Hybrid Retirement Plan combines the features of a defined benefit plan and a defined contribution plan.

• The defined benefit component 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.

Eligible Members

Eligible Members – Plan 1

Employees are in Plan 1 if their membership date is before July 1, 2010, they were vested as of January 1, 2013, and they have not taken a refund. VRS non-hazardous duty covered 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. Members who were eligible for an optional retirement plan (ORP) and had prior service under Plan 1 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 1 or ORP.

Eligible Members – Plan 2
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. VRS non-hazardous duty covered 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. Members who were eligible for an optional retirement plan (ORP) and have prior service under Plan 2 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 2 or ORP.

Eligible Members – Hybrid Plan
Employees are in the Hybrid Retirement Plan if their membership date is on or after January 1, 2014. This includes:

- State 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

*Some state employees are not eligible to participate in the Hybrid Retirement Plan. They include members of the Virginia Law Officers' Retirement System (VaLORS), and employees eligible for an optional retirement plan (ORP) who have prior service under Plan 1 or Plan 2. These employees must select Plan 1 or Plan 2 (as applicable) or the ORP plan.

Retirement Contributions

Retirement Contributions - Plan 1
State employees, excluding state elected officials, and optional retirement plan participants, 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 - Plan 2
Same as Plan 1.

Retirement Contributions - Hybrid Plan
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.

Creditable Service

Creditable Service - Plan 1
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 - Plan 2
Same as Plan 1.

Creditable Service - Hybrid Plan
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 Contributions Component: Under the defined contribution component, creditable service is used to determine vesting for the employer contribution portion of the plan.

Vesting

Vesting - Plan 1
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 - Plan 2
Same as Plan 1.

Vesting - Hybrid Plan
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 Contributions 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.

Calculating the Benefit

Calculating the Benefit - Plan 1

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 - Plan 2

See definition under Plan 1.

Calculating the Benefit - Hybrid Plan

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

Average Final Compensation - Plan 1

A member's average final compensation is the average of the 36 consecutive months of highest compensation as a covered employee.

Average Final Compensation - Plan 2

A member's average final compensation is the average of their 60 consecutive months of highest compensation as a covered employee.

Average Final Compensation - Hybrid Plan

Same as Plan 2. It is used in the retirement formula for the defined benefit component of the plan.

Service Retirement Multiplier

Service Retirement Multiplier - Plan 1

For SERP, the retirement multiplier is a factor used in the formula to determine a final retirement benefit. The retirement multiplier for non-hazardous duty members is 1.70%. For VaLORS, the retirement multiplier for VaLORS employees is 1.70% or 2.00%.

Service Retirement Multiplier - Plan 2

For SERP, same as Plan 1 for service earned, purchased or granted prior to January 1, 2013. For non-hazardous duty members the retirement multiplier is 1.65% for creditable service earned, purchased, or granted on or after January 1, 2013. For VaLORS, the retirement multiplier for VaLORS employees is 2.00%.

Service Retirement Multiplier - Hybrid Plan

Defined Benefit Component: SERP - 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. VaLORS - Not applicable.

Defined Contribution Component: Not applicable.

Normal Retirement Age

Normal Retirement Age - Plan 1

For SERP, age 65. For VaLORS, age 60.

Normal Retirement Age - Plan 2

For SERP, normal Social Security retirement age. For VaLORS, same as Plan 1.

Normal Retirement Age - Hybrid Plan

Defined Benefit Component: SERP - Same as Plan 2; VaLORS - Not applicable.

Defined Contribution Component: Members are eligible to receive distributions upon leaving employment, subject to restrictions.

Earliest Unreduced Retirement Eligibility

Earliest Unreduced Retirement Eligibility - Plan 1

For SERP, age 65 with at least five years (60 months) of creditable service or at age 50 with at least 30 years of creditable service. For VaLORS, age 60 with at least five years of creditable service or age 50 with at least 25 years of creditable service.

Earliest Unreduced Retirement Eligibility - Plan 2

For SERP, normal Social Security retirement age with at least five years (60 months) of creditable service or when age and service equal 90. For VaLORS, same as Plan 1.

Earliest Unreduced Retirement Eligibility - Hybrid Plan

Defined Benefit Component: SERP - Normal Social Security retirement age and have at least five years (60 months) of creditable service or when their age and service equal 90; VaLORS - Not applicable.

Defined Contribution Component: Members are eligible to receive distributions upon leaving employment, subject to restrictions.

Earliest Reduced Retirement Eligibility

Earliest Reduced Retirement Eligibility - Plan 1

For SERP, age 55 with at least five years (60 months) of creditable service or age 50 with at least 10 years of creditable service. For VaLORS, age 50 with at least five years of creditable service.

Earliest Reduced Retirement Eligibility - Plan 2

For SERP, age 60 with at least five years (60 months) of creditable service. For VaLORS, same as Plan 1.

Earliest Reduced Retirement Eligibility - Hybrid Plan

Defined Benefit Component: SERP - Age 60 with at least five years (60 months) of creditable service; VaLORS - Not applicable.

Defined Contribution Component: Members are eligible to receive distributions upon leaving employment, subject to restrictions.

Cost-of-Living Adjustment (COLA) in Retirement

Cost-of-Living Adjustment (COLA) in Retirement - Plan 1

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 rules:

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 retires directly from short-term or long-term disability under the Virginia Sickness and Disability Program (VSDP).
- 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 - Plan 2

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 rules and exceptions are the same as Plan 1.

Cost-of-Living Adjustment (COLA) in Retirement - Hybrid Plan

Defined Benefit Component: The COLA is the same as Plan 2. The eligibility rules and exceptions are the same as Plan 1 and Plan 2.

Defined Contribution Component: Not applicable.

Disability Coverage

Disability Coverage - Plan 1

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. Most state employees are covered under the Virginia Sickness and Disability Program (VSDP), and are not eligible for disability retirement. VSDP members are subject to a one-year waiting period before becoming eligible for non-work-related disability benefits.

Disability Coverage - Plan 2

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. Most state employees are covered under the Virginia Sickness and Disability Program (VSDP), and are not eligible for disability retirement. VSDP members are subject to a one-year waiting period before becoming eligible for non-work related disability benefits.

Disability Coverage - Hybrid Plan

State employees (including Plan 1 and Plan 2 opt-ins) participating in the Hybrid Retirement Plan are covered under the Virginia Sickness and Disability Program (VSDP), and are not eligible for disability retirement. Hybrid members (including Plan 1 and Plan 2 opt-ins) covered under VSDP are subject to a one-year waiting period before becoming eligible for non-work-related disability benefits.

Purchase of Prior Service

Purchase of Prior Service - Plan 1

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 - Plan 2

Same as Plan 1.

Purchase of Prior Service - Hybrid Plan

Defined Benefit Component: Same as Plan 1, with the exception that 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 state agencies by the Virginia General Assembly. Employees are required to contribute 5.00% of their compensation toward their retirement. Prior to July 1, 2012, the 5.00% member contribution was paid by the employer. Beginning July 1, 2012 state employees were required to pay the 5.00% member contribution and the employer was required to provide a salary increase equal to the amount of the increase in the employee-paid member contribution. Each state agency's contractually required contribution rate for the year ended June 30, 2019 was 13.52% of covered employee compensation for employees in the VRS State Employee Retirement Plan. For employees in the VaLORS Retirement Plan, the contribution rate was 24.88% of covered employee compensation. These rates were based on an actuarially determined rates from an actuarial valuation as of June 30, 2017. 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. Contributions from Virginia Tech to the VRS State Employee Retirement Plan were $36,003,000 and $36,466,000 for the years ended June 30, 2019 and June 30, 2018, respectively. Contributions from Virginia Tech to the VaLORS Retirement Plan were $496,000 and $483,000 for the years ended June 30, 2019 and June 30, 2018, respectively.

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At June 30, 2019, Virginia Tech reported a liability of $349,811,000 for its proportionate share of the VRS State Employee Retirement Plan Net Pension Liability and a liability of $4,144,000 for its proportionate share of the VaLORS Retirement Plan Net Pension Liability. The Net Pension Liability was measured as of June 30, 2018 and the total pension liability used to calculate the Net Pension Liability was determined by an actuarial valuation as of that date. Virginia Tech's proportion of the Net Pension Liability was based on Virginia Tech's actuarially determined employer contributions to the pension plan for the year ended June 30, 2018 relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2018, Virginia Tech's proportion of the VRS State Employee Retirement Plan was 6.462% as compared to 6.551% at June 30, 2017. At June 30, 2018, the Virginia Tech's proportion of the VaLORS Retirement Plan was 0.665% as compared to 0.670% at June 30, 2017.

For the year ended June 30, 2019, Virginia Tech recognized pension expense of $15,062,000 for the VRS State Employee Retirement Plan and $162,000 the VaLORS Retirement Plan. Since there was a change in proportionate share between June 30, 2017 and June 30, 2018, a portion of the pension expense was related to deferred amounts from changes in proportion and from differences between employer contributions and the proportionate share of employer contributions.

At June 30, 2019, Virginia Tech reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources *(all dollars in thousands):*

	SERP		VaLORS	
	Deferred Outflows	Deferred Inflows	Deferred Outflows	Deferred Inflows
Differences between expected and actual experience	$ -	$ 21,147	$ 3	$ 117
Net difference between projected and actual earnings on pension plan investments	-	9,136	-	68
Change in assumptions	2,342	-	-	145
Changes in proportion and differences between employer contributions and proportionate share of contributions	734	4,779	5	27
Employer contributions subsequent to the measurement date	36,003		496	
Total	$ 39,079	$ 35,062	$ 504	$ 357

A total of $36,499,000 ($36,003,000 for SERP and $496,000 for VaLORS) reported as deferred outflows of resources related to pensions resulting from Virginia Tech's contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in 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 *(all dollars in thousands)*:

Year ended June 30,	SERP	VaLORS
2020	$ (5,687)	$ (180)
2021	$ (8,253)	$ (75)
2022	$ (17,070)	$ (88)
2023	$ (976)	$ (6)
2024	$ -	$ -

Actuarial Assumptions

VRS State Employee Retirement Plan (SERP)

The total pension liability for the VRS State Employee 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	2.5%
Salary increases, including inflation	3.5% – 5.35%
Investment rate of return	7.0%, net of pension plan investment expense, including inflation*

Mortality rates (SERP)

Pre-Retirement: RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.

Post-Retirement: RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year; females set back 1 year with 1.5% increase compounded from ages 70 to 85.

Post-Disablement: RP-2014 Disability Life Mortality Table projected with Scale BB to 2020; males 115% of rates; female 130% of rates.

The actuarial assumptions used in the June 30, 2017 valuation were based on the results of an actuarial experience study for the 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	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
Line of Duty Disability	Increased rate from 14% to 25%

VaLORS Retirement Plan

The total pension liability for the VaLORS 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	2.5%
Salary increases, including inflation	3.5% – 4.75%
Investment rate of return	7.0%, net of pension plan investment expense, including inflation*

Mortality rates (VaLORS)

Pre-Retirement: RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement: RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 1 year.

Post-Disablement: RP-2014 Disability Life Mortality Table projected with Scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2017 valuation were based on the results of an actuarial experience study for the 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	Update to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience
Retirement Rates	Increased age 50 rates and lowered rates at older ages
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
Line of Duty Disability	Decreased rate from 50% to 35%

** 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 7.0%. However, since the difference was minimal, and a more conservative 7.0% 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 7.0% to simplify preparation of pension liabilities.*

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 67, less that system's fiduciary net position. As of June 30, 2018, NPL amounts for the VRS State Employee Retirement Plan and the VaLORS Retirement Plan are as follows *(all dollars in thousands):*

	SERP	VaLORS
Total Pension Liability	$ 23,945,821	$ 2,047,161
Plan Fiduciary Net Position	18,532,189	1,423,980
Employers' NPL (Asset)	$ 5,413,632	$ 623,181
Plan Fiduciary Net Position as a percentage of the total pension liability	77.39%	69.56%

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 67 in the System's notes to the financial statements and required supplementary information.

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%.

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 System 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 Virginia Tech for the VRS State Employee Retirement Plan and the VaLORS 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, all agencies are assumed 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.

Sensitivity of Virginia Tech's Proportionate Share of the Net Pension Liability to Changes in the Discount Rate

The following presents Virginia Tech's proportionate share of the VRS State Employee Retirement Plan (SERP) and the VaLORS Retirement Plan net pension liability using the discount rate of 7.00%, as well as what Virginia Tech's proportionate share of the 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 *(all dollars in thousands):*

	1.00% Decrease (6.00%)	Current Discount Rate (7.00%)	1.00% Increase (8.00%)
Virginia Tech's proportionate share of the VRS SERP net pension liability	$ 529,633	$ 349,811	$ 198,441
Virginia Tech's proportionate share of the VaLORS net pension liability	$ 5,880	$ 4,144	$ 2,706

Pension Plan Fiduciary Net Position

Detailed information about the VRS State Employee Retirement Plan's Fiduciary Net Position or the VaLORS Retirement Plan's Fiduciary Net Position is available in the separately issued VRS 2018 Comprehensive Annual Financial Report (CAFR). A copy of the 2018 VRS CAFR may be downloaded from the VRS website at http://www.varetire.org/Pdf/Publications/2018-annual-report.pdf, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

Payables to the Pension Plan

The amount of payables outstanding to the VRS State Employee Retirement Plan (SERP) and the VaLORS Retirement Plan at June 30, 2019, was approximately $2.1 million for legally required contributions into the plans.

19. DEFINED CONTRIBUTION PLANS

Optional Retirement Plan

Full-time faculty and certain administrative staff may participate in optional retirement plans as authorized by the *Code of Virginia* rather than the VRS retirement plan. These optional retirement plans are defined contribution plans offered through Teachers Insurance and Annuity Association – College Retirement Equities Fund (TIAA-CREF), and Fidelity Investments Tax-Exempt Services Company. There are two defined contribution plans. Plan 1 is for employees hired prior to July 1, 2010, and retirement benefits received are based upon the employer's 10.4 percent, plus net investment gains or losses. Plan 2 is for employees hired on or after July 1, 2010, and retirement benefits received are based upon the employer's 8.5 percent contribution and the employee's 5.0 percent contribution plus net investment gains or losses. Individual contracts issued under the plan provide for full and immediate vesting of both the university's and the employees' contributions. Total pension costs under this plan were approximately $29,677,000 for year ended June 30, 2019. Contributions to the optional retirement plan were calculated using the base salary amount of approximately $346,475,000 for this fiscal year.

Deferred Compensation Plan

Employees of the university are employees of the Commonwealth of Virginia. State employees may participate in the commonwealth's Deferred Compensation Plan. Participating employees can contribute to the plan each pay period with the commonwealth matching up to $20 per pay period. The dollar amount match can change depending on the funding available in the commonwealth's budget. The Deferred Compensation Plan is a qualified defined contribution plan under section 401(a) of the Internal Revenue Code. The university expense for matching contributions to this plan, which is an amount assessed by the commonwealth, was approximately $2,395,000 for the fiscal year 2019.

Federal Pension Plans

Certain Cooperative Extension Service (CES) professional employees are participants in either the Federal Employee Retirement System (FERS) or the Federal Civil Service Retirement System (CSRS). The FERS and CSRS are defined benefit plans in which benefits are based upon the highest base pay over any three consecutive years and the years of creditable service. The costs under these plans were approximately $91,000 for the year ended June 30, 2019. Contributions to the FERS and CSRS were calculated using the base salary amount of approximately $740,000 for the fiscal year 2019.

In addition, the university contributed $29,000 in employer contributions to the Thrift Savings Plan for the year ended June 30, 2019. The Thrift Savings Plan is a defined contribution plan in which the university matches employee contributions within certain limitations.

20. OTHER POSTEMPLOYMENT BENEFITS

The university participates in postemployment benefit programs that are sponsored by the commonwealth and administered by the Virginia Retirement System (VRS, or the System) or the Department of Human Resource Management. These programs include the Pre-Medicare Retiree Healthcare program, Virginia Sickness and Disability program, Group Life Insurance program, Retiree Health Insurance Credit program, and Line of Duty Act program. The specific information for each of these OPEB (Other Postemployment Benefit) programs is described below:

Plan Descriptions

Pre-Medicare Retiree Healthcare (PMRH) program - All full-time and part-time permanent salaried Virginia Tech employees who are covered under the Virginia Retirement System (VRS), the State Police Officers' Retirement System (SPORS), or the Virginia Law Officers' Retirement System (VaLORS) are eligible to participate in the commonwealth's healthcare program upon employment. Retirees who are not yet eligible for Medicare health benefits may participate in this program by meeting certain eligibility requirements.

Virginia Sickness and Disability (VSDP) program - All full-time and part-time permanent salaried Virginia Tech employees who are covered under the Virginia Retirement System (VRS), the State Police Officers' Retirement System (SPORS), or the Virginia Law Officers' Retirement System (VaLORS) hired on or after January 1, 1999 are automatically covered by VSDP upon employment. The VSDP program also covers Virginia Tech employees hired before January 1, 1999 who elected to transfer to VSDP rather than retain their eligibility to be considered for disability retirement.

Group Life Insurance (GLI) program - All full-time, salaried, permanent employees of Virginia Tech are automatically covered by the GLI program upon employment. (NOTE: In addition to the Basic Group Life Insurance benefit, members are also eligible to elect additional coverage for themselves as well as a spouse or dependent children through the Optional Group Life Insurance program. For members who elect the optional group life insurance coverage, the insurer bills Virginia Tech directly for the premiums. Virginia Tech deducts these premiums from members' paychecks and pays the premiums to the insurer. Since this is a separate and fully insured program, it is not included as part of the GLI program postemployment benefit.)

Retiree Health Insurance Credit (HIC) program - All full-time, salaried, permanent employees of Virginia Tech are automatically covered by the HIC program. Members earn one month of service credit toward the benefit for each month they are employed and for which Virginia Tech pays contributions to VRS. The health insurance credit is a tax-free reimbursement in an amount set by the General Assembly for each year of service credit against qualified health insurance premiums retirees pay for single coverage, excluding any portion covering the spouse or dependents. The credit cannot exceed the amount of the premiums and ends upon the retiree's death.

Line of Duty Act (LODA) program - All paid employees and volunteers in hazardous duty positions in Virginia localities and hazardous duty employees who are covered under the Virginia Retirement System (VRS), the State Police Officers' Retirement System (SPORS), or the Virginia Law Officers' Retirement System (VaLORS) are automatically covered by the LODA program. As required by statute, the VRS is responsible for managing the assets of the program. The Virginia Tech contributions are determined by the VRS actuary using anticipated program costs and the number of covered individuals associated with all participating employers.

Plan Provisions

PMRH program

Eligible employees

For a VRS retiree to participate in the Pre-Medicare Retiree Healthcare (PMRH) program, the participant must:

- be a retiring state employee who is eligible for a monthly retirement benefit from the VRS, and
- be receiving (not deferring) the annuity or periodic benefit immediately upon retirement*, and
- have his or her last employer before retirement be the Commonwealth of Virginia, and
- be eligible for coverage (even if not enrolled) as an active employee in the State Health Benefits Program until his or her retirement date (not including extended coverage), and
- have submitted within 31 days of his or her retirement date an enrollment form to his or her benefits administrator to enroll.

(* A retirement contribution or leave without pay status for retirement was reported in the month immediately prior to retirement date. Some faculty members may also be eligible if they are paid on an alternate pay cycle but maintain eligibility for active coverage until their retirement date.)

For an Optional Retirement Plan (ORP) retiree to participate in the PMRH program, the participant must:

- be a terminating state employee who is eligible for a benefit from one of the qualified ORP vendors, and
- have his or her last employer before termination be the Commonwealth of Virginia, and
- be eligible for coverage (even if not enrolled) in the State Employee Health Benefits Program at the time of termination, and
- meet the age and service requirements for an immediate retirement benefit under the VRS plan that would have been applicable had ORP coverage not been selected, and
- enroll in the State Retiree Health Benefits Program no later than 31 days from the date that coverage (or eligibility for coverage) was lost due to termination of employment.

(This applies to ORP terminations effective January 1, 2017, or later. For those who terminated employment prior to January 1, eligibility should be determined based on the policy in place at the time of their termination.)

There are no assets accumulated in a trust to pay benefits for this program.

VSDP program

Eligible employees

The Virginia Sickness and Disability Program (VSDP), also known as the Disability Insurance Trust Fund was established January 1, 1999 to provide short-term and long-term disability benefits for non-work-related and work-related disabilities.

Eligible employees are enrolled automatically upon employment. They include:

- Full-time and part-time permanent salaried Virginia Tech employees covered under VRS, SPORS and ValORS (members new to VaLORS following its creation on October 1, 1999, have been enrolled since the inception of VSDP).
- State employees hired before January 1, 1999, who elected to transfer to VSDP rather than retain their eligibility to be considered for VRS disability retirement.
- Virginia Tech faculty members who elect the VRS defined benefit plan.

Benefit Amounts

The Virginia Sickness and Disability Program (VSDP) provides the following benefits for eligible retirees:

- Long-Term Disability – If an employee becomes disabled within five years of his or her normal retirement age, the employee will receive up to five years of VSDP benefits, provided he or she remains medically eligible.
- Long-Term Care Plan – The program also includes a self-funded long-term care plan that assists with the cost of covered long-term care services.

Cost-of-Living Adjustment (COLA)

During periods an employee receives long-term disability benefits, the LTD benefit may be increased annually by an amount recommended by the actuary and approved by the board.

- Plan 1 employees vested as of 1/1/2013 – 100% of the VRS Plan 1 COLA (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%).
- Plan 1 employee non-vested as of 1/1/2013, Plan 2 and Hybrid Plan employees – 100% of the VRS Plan 2 and Hybrid COLA (The first 2% increase in the Consumer Price Index for all Urban Consumers (CPI-U) and half of any additional increase (up to 2%) up to a maximum COLA of 3%).

For participating full-time employees taking service retirement, the creditable compensation may be increased annually by an amount recommended by the actuary and approved by the board, from the date of the commencement of the disability to the date of retirement.

- 100% of the increase in the pay over the previous plan year for continuing VSDP members in the State, SPORS and VaLORS Plans, with a maximum COLA of 4.00%

For participating full-time employees receiving supplemental (work-related) disability benefits, the creditable compensation may be increased annually by an amount recommended by the actuary and approved by the Board, from the date of the commencement of the disability to the date of retirement

GLI program

Eligible employees

The GLI program was established July 1, 1960, for state employees, teachers, and employees of political subdivisions that elect the program. Basic group life insurance coverage is automatic upon employment. Coverage ends for employees who leave their position before retirement eligibility or who take a refund of their member contributions and accrued interest.

Benefit amounts

The benefits payable under the GLI program have several components:

- Natural Death Benefit – The natural death benefit is equal to the employee's covered compensation rounded to the next highest thousand and then doubled.
- Accidental Death Benefit – The accidental death benefit is double the natural death benefit.
- Other Benefit Provisions – In addition to the basic natural and accidental death benefits, the program provides additional benefits provided under specific circumstances. These include: accidental dismemberment benefit, safety belt benefit, repatriation benefit, felonious assault benefit, and accelerated death benefit option.

Reduction in benefit amounts

The benefit amounts provided to members covered under the GLI program are subject to a reduction factor. The benefit amount reduces by 25% on January 1 following one calendar year of separation. The benefit amount reduces by an additional 25% on each subsequent January 1 until it reaches 25% of its original value.

Minimum Benefit Amount and Cost-of-Living Adjustment (COLA)

For covered members with at least 30 years of creditable service, there is a minimum benefit payable under the GLI program. The minimum benefit was set at $8,000 by statute. The amount increases annually based on the VRS Plan 2 cost-of-living adjustment and was increased to $8,279 effective July 1, 2018.

Retiree HIC program

Eligible Employees

The HIC program was established January 1, 1990 for retired state employees covered under VRS, SPORS, VaLORS and the Judicial Retirement System (JRS) who retire with at least 15 years of service credit. Eligible employees are enrolled automatically upon employment. They include full-time and part-time permanent salaried state employees covered under VRS, SPORS, VaLORS and JRS.

Benefit amounts

The HIC program provides the following benefits for eligible employees:

- At Retirement – For employees who retire with at least 15 years of service credit, the monthly benefit is $4.00 per year of service per month with no cap on the benefit amount.
- Disability Retirement – For employees other than state police officers who retire on disability or go on long-term disability under the Virginia Sickness and Disability Program (VSDP), the monthly benefit is $120.00 or $4.00 per year of service, whichever is higher. For state police officers with a non-work-related disability who retire on disability or go on long-term disability under VSDP, the monthly benefit is $120.00 or $4.00 per year of service, whichever is higher. For state police officers with a work-related disability, there is no benefit provided under the HIC program if the premiums are being paid under the Virginia Line of Duty Act (LODA). However, they may receive the credit for premiums paid for other qualified health plans.

HIC program notes

- The monthly HIC benefit cannot exceed the individual premium amount.
- Employees who retire after being on long-term disability under VSDP must have at least 15 years of service credit to qualify for HIC as a retiree.

LODA program

Eligible Employees

The eligible employees of the LODA program are paid employees and volunteers in hazardous duty positions in Virginia localities and hazardous duty employees who are covered under the Virginia Retirement System (VRS), the State Police Officers' Retirement System (SPORS), or the Virginia Law Officers' Retirement System (VaLORS).

Benefit Amounts

The Line of Duty Act Program (LODA) provides death and health insurance benefits for eligible individuals.

Death benefits – The Line of Duty Act program death benefit is a one-time payment made to the beneficiary or beneficiaries of a covered individual. Amounts vary as follows:

- $100,000 when a death occurs as the direct or proximate result of performing duty as of January 1, 2006, or after.
- $25,000 when the cause of death is attributed to one of the applicable presumptions and occurred earlier than five years after the retirement date.
- An additional $20,000 benefit is payable when certain members of the National Guard and U.S. military reserves are killed in action in any armed conflict on or after October 7, 2001.

Health insurance benefits – The Line of Duty Act program provides health insurance benefits. Prior to July 1, 2017, these benefits were managed though the various employee plans and maintained the benefits that existed prior to the employee's death or disability. These premiums were reimbursed to the employer by the LODA program. Beginning July 1, 2017, the health insurance benefits are managed through the Virginia Department of Human Resource Management (DHRM). The health benefits are modeled after the State Employee Health benefits Program plans and provide consistent, premium-free continued health plan coverage for LODA-eligible disabled individuals, survivors and family members. Individuals receiving the health insurance benefits must continue to meet eligibility requirements as defined by the Line of Duty Act.

Contributions

PMRH program

Virginia Tech does not pay a portion of the retirees' healthcare premium; however, since both active employees and retirees are included in the same pool for purposes of determining health insurance rates, this generally results in a higher rate for active employees. Therefore, Virginia Tech effectively subsidizes the costs of the participating retirees' healthcare through payment of Virginia Tech's portion of the premiums for active employees.

VSDP program

The contribution requirements for the VSDP are governed by §51.1-1140 of the *Code of Virginia*, as amended, but may be impacted as a result of funding provided to state agencies by the Virginia General Assembly. Each employer's contractually required employer contribution rate for VSDP for the year ended June 30, 2019 was 0.62% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2017. The actuarially determined rate was expected to finance the costs of benefits payable during the year, with an adjustment to amortize the accrued OPEB assets. Contributions to the VSDP from Virginia Tech were $950,000 and $977,000 for the years ended June 30, 2019 and June 30, 2018, respectively.

GLI program

The contribution requirements for the GLI program are governed by §51.1-506 and §51.1-508 of the *Code of Virginia*, as amended, but may be impacted as a result of funding provided to state agencies and school divisions by the Virginia General Assembly. The total rate for the GLI program was 1.31% of covered employee compensation. This was allocated into an employee and an employer component using a 60/40 split. The employee component was 0.79% (1.31% X 60%) and the employer component was 0.52% (1.31% X 40%). Employers may elect to pay all or part of the employee contribution, however the employer must pay all of the employer contribution. Each employer's contractually required employer contribution rate for the year ended June 30, 2019 was 0.52% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2017. The actuarially determined rate, when combined with employee contributions, was expected to finance the costs of benefits payable during the year, with an additional amount to finance any unfunded accrued liability. Contributions to the GLI program from Virginia Tech were $3,039,000 and $2,880,000 for the years ended June 30, 2019 and June 30, 2018, respectively.

Retiree HIC program

The contribution requirement for active employees is governed by §51.1-1400(D) of the *Code of Virginia*, as amended, but may be impacted as a result of funding provided to state agencies by the Virginia General Assembly. Each state agency's contractually required employer contribution rate for the year ended June 30, 2019 was 1.17% of covered employee compensation for employees in the Retiree HIC program. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2017. The actuarially determined rate was expected to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. Contributions from Virginia Tech to the Retiree HIC program were $6,836,000 and $6,653,000 for the years ended June 30, 2019 and June 30, 2018, respectively.

LODA program

The contribution requirements for the LODA program are governed by §9.1-400.1 of the *Code of Virginia*, as amended, but may be impacted as a result of funding provided to state agencies by the Virginia General Assembly. Each employer's contractually required employer contribution rate for the LODA program for the year ended June 30, 2019 was $705.77 per covered full-time-equivalent employee. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2017 and represents the pay-as-you-go funding rate and not the full actuarial cost of the benefits under the program. The actuarially determined pay-as-you-go rate was expected to finance the costs and related expenses of benefits payable during the year. Contributions to the LODA program from Virginia Tech were $32,000 and $25,000 for the years ended June 30, 2019 and June 30, 2018, respectively.

Liabilities, Expenses, and Deferred Inflows/Outflows of Resources

At June 30, 2019, Virginia Tech reported the following net liabilities (assets) for its proportionate share of these programs:

PMRH	$	85,746,000
VSDP	$	(8,583,000)
GLI	$	44,770,000
HIC	$	75,868,000
LODA	$	735,000

These liabilities were measured as of June 30, 2018 and the total OPEB liability used to calculate each net liability was determined by an actuarial valuation as of that date. Virginia Tech's proportion of the PMRH OPEB liability was based on its healthcare premium contributions as a percentage of the total employer's healthcare premium contributions for all participating employers. For VSDP, GLI, HIC and LODA programs, Virginia Tech's proportionate share of each liability was based on Tech's actuarially determined employer contributions to each plan for the year ended June 30, 2018 relative to the total of the actuarially determined employer contributions for all participating employers.

At June 30, 2018, Tech's proportionate share was:

PMRH	8.53% as compared to 8.34% at June 30, 2017.
VSDP	3.81% as compared to 3.79% at June 30, 2017.
GLI	2.95% as compared to 2.87% at June 30, 2017.
HIC	8.32% as compared to 8.19% at June 30, 2017.
LODA	.234% as compared to .253% at June 30, 2017.

For the year ended June 30, 2019, Virginia Tech recognized the following expenses for these programs:

PMRH	$	2,325,000
VSDP	$	458,000
GLI	$	547,000
HIC	$	6,712,000
LODA	$	57,000

Since there was a change in proportionate share between measurement dates, a portion of these expenses was related to deferred amounts from changes in proportion.

At June 30, 2019, Virginia Tech reported deferred outflows/inflows of resources related to these programs from the following sources *(all dollars in thousands)*:

Program	Source	Deferred Outflow	Deferred Inflow
PMRH	Difference between expected and actual experience	$ -	$ 17,289
	Change in assumptions	-	34,294
	Changes in proportion	4,520	843
	Amounts associated with transactions subsequent to measurement date	3,525	
	Total	$ 8,045	$ 52,426

VSDP	Difference between expected and actual experience	$ -	$ 364
	Net difference between projected and actual earnings on investments	-	507
	Change in assumptions	-	507
	Changes in proportion	30	25
	VT contributions subsequent to measurement date	950	
	Total	$ 980	$ 1,403
GLI	Difference between expected and actual experience	$ 2,189	$ 803
	Net difference between projected and actual earnings on investments	-	1,456
	Change in assumptions	-	1,866
	Changes in proportion	1,236	11
	VT contributions subsequent to measurement date	3,039	
	Total	$ 6,464	$ 4,136
HIC	Difference between expected and actual experience	$ 53	$ -
	Net difference between projected and actual earnings on investments	-	124
	Change in assumptions	-	690
	Changes in proportion	1,202	20
	VT contributions subsequent to measurement date	6,836	
	Total	$ 8,091	$ 834
LODA	Difference between expected and actual experience	$ 105	$ -
	Net difference between projected and actual earnings on investments	-	2
	Change in assumptions	-	85
	Changes in proportion	29	47
	VT contributions subsequent to measurement date	32	
	Total	$ 166	$ 134

The following amounts reported as deferred outflows of resources related to each program, resulting from Virginia Tech's contributions subsequent to the measurement date, will be recognized as a reduction of each program's net liability (asset) in the fiscal year ending June 30, 2020 *(all dollars in thousands)*:

PMRH	$ 3,525
VSDP	$ 950
GLI	$ 3,039
HIC	$ 6,836
LODA	$ 32

Other amounts reported as deferred outflows/inflows of resources related to the OPEB programs will be recognized in each program's expense in future reporting periods as follows *(all dollars in thousands)*:

Year ended June 30:	PMRH	VSDP	GLI	HIC	LODA
2020	$ (9,948)	$ (308)	$ (427)	$ 42	$ -
2021	$ (9,948)	$ (308)	$ (427)	$ 42	$ -
2022	$ (9,948)	$ (308)	$ (427)	$ 42	$ -
2023	$ (9,948)	$ (155)	$ (9)	$ 89	$ -
2024	$ (7,155)	$ (143)	$ 347	$ 175	$ -
Thereafter	$ (959)	$ (151)	$ 232	$ 31	$ -

Actuarial Assumptions (PMRH)

The total Pre-Medicare Retiree Healthcare OPEB liability was based on an actuarial valuation with a valuation date of June 30, 2018. The Department of Human Resource Management selected the economic, demographic and healthcare claim cost assumptions. The actuary provided guidance with respect to these assumptions. Initial healthcare costs trend rates used were 8.21 percent for medical and pharmacy and 4.0 percent for dental. The ultimate trend rates used were 5.0 percent for medical and pharmacy and 4.0 percent for dental.

Valuation Date	Actuarially determined contribution rates are calculated as of June 30, one year prior to the end of the fiscal year in which contributions are reported.
Measurement Date	June 30, 2018 (one year prior to the end of the fiscal year)
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level dollar, Closed
Effective Amortization Period	6.19 years
Discount Rate	3.87%
Projected Salary Increases	4.0%
Medical Trend Under 65	Medical and Rx: 8.21% to 5.00% Dental: 4.00% Before reflecting Excise tax
Year of Ultimate Trend	2025

Mortality Rates

Pre-Retirement:	RP-2014 Employee Rates projected with Scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year
Post-Retirement	RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males and females set back 1 year
Post-Disablement:	RP-2014 Disabled Mortality Rates projected with Scale BB to 2020; males 115% of rates; females 130% of rates

Changes of Assumptions

The following actuarial assumptions were updated since the June 30, 2017 valuation based on the recent experience study are as follows:

- Spousal coverage – reduced rate from 50% to 35%
- Retiree participation – reduced rate from 70% to 60%

Spousal coverage and retiree participation were both reduced based on a blend of recent experience and the prior year assumptions. The mortality assumption was modified slightly to reflect mortality improvement projection scale BB to 2020. Additionally, the discount rate was increased from 3.58% to 3.87% based on the Bond Buyers GO 20 Municipal Bond Index.

Actuarial Assumptions (VSDP, GLI, HIC, LODA)

The total liability for these programs 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	2.5 percent
Salary increases, including inflation –	
General state employees	3.5 percent – 5.35 percent
Teachers	3.5 percent - 5.95 percent
SPORS employees	3.5 percent – 4.75 percent
VaLORS employees	3.5 percent – 4.75 percent
JRS employees	4.5 percent
Locality – General employees	3.5 percent – 5.35 percent
Locality – Hazardous Duty employees	3.5 percent – 4.75 percent
Medical cost trend rates assumption (LODA only) –	
Under age 65	7.75 percent – 5.00 percent
Ages 65 and older	5.75 percent – 5.00 percent
Investment rate of return (VSDP, GLI, HIC)	7.00 percent, net of OPEB plan investment expenses, including inflation*
Year of ultimate trend rate (LODA)	Fiscal year ended 2024
Investment rate of return (LODA)	3.89 percent, net of OPEB 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% (3.89% LODA). However, since the difference was minimal, a more conservative 7.00% (3.89% LODA) investment return assumption has been used. Since LODA is funded on a current-disbursement basis, the assumed annual rate of return of 3.89% was used since it approximates the risk-free rate of return.

Mortality rates – General State Employees (VSDP, GLI, HIC, LODA)

Pre-Retirement: RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.

Post-Retirement: RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year; females set back 1 year with 1.5% increase compounded from ages 70 to 85.

Post-Disablement: RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males 115% of rates; females 130% of rates.

The actuarial assumptions used in the June 30, 2017 valuation were based on the results of an actuarial experience study for the 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	Updated 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 through 9 years of service
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 25%

Mortality rates – Teachers (GLI)

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 Health 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	Updated 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 through 9 years of service
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change

Mortality rates – SPORS Employees (VSDP, GLI, HIC, LODA)

Pre-Retirement: RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement: RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement: RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2017 valuation were based on the results of an actuarial experience study for the 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	Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted rates to better fit experience
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Increased rate from 60% to 85%

Mortality rates – VaLORS Employees (VSDP, LGI, HIC, LODA)

Pre-Retirement: RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement: RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement: RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2017 valuation were based on the results of an actuarial experience study for the 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	Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted rates to better fit experience at each year through 9 years of service
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Decreased rate from 50% to 35%

Mortality rates – JRS Employees (GLI, HIC)

Pre-Retirement: RP-2014 Employee Rates to age 80, Healthy Annuitant Rates at ages 81 and older projected with scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.

Post-Retirement: RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males set forward 1 year; females set back 1 year with 1.5% compounding increase from ages 70 to 85.

Post-Disablement: RP-2014 Disability Mortality Rates projected with Scale BB to 2020; males 115% of rates; females 130% of rates.

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	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Decreased rates at first retirement eligibility
Withdrawal Rates	No change
Disability Rates	Removed disability rates
Salary Scale	No change

Mortality rates – Largest Ten Locality Employers - General Employees (GLI)

Pre-Retirement: RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 95% of rates; females 105% of rates.

Post-Retirement: RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 3 years; females 1.0% increase compounded from ages 70 to 90.

Post-Disablement: RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years, 110% of rates; females 125% of rates

The actuarial assumptions used in the June 30, 2017 valuation were based on the results of an actuarial experience study for the 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	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages and extended final retirement age from 70 to 75
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Lowered disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 20%

Mortality rates – Non-Largest Ten Locality Employers - General Employees (GLI)

Pre-Retirement: RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 95% of rates; females 105% of rates.

Post-Retirement: RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 3 years; females 1.0% increase compounded from ages 70 to 90.

Post-Disablement: RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years, 110% of rates; females 125% of rates.

The actuarial assumptions used in the June 30, 2017 valuation were based on the results of an actuarial experience study for the 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	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages and extended final retirement age from 70 to 75
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Lowered disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14 to 15%

Mortality rates – Largest Ten Locality Employers – Hazardous Duty Employees (GLI, LODA)

Pre-Retirement: RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement: RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement: RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2017 valuation were based on the results of an actuarial experience study for the 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	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Increased disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 60% to 70%

Mortality rates – Non-Largest Ten Locality Employers – Hazardous Duty Employees (GLI, LODA)

Pre-Retirement: RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement: RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement: RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2017 valuation were based on the results of an actuarial experience study for the 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	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Decreased rate from 60% to 45%

Changes to the LODA Program Associated with HB 1345 (2016) and HB 2243 (2017)

The following changes were made to the LODA Program as a result of legislation in 2016 and 2017, but were specifically not considered in the June 30, 2017 actuarial valuation results which were rolled forward to the measurement date of June 30, 2018. There is limited actuarial experience on which to base the adjustments and the combined impact of the changes was not considered to be material to the final results. These changes will be factored into future actuarial valuations for the LODA Program if and when sufficient experience develops.

- The discontinuance of spouse health care coverage, if a covered spouse divorces a disabled employee or a covered surviving spouse remarries.
- The potential for VRS's periodic review of the disability status of a disabled employee.
- For those beneficiaries who become eligible for health care benefits as the result of a disability occurring after June 30, 2017, the suspension of health care benefits in years when VRS certifies current income exceeds salary at the time of the disability, indexed for inflation.

Net OPEB Liability

The net OPEB liability (NOL) for VSDP, GLI, HIC and LODA represents each program's total OPEB liability determined in accordance with GASB Statement 74, less the associated fiduciary net position. As of June 30, 2018, NOL amounts for each program are as follows *(amounts expressed in thousands):*

	VSDP	GLI	HIC	LODA
Total OPEB Liability	$ 237,733	$ 3,113,508	$ 1,008,184	$ 315,395
Plan Fiduciary Net Position	462,961	1,594,773	95,908	1,889
Employers' Net OPEB Liability (Asset)	$ (225,228)	$ 1,518,735	$ 912,276	$ 313,506
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	194.74%	51.22%	9.51%	.60%

The total OPEB liability is calculated by the VRS actuary, and each plan's fiduciary net position is reported in the VRS financial statements. The net OPEB liability is disclosed in accordance with the requirements of GASB Statement 74 in the VRS notes to the financial statements and required supplementary information.

Long-Term Expected Rate of Return

VSDP, GLI, HIC programs

The long-term expected rate of return on the VRS 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 the VRS 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	Weighted Average Arithmetic Long-term Expected Rate of Return	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%.

LODA program

The long-term expected rate of return on LODA OPEB Program's investments was set at 3.89% for this valuation. Since LODA is funded on a current-disbursement basis, it is not able to use the VRS Pooled Investments 7.00% assumptions. Instead, the assumed annual rate of return of 3.89% was used since it approximates the risk-free rate of return. This Single Equivalent Interest Rate (SEIR) is the applicable municipal bond index rate based on the Bond Buyer General Obligation 20-year Municipal Bond Index as of the measurement date of June 30, 2018.

Discount Rate

PMRH program

The discount rate was increased from 3.58% to 3.87% based on the Bond Buyers GO 20 Municipal Bond Index as of the measurement date of June 30, 2017. Spousal coverage was reduced from 50% to 35% based on a blend of recent spousal coverage election rates and the prior year assumption. Based on the 2017 census, new retirees since 1/1/2015 have chosen to cover their spouses approximately 20% of the time. However, active employees cover their spouses at a rate close to 53%.

VSDP, GLI, HIC, LODA programs

The discount rate used to measure the total OPEB liability was 7.00% for VSDP, GLI, and HIC; 3.89% for LODA. The projection of cash flows used to determine the discount rate assumed that member contributions will be made per the VRS guidance 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 Virginia Tech for each of these programs will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly. From July 1, 2018 on, employers are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the OPEB fiduciary net position for these programs was projected to be available to make all projected future benefit payments of eligible employees. Therefore the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total OPEB liability for each of these programs.

Sensitivity of Virginia Tech's Proportionate Share of the Net OPEB Liability to Changes in the Discount Rate

The following presents Virginia Tech's proportionate share of the net OPEB liability for PMRH using the discount rate of 3.87%; VSDP, GLI, and HIC using the discount rate of 7.00%; and LODA using the discount rate of 3.89%. As well, Virginia Tech's proportionate share of the net OPEB liability is presented as it would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate:

Virginia Tech's Proportionate Share of Net OPEB Liability (Asset)

	1.00% Decrease	Current Discount Rate	1.00% Increase
	2.87%	3.87%	4.87%
PMRH	$ 91,746	$ 85,746	$ 80,041
	6.00%	7.00%	8.00%
VSDP	$ (8,274)	$ (8,583)	$ (8,848)
GLI	$ 58,508	$ 44,770	$ 33,614
HIC	$ 83,901	$ 75,868	$ 68,957
	2.89%	3.89%	4.89%
LODA	$ 842	$ 735	$ 649

Sensitivity of Virginia Tech's Proportionate Share of the Net PMRH OPEB and LODA OPEB Liabilities to Changes in the Health Care Trend Rate

Because the Pre-Medicare Retiree Healthcare and Line of Duty Act programs contain provisions for the payment of health insurance premiums, the liabilities are also impacted by the health care trend rates. The following presents Virginia Tech's proportionate share of the net OPEB liability for these programs using health care trend rate of 8.21% decreasing to 5% for PMRH and 7.75% decreasing to 5.00% for LODA. As well, Virginia Tech's proportionate share of the net OPEB liability is presented as it would be if it were calculated using a health care trend rate that is one percentage point lower or one percentage point higher than the current rate:

Virginia Tech's Proportionate Share of Net OPEB Liability

	1.00% Decrease	Current Health Care Trend Rate	1.00% Increase
PMRH	7.21% decreasing to 4.00%	8.21% decreasing to 5.00%	9.21% decreasing to 6.00%
	$ 76,480	$ 85,746	$ 96,638
LODA	6.75% decreasing to 4.00%	7.75% decreasing to 5.00%	8.75% decreasing to 6.00%
	$ 626	$ 735	$ 871

Fiduciary Net Position

Detailed information about Fiduciary Net Position for each of these programs is available in the separately issued VRS 2018 Comprehensive Annual Financial Report (CAFR). A copy of the 2018 VRS CAFR may be downloaded from the VRS website at http://www.varetire.org/Pdf/Publications/2018-annual-report.pdf, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

Payables to the VSDP, GLI, and HIC OPEB programs

The amount payable outstanding at June 30, 2019 to each of these OPEB programs was as follows:

VSDP	$ 5,000
GLI	$ 175,000
HIC	$ 390,000

21. GRANTS, CONTRACTS, AND OTHER CONTINGENCIES

The university has received federal grants for specific purposes that are subject to review and audit by the grantor agencies. Claims against these resources are generally conditional upon compliance with the terms and conditions of grant agreements and applicable federal regulations, including the outlay of resources for allowable purposes. Any disallowance resulting from a federal audit may become a liability of the university.

In addition, the university is required to comply with various federal regulations issued by the Office of Management and Budget. Failure to comply with certain system requirements of these regulations may result in questions concerning the allowance of related direct and indirect charges pursuant to such agreements. As of June 30, 2019, the university estimates that no material liabilities will result from such audits or questions.

22. FEDERAL DIRECT LENDING PROGRAM

The university participates in the Federal Direct Lending Program. Under this program, the university receives funds from the U.S. Department of Education for Stafford and Parent PLUS Loan Programs and disburses these funds to eligible students. The funds can be applied to outstanding student tuition and fee charges or refunded directly to the student.

These loan proceeds are treated as student payments with the university acting as a fiduciary agent for the student. Therefore, the receipt of the funds from the federal government is not reflected in the federal government grants and contracts total on the *Statement of Revenues, Expenses, and Changes in Net Position.* The activity is included in the noncapital financing section of the *Statement of Cash Flows*. For the fiscal year ended June 30, 2019, cash provided by the program totaled $143,901,000 and cash used by the program totaled $143,829,000.

23. APPROPRIATIONS

The Appropriation Act specifies that unexpended general fund appropriations remaining on the last day of the current year, ending on June 30, 2019, shall be reappropriated for expenditure in the first month of the next year, beginning on July 1, 2019, except as may be specifically provided otherwise by the Virginia General Assembly. The governor may, at his discretion, unallot funds from the reappropriated balances that relate to unexpended appropriations for payments to individuals, aid to localities, or any pass-through grants.

Adjustments made to the university's original appropriation during this fiscal year are as follows (*all dollars in thousands*):

Original legislative appropriation	
(per Chapter 806)	
Education and general programs	$ 234,041
Student financial assistance	21,288
Commonwealth Research Initiative	5,389
Unique military activities	2,284
Virginia Research Investment fund	375
Total appropriation	263,377
Adjustments	
Central appropriation	1,702
Commonwealth Research Initiative and Federal Action Contingency Trust	539
Student financial assistance	387
Other adjustments	158
Total adjustments	2,786
Adjusted appropriation	$ 266,163

Appropriations receivable of $373,000 for brain cancer treatment from the Virginia Research Investment Fund is included in the current portion of the Due from the Commonwealth line on the financial statements.

24. EXPENSES BY NATURAL CLASSIFICATION WITHIN FUNCTIONAL CLASSIFICATION

The university's operating expenses by functional classification for the year ended June 30, 2019
(all dollars in thousands)

	Compensation and Benefits	Contractual Services	Travel	Supplies and Materials	Other Operating Expenses	Sponsored Program Subcontracts	Scholarships and Fellowships	Total
Instruction	$ 361,688	$ 16,768	$ 6,890	$ 7,926	$ 3,977	$ 282	$ 1,376	$ 398,907
Research	216,692	24,969	14,665	21,426	7,296	29,216	16,683	330,947
Public service	60,938	16,998	6,402	2,960	3,941	1,176	411	92,826
Academic support	70,004	14,175	1,820	8,082	4,482	25	338	98,926
Student services	17,775	3,068	1,377	1,379	617	87	153	24,456
Institutional support	62,113	5,547	2,023	1,299	1,621	21	813	73,437
Operations and maintenance	29,752	10,188	271	15,412	36,118	-	23	91,764
Student financial assistance	282	1	4	2	82	-	18,995	19,366
Auxiliary enterprises	112,347	27,218	10,669	39,000	37,966	27	691	227,918
Subtotal before other costs								1,358,547
Depreciation and amortization expense								108,190
Loan administrative fees and collection costs								1,200
Total operating expenses	$ 931,591	$ 118,932	$ 44,121	$ 97,486	$ 96,100	$ 30,834	$ 39,483	$ 1,467,937

25. COMPONENT UNITS

The component units' statements on the following pages, and subsequent notes, comply with the Governmental Accounting Standards Board (GASB) presentation format. Both Virginia Tech Foundation Inc. and Virginia Tech Services Inc. follow the Financial Accounting Standards Board (FASB) presentation format in their audited financial statements. Consequently, reclassifications have been made to convert their statements to the GASB format.

Consolidating Statement of Net Position

The financial position for the university's component units as of June 30, 2019

(all dollars in thousands)

	Virginia Tech Foundation	Virginia Tech Services	Total Component Units
Assets			
Current Assets			
Cash and cash equivalents	$ 15,050	$ 2,059	$ 17,109
Short-term investments	14,482	2,151	16,633
Accounts and contributions receivable, net	60,167	1,240	61,407
Notes receivable, net	665	-	665
Inventories	343	-	343
Prepaid expenses	1,601	209	1,810
Other assets	2,227	-	2,227
Total current assets	94,535	5,659	100,194
Noncurrent assets			
Cash and cash equivalents	78,985	-	78,985
Accounts and contributions receivable, net	98,212	-	98,212
Notes and deeds of trust receivable, net	21,831	-	21,831
Net investments in direct financing leases	77,533	-	77,533
Irrevocable trusts held by others, net	7,652	-	7,652
Long-term investments	1,444,294	-	1,444,294
Depreciable capital assets, net	194,420	943	195,363
Nondepreciable capital assets	84,337	-	84,337
Intangible assets, net	634	-	634
Other assets	4,702	-	4,702
Total noncurrent assets	2,012,600	943	2,013,543
Total assets	2,107,135	6,602	2,113,737
Liabilities			
Current liabilities			
Accounts payable and accrued liabilities	8,618	165	8,783
Accrued compensated absences	525	106	631
Deferred revenue	6,461	531	6,992
Long-term debt payable	22,557	-	22,557
Other liabilities	1,637	765	2,402
Total current liabilities	39,798	1,567	41,365
Noncurrent liabilities			
Accrued compensated absences	151	-	151
Deferred revenue	439	871	1,310
Long-term debt payable	205,864	-	205,864
Liabilities under trust agreements	23,938	-	23,938
Agency deposits held in trust	446,093	-	446,093
Other liabilities	9,523	84	9,607
Total noncurrent liabilities	686,008	955	686,963
Total liabilities	725,806	2,522	728,328
Net position			
Invested in capital assets, net of related debt	141,027	943	141,970
Restricted, nonexpendable	638,881	-	638,881
Restricted, expendable			
Scholarships, research, instruction, and other	487,414	-	487,414
Unrestricted	114,007	3,137	117,144
Total net position	$ 1,381,329	$ 4,080	$ 1,385,409

Consolidating Statement of Revenues, Expenses, and Changes in Net Position

The university's component unit activity for the year ended June 30, 2019

(all dollars in thousands)

	Virginia Tech Foundation	Virginia Tech Services	Total Component Units
Operating Revenues			
Gifts and contributions	$ 54,070	$ -	$ 54,070
Auxiliary enterprise revenue			
Hotel Roanoke	22,839	-	22,839
River Course	1,597	-	1,597
Bookstore	-	18,751	18,751
Other revenues			
Rental income	40,413	-	40,413
Other	17,020	-	17,020
Total operating revenues	135,939	18,751	154,690
Operating Expenses			
Instruction	403	-	403
Research	7,964	-	7,964
Public service	5,325	-	5,325
Academic support	26,989	-	26,989
Institutional support			
Other university programs	18,519	-	18,519
Fund-raising	13,711	-	13,711
Management and general	9,084	-	9,084
Operation and maintenance of plant			
Operation and maintenance of plant	6,724	-	6,724
Research cost centers	7,194	-	7,194
Student financial assistance	29,426	-	29,426
Auxiliary enterprises			
Hotel Roanoke	14,247	-	14,247
River Course	2,223	-	2,223
Bookstore	-	18,869	18,869
Depreciation expense	10,968	-	10,968
Other expenses	9,028	-	9,028
Total operating expenses	161,805	18,869	180,674
Operating income (loss)	(25,866)	(118)	(25,984)
Non-operating revenues (expenses)			
Investment income, net	18,743	-	18,743
Net gains (losses) on investments	19,518	-	19,518
Interest expense on debt related to capital assets	(8,236)	-	(8,236)
Net non-operating revenues	30,025	-	30,025
Income before other revenues, expenses, gains or losses	4,159	(118)	4,041
Change in valuation of split interest agreements	1,062	-	1,062
Capital grants and gifts	12,329	-	12,329
Gain on disposal of capital assets	(36)	(22)	(58)
Additions to permanent endowments	70,589	-	70,589
Other revenues (expenses)	(416)	-	(416)
Total other revenues, expenses, gains, or losses	83,528	(22)	83,506
Increase in net position	87,687	(140)	87,547
Net position - beginning of year	1,293,642	4,220	1,297,862
Net position - end of year	$ 1,381,329	$ 4,080	$ 1,385,409

Contributions Receivable – Virginia Tech Foundation Inc.

The following summarizes unconditional promises to give at June 30, 2019 *(all dollars in thousands)*:

Receivable in less than one year	$	56,314
Receivable in one to five years		62,390
Receivable in more than five years		62,742
Total contributions receivable, gross		181,446
Less allowance for uncollectible contributions		28,646
Contributions receivable, measured at fair value	$	152,800

The discount rates ranged from 2.46% to 3.75% at June 30, 2019 and as of June 30, 2019 there were no conditional promises to give.

Investments – Virginia Tech Foundation Inc.

The overall investment objective of the foundation is to invest its operating funds in a prudent manner that will achieve a long-term rate of return sufficient to fund a portion of its annual operating activities, and to invest its endowed funds in a manner that maintains the purchasing power of the endowment. The foundation diversifies its investments among various asset classes incorporating multiple strategies and managers. Major investment decisions, such as asset allocation and spending, are authorized by the Board's Investment Committee, which oversees the foundation's investment program in accordance with established guidelines.

In addition to traditional equity and fixed-income securities, the foundation may also hold shares or units in traditional institutional funds, as well as in alternative investment funds involving hedged strategies, private equity and real asset strategies. Hedged strategies involve funds whose managers have the authority to invest in various asset classes at their discretion, including the ability to invest long and short. Funds with hedged strategies generally hold securities or other financial instruments for which a ready market exists and may include stocks, bonds, put or call options, swaps, currency hedges and other instruments, and are valued accordingly. Private equity funds primarily employ buyout and venture capital strategies. Real asset funds generally hold interests in public real estate investment trusts (REITS), public natural resource equities, private commercial real estate, and private natural resources such as power plants and oil and gas companies. Private equity and real asset strategies therefore often require the estimation of fair values by the fund managers in the absence of readily determinable market values. Because of the inherent uncertainties of valuation, these estimated fair values may differ significantly from values that would have been used had a ready market existed, and the differences could be material. Such valuations are determined by fund managers and generally consider variables such as operating results, comparable public earnings multiples, projected cash flows, recent sales prices, and other pertinent information, and may reflect discounts for the illiquid nature of certain investments held. Moreover, the fair values of the foundation's interests in shares or units of these funds, because of liquidity and capital commitment terms that vary depending on the specific fund or partnership agreement, may differ from the fair value of the funds' underlying net assets.

The following tabulation summarizes changes in relationships between cost and fair value of investments *(all dollars in thousands)*:

	Fair Value	Cost	Net Gains
June 30, 2019	$ 1,458,776	$ 1,291,097	$ 167,679
June 30, 2018	1,281,275	1,097,636	183,639
Unrealized net loss for the year, including net loss on agency deposits held in trust of $1,134			(15,960)
Realized net gain for the year, including net gain on agency deposits held in trust of $11,123			45,431
Total net gain for the year, including net gain on agency deposits held in trust of $9,989			$ 29,471

As of June 30, 2019, long-term investments include investment assets held in internally managed trust funds with a carrying value totaling $49,390.

The foundation is required by Maryland state law to maintain segregated assets for all annuities issued in an amount at least equal to the sum of its outstanding deferred giving arrangements liability discounted to present value. As of June 30, 2019, the foundation had recorded annuity obligations of $7,181. As of June 30, 2019, the foundation had separately invested cash reserves of $12,364 and had met its minimum reserve requirement under Maryland state law.

Fair Value Hierarchy – Virginia Tech Foundation Inc.

ASC Topic 820 established a three-tier fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and lowest priority to unobservable inputs (Level 3 measurements).

The three levels of the fair value hierarchy are as follows:

Level 1 – Inputs that utilize quoted prices (unadjusted) in active markets for identical assets or liabilities that the foundation has the ability to access.

Level 2 – Inputs that include quoted prices for similar assets and liabilities in active markets and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument. Fair values for these instruments are estimated using pricing models, quoted prices of securities with similar characteristics, or discounted cash flows.

The fair values of the foundation's corporate debt securities and state, county and municipal securities are obtained from a third-party pricing service provider. The fair values provided by the pricing service provider are estimated using pricing models, where the inputs to those models are based on observable market inputs including credit spreads and broker-dealer quotes, among other inputs. The foundation classifies the prices obtained from the pricing services within Level 2 of the fair value hierarchy because the underlying inputs are directly observable from active markets. However, the pricing models used do entail a certain amount of subjectivity and therefore differing judgments in how the underlying inputs are modeled could result in different estimates of fair value.

Level 3 – Inputs that are unobservable inputs for the asset or liability, which are typically based on an entity's own assumptions, as there is little, if any, related market activity.

In instances where the determination of fair value measurement is based on inputs from different levels of the fair value hierarchy, the level in the fair value hierarchy within which the entire fair value measurement falls is based on the lowest level input that is significant to the fair value measurement in its entirety.

The assets that are measured at fair value on a recurring basis at June 30, 2019 are presented in the first table on the next page.

The second table on the next page summarizes the foundation's investments in entities that calculate net asset value as a practical expedient to estimate fair value.

Assets Measured at Fair Value - Virginia Tech Foundation Inc.
At June 30, 2019
(all dollars in thousands)

	Total	Fair value measurements at reporting date using Level 1	Level 2	Level 3	NAV*
Assets					
Contributions Receivable	$ 152,800	$ -	$ -	$ 152,800	$ -
Short-term investments					
Corporate debt securities	7,915	7,915	-	-	-
U.S. government treasuries	709	709	-	-	-
U.S. government agencies	5,858	5,858	-	-	-
Total short-term investments	14,482	14,482	-	-	-
Long-term investments					
Cash and cash equivalents	60,126	59,093	1,033	-	-
U.S. government treasuries	41,898	41,898	-	-	-
U.S. government agencies	15,263	15,263	-	-	-
State, county, and municipal securities	100	-	100	-	-
Corporate debt securities	55,199	49,980	5,219	-	-
Equity securities	408,823	248,288	-	1,469	159,066
Partnerships and other joint ventures	795,123	-	-	-	795,123
Foreign securities	28,892	18,400	-	-	10,492
Real Estate	31,366	-	-	31,366	-
Other	7,504	-	-	7,504	-
Total long-term investments	1,444,294	432,922	6,352	40,339	964,681
Irrevocable trusts held by others	7,652	-	-	7,652	-
Total	$ 1,619,228	$ 447,404	$ 6,352	$ 200,791	$ 964,681

* *Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been categorized in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the consolidated financial statements.*

Assets Measured using NAV Estimate - Virginia Tech Foundation Inc.
At June 30, 2019
(all dollars in thousands)

	Fair value	Uncalled commitments	Remaining life	Redemption frequency	Trade to settlement terms	Redemption frequency
Public equity funds [1]	$ 147,679	$ -	N/A	≤ Quarterly	5-15 days	30-90 days
Public equity funds [2]	139,944	2,466	N/A	> Quarterly	5-15 days	30-180 days
Hedge funds [3]	39,998	-	N/A	≤ Quarterly	5-15 days	30-90 days
Hedge funds [3]	281,309	-	N/A	> Quarterly	5-15 days	30-90 days
Private credit funds [4]	168,827	86,463	1-10 years	N/A	N/A	N/A
Private equity funds [5]	109,453	74,360	1-10 years	N/A	N/A	N/A
Private real assets funds [6]	77,471	37,468	1-10 years	N/A	N/A	N/A
	$ 964,681	$ 200,757				

(1) The amount represents funds that invest in publicly traded equity securities and can be liquidated at the end of each quarter or more frequently. There are currently no restrictions on redemption of these investments. The managers directly invest primarily in long equity securities and, at times, opportunistically invest in short equity securities. Management seeks to achieve a return in excess of an appropriate equity benchmark such as the MSCI ACWI.

(2) The amount represents funds that invest in publicly traded equity securities and can be liquidated at times longer than quarter-end. The longest time to liquidation is 42 months. There are currently no restrictions on redemption of these investments. The managers directly invest primarily in long equity securities and, at times, opportunistically invest in short equity securities. Management seeks to achieve a return in excess of an appropriate equity benchmark such as the MSCI ACWI.

(3) The amount represents investments in funds that invest in hedge fund strategies such as long/short, event-driven and global macro. Management of the funds seeks to achieve an annualized return that is at least 7% in excess of the 91-day U.S. Treasury Bill rate. The funds invest both long and short equity and fixed income securities and there is no restriction on the types of securities and financial instruments they are allowed to invest in.

(4) The amount represents investments in funds that invest in credit related securities and have a liquidity structure similar to private equity. These investments can never be redeemed from the funds, and it is estimated that the underlying assets of the fund will be liquidated over the next one to 10 years.

(5) The amount represents investments in funds that invest in private equity in buyouts and venture capital, both domestically and internationally. The allocation to buyouts is 93% and to venture capital 7%. Uncalled commitments are approximately $66,619 to buyouts and $7,741 to venture capital. These investments can never be redeemed from the funds and it is estimated that the underlying assets of the fund will be liquidated over the next one to 10 years.

(6) The amount represents investments in funds that invest in private real assets in real estate and natural resources, primarily domestically. The allocation to real estate is 8% and to natural resources 92%. Uncalled commitments are approximately $19,228 to real estate and $18,240 to natural resources. These investments can never be redeemed from the funds, and it is estimated that the underlying assets of the fund will be liquidated over the next one to 10 years.

Land, Buildings, and Equipment - Virginia Tech Foundation Inc.

A summary of land, buildings, and equipment at cost, less accumulated depreciation for the year ending June 30, 2019 is presented as follows *(all dollars in thousands)*:

Depreciable capital assets		
Buildings	$	264,644
Equipment and other		39,004
Land improvements		24,725
Total depreciable capital assets, at cost		328,373
Less accumulated depreciation		133,953
Total depreciable capital assets, net of accumulated depreciation		194,420
Nondepreciable capital assets		
Land		72,465
Vintage and other collection items		5,801
Livestock		1,284
Construction in progress		4,787
Total nondepreciable capital assets		84,337
Total capital assets, net of accumulated depreciation	$	278,757

As of June 30, 2019, outstanding contractual commitments for projects under construction approximated $6,091.

Long-Term Debt Payable - Virginia Tech Foundation Inc.

Notes payable

The following is a summary of outstanding notes payable at June 30, 2019 *(all dollars in thousands)*:

Unsecured line of credit note payable due August 1, 2019, plus variable interest at LIBOR plus 0.65% (3.0524% as of June 30, 2019)	$	5,742
Unsecured note payable upon the sale of the hotel and repayment of all debt of the hotel and the Hotel Roanoke Foundation (HRF)		1,775
Total notes payable	$	7,517

The aggregate annual maturities of notes payable for each of the five years and thereafter subsequent to June 30, 2019, are *(all dollars in thousands)*:

2020	$	5,742
Upon the sale of the hotel and repayment of all debt of the hotel and HRF		1,775
Total notes payable	$	7,517

During 2003, the foundation used proceeds from borrowings on notes payable totaling $13,800 to provide a loan to an unrelated party through a promissory note receivable. The unrelated party used the proceeds to purchase the University Mall building located in Blacksburg, Virginia. The promissory note receivable, which requires interest payments only until maturity, earns interest at a fixed rate of 6.18% through June 30, 2013 and 6.96% thereafter through June 30, 2023, the maturity date. The promissory note receivable is secured by a first deed of trust in the real property of the University Mall building, as well as the assignment of leases and rents, and security agreements.

Bonds payable

The foundation is obligated under the Economic Development Authority of Montgomery County, Virginia Revenue Refunding Bonds (Series 2010A) and Taxable Revenue Refunding Bonds (Series 2010B) dated August 3, 2010. Proceeds were used to refinance a portion of the outstanding Series 2009A, Series 2009B, and Series 2005 bonds, and to retire certain interest rate swaps. The original Series 2010A and 2010B bonds, which bear a weighted average fixed interest rate of 4.23% and 4.52%, respectively, have annual serial and sinking fund maturities beginning June 1, 2011 and concluding June 1, 2039 in varying amounts ranging from $1,320 to $3,450. The Series 2017A and Series 2017B bonds, as further described below, refunded portions of both the Series 2010A and Series 2010B bonds. The unrefunded portions of the Series 2010A and Series 2010B bonds currently have a final maturity of 2020 and 2023, respectively.

The foundation is obligated under the Economic Development Authority of Montgomery County, Virginia Revenue and Refunding Bonds (Series 2011A) and Taxable Revenue and Refunding Bonds (Series 2011B) dated November 17, 2011. Proceeds were used to refinance all or a portion of the outstanding Series 2000, Series 2005, Series 2009A, and Series 2009B bonds and two notes payable, retire certain interest rate swaps, and finance the construction of several commercial facilities and other facilities to be used in support of the university. The original Series 2011A and Series 2011B bonds, which bear a weighted average fixed interest rate of 3.69% and 4.03%, respectively, have annual serial and sinking fund maturities beginning June 1, 2012 and concluding June 1, 2039 in varying amounts ranging from $1,505 to $5,200. The Series 2017A and Series 2017B bonds, as further described below, refunded portions of the Series 2011A bonds. The unrefunded portion of the Series 2011A bonds currently have a final maturity of 2036.

The foundation is obligated under the Economic Development Authority of Montgomery County, Virginia Tax-Exempt Revenue and Refunding Bonds (Series 2012A) and Taxable Revenue and Refunding Bonds (Series 2012B) dated December 1, 2012. Proceeds were used to refinance a portion of the outstanding Series 2009B bonds and to finance the construction of several facilities to be used in support of the university. During 2014, an additional $1,817 was borrowed on the Series 2012B bonds to finance the construction of a facility to be used in support of the university. The Series 2012A bonds, which bear a fixed interest rate of 1.99%, have monthly payments of principal and interest beginning February 1, 2013 and concluding June 1, 2022. The Series 2012B bonds bore a variable interest rate of LIBOR plus 125 basis points (1.44% at June 30, 2013), until the final advance date of October 1, 2013 and thereafter bear a fixed interest rate of 3.05%, have monthly interest commencing on February 1, 2013, and have monthly payments of principal and interest beginning November 1, 2013 and concluding on January 1, 2033. The Series 2012B bonds are subject to mandatory tender on December 27, 2022 at the bondholder's option.

The foundation is obligated under the Economic Development Authority of Montgomery County, Virginia Revenue and Refunding Bonds (Series 2013A) and Taxable Revenue and Refunding Bonds (series 2013B) dated October 30, 2013. Proceeds were or will be used to finance the construction of several commercial facilities and several facilities to be used in support of the university. The bonds, which bear a weighted average fixed interest rate of 3.95% and 3.87%, have annual serial and sinking fund maturities beginning June 1, 2014 and concluding June 1, 2038 in varying amounts ranging from $280 to $4,010. At June 30, 2019, unspent bond proceeds of $639 are included in restricted cash and cash equivalents.

The foundation is obligated under the Economic Development Authority of Montgomery County, Virginia Revenue and Refunding Bonds (Series 2017A) and Taxable Revenue and Refunding Bonds (series 2017B) dated May 17, 2017. Proceeds were used to refinance all or a portion of the outstanding Series 2009A, Series 2010A, Series 2010B, and Series 2011A bonds, refinance a VTREF note payable, and renovate a facility used in support of the university. The bonds, which bear a weighted average fixed interest rate of 2.93% and 3.43%, have annual serial and sinking fund maturities beginning June 1, 2018 and concluding June 1, 2039 in varying amounts ranging from $580 to $4,670.

The foundation is obligated under the Economic Development Authority of Montgomery County, Virginia Revenue and Refunding Bonds (Series 2017C) dated May 17, 2017. Proceeds were used to refinance all of the outstanding Series 2005 bonds and the remaining portion of the Series 2009A bonds. The Series 2017C bonds, which bear a variable interest rate calculated as 65% of one-month LIBOR plus 0.407%, have annual serial maturities beginning June 1, 2018 and concluding June 1, 2027 in varying amounts ranging from $1,340 to $3,380.

The foundation is obligated under a promissory note with Union Bank and Trust (Series 2017D), dated December 19, 2017. Proceeds were used to finance the construction of several facilities to be used in support of the university. The promissory note, which bears a fixed interest rate of 3.7%, has annual serial maturities beginning October 1, 2019 and concluding October 1, 2037 in varying amounts ranging from $115 to $825. At June 30, 2019 unspent bond proceeds of $171 are included in restricted cash and cash equivalents.

During fiscal year ended June 30, 2017, the foundation used the proceeds from the Series 2017 bond issuances to refinance all of its Industrial Development Authority of Montgomery County, Virginia Variable Rate Revenue Bonds Series 2005 and Industrial Development Authority of Montgomery County, Virginia Revenue Bonds Series 2009A bonds in the amount of $12,065 and $16,495, respectively. The foundation also partially refunded $44,190 of Series 2010A, $5,620 of its Series 2010B and $14,515 of its Series 2011A bonds as well. The foundation defeased or partially refunded these bonds payable by placing the proceeds of new bonds in an irrevocable trust to provide for future debt service payments on the old bonds. Accordingly, the trust account assets and the liability for the defeased or partially refunded bonds are not reflected in the foundation's component unit statements.

Principal amounts outstanding for these bonds as of June 30, 2019, are as follows *(all dollars in thousands)*:

Series 2010A	$	355
Series 2010B		5,810
Series 2011A		31,885
Series 2011B		34,735
Series 2012A		1,119
Series 2012B		5,318
Series 2013A		14,605
Series 2013B		16,665
Series 2017A		37,245
Series 2017B		42,210
Series 2017C		17,685
Series 2017D		11,230
Premium on Series 2011A		593
Premium on Series 2013A		531
Premium on Series 2017A		2,694
Unamortized bond issuance cost		(1,775)
Total bonds payable	$	220,905

The aggregate annual maturities of bonds payable for each of the five years and thereafter subsequent to June 30, 2019, are as follows *(all dollars in thousands)*:

2020	$	16,972
2021		17,531
2022		15,707
2023		13,737
2024		12,629
Thereafter		146,104
Total	$	222,680

Total interest expense incurred in the aggregate related to notes payable and bonds payable in 2019 totaled $8,118.

Interest Rate Swaps

Effective September 1, 2005, the foundation entered into an interest rate swap agreement (Swap 1) with a lending institution. This agreement was based on the principal balances of the Series 2001A and Series 2002A bond issues, which were refinanced by the Series 2005 bonds and more recently by the Series 2017C bonds. The foundation participates as a fixed rate payer, with a fixed rate of 3.2650% for a 17-year term ending June 1, 2022. The lending institution participates as a floating rate payer with a floating interest rate, which is calculated based on the weighted average of 70% of USD-LIBOR-BBA, of 1.68365% at June 30, 2019.

Effective September 1, 2006, the foundation entered into an interest rate swap agreement (Swap 2) with a lending institution. This agreement was based on the principal balances of the Series 2005 bond issue, which were refinanced by the Series 2017C bonds. The foundation participates as a fixed rate payer, with a fixed rate of 3.21300% ending June 1, 2025. The lending institution participates as a floating rate payer, with a floating interest rate, which is calculated based on the weighted average of 70% of USD-LIBOR-BBA, of 1.68617% at June 30, 2019.

Effective March 14, 2007, the foundation entered into an interest rate swap agreement (Swap 3) with a lending institution. This agreement was based on the principal balances of the Series 2007 bond issue, which were refinanced by the Series 2009 bonds and more recently by the 2017C bonds. The foundation participates as a fixed rate payer, with a fixed rate of 3.7370% ending June 1, 2027. The lending institution participates as a floating rate payer, with a floating interest rate, which is calculated based on the weighted average of SIFMA Municipal Swap Index, of 1.6590% at June 30, 2019.

The following table summarizes the fair values of the foundation's interest rate swaps at June 30 and changes in the fair values of those swaps during the year ended June 30, 2019 *(all dollars in thousands):*

		Fair Values		Change in Fair Value
Swap 1	$	94	$	37
Swap 2		364		(60)
Swap 3		1,112		(239)
Total	$	1,570	$	(262)

Agency Deposits Held in Trust - Virginia Tech Foundation Inc.

Under an agreement between the university and the foundation, the foundation serves as agent in connection with the investment, management, and administration of the Pratt Estate Funds. Under a similar agreement, the foundation also serves as agent for the investment and management of other university non-general funds to assist the university in its goal of achieving enhanced earnings. In addition, the foundation serves as agent and maintains investments for the Virginia Tech Alumni Association Inc., Virginia Tech Services Inc., and certain other associations.

A summary of agency deposits held in trust for the year ending June 30, 2019 is presented as follows *(all dollars in thousands):*

University—Pratt Estate	$	46,524
University—other		335,619
Virginia Tech Alumni Association Inc.		4,881
Virginia Tech Services Inc.		2,156
Other		56,913
Total agency deposits held in trust	$	446,093

26. JOINT VENTURES

The Hotel Roanoke Conference Center Commission was created by a joint resolution of the university and the City of Roanoke. The purpose of the commission is to establish and operate a publicly owned conference center in Roanoke adjacent to the renovated Hotel Roanoke. The powers of the commission are vested in commissioners. Each participating governing body appoints three commissioners for a total of six commissioners. The commission has the authority to issue debt, and such debt is the responsibility of the commission. The intention of the commission is to be self-supporting through its user fees. The university and the City of Roanoke equally share in any operating deficit or additional funding needed for capital expenditures. The university made contributions of $80,000 using private funds to the commission for the fiscal year ended June 30, 2019. The administrative offices for the Hotel Roanoke Conference Center Commission are located at 106 Shenandoah Avenue, Roanoke, Virginia, 24016.

27. JOINTLY GOVERNED ORGANIZATIONS

NRV Regional Water Authority
Created by a concurrent resolution of the university, the towns of Blacksburg and Christiansburg and joined by the county of Montgomery in fiscal year 2013, the authority operates and maintains the water supply system for the university and the other participating governing bodies. A six-member board governs the authority with one member appointed by each governing body and two at-large members appointed by the joint resolution of each of the governing bodies. The authority's indebtedness is not an obligation of the university and is payable solely from the revenues of the authority. The university paid $1,642,000 to the authority for the purchase of water for the fiscal year ended June 30, 2019.

Blacksburg-VPI Sanitation Authority
Created by a concurrent resolution of the university and the town of Blacksburg, the authority operates and maintains the wastewater treatment system for the participating governing bodies. Each participating governing body appoints one member of the five-member board of directors. Three at-large members are appointed by the joint resolution of each of the governing bodies. The authority's indebtedness is not an obligation of the university and is payable solely from the revenues of the authority. The university paid $1,230,000 to the authority for the purchase of sewer services for the fiscal year ended June 30, 2019.

Montgomery Regional Solid Waste Authority
Created by a joint resolution of the university, the towns of Blacksburg and Christiansburg, and the county of Montgomery, the authority represents its members in solid waste and recycling issues as well as operating a recycling facility. The authority is governed by its board with each participating governing body appointing one board member, and all governing bodies jointly appointing the fifth at-large member. Each governing body provides collection of solid waste and recyclables from within its jurisdiction and delivers the collected materials to the authority for disposal of the waste, and the processing and marketing of the recyclables. All indebtedness is the obligation of the authority and payable from its revenues. The university paid $228,000 to the authority for tipping fees for the fiscal year ended June 30, 2019.

Virginia Tech/Montgomery Regional Airport Authority
Created by a joint resolution of the university, the towns of Blacksburg and Christiansburg, and the county of Montgomery, this authority serves to develop a regional airport based on the mission of servicing corporate executive markets and other general aviation markets; obtaining grants, loans and other funding for airport improvements and other activities; and in promoting and assisting in regional economic development. The authority is governed by its board, which consists of five members. Each participating governing body appoints one member of the board, and jointly all governing bodies appoint the fifth member. All indebtedness is the obligation of the authority and payable from its revenues. The university's funding commitment for fiscal year 2019 was $50,000, all of which Virginia Tech paid to the authority.

New River Valley Emergency Communications Regional Authority
Created by a joint resolution of the university, towns of Blacksburg and Christiansburg, and the county of Montgomery, this authority provides 911 dispatch and emergency communication services to the people of each jurisdiction and campus. The authority is governed by its board, which consists of five members. Each participating governing body appoints one member of the board, and jointly all governing bodies appoint the fifth member. The university paid $782,000 to the authority for the fiscal year ended June 30, 2019.

28. RISK MANAGEMENT AND EMPLOYEE HEALTH CARE PLANS

The university is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; nonperformance of duty; injuries to employees; and natural disasters. The university participates in insurance plans maintained by the Commonwealth of Virginia. The state employee health care and worker's compensation plans are administered by the Department of Human Resource Management and the risk management insurance plans are administered by the Department of Treasury, Division of Risk Management. Risk management insurance includes property, general liability, medical malpractice, faithful performance of duty bond, automobile, boiler and machinery, and air and watercraft plans. The university pays premiums to the Commonwealth of Virginia for the aforementioned insurance coverage. In addition, the university contracts with private insurers to provide additional fidelity bonding coverage, automobile physical damage coverage, business interruption coverage for the Equine Medical Center and overseas liability coverage. Information relating to the commonwealth's insurance plans is available in the Commonwealth of Virginia's *Comprehensive Annual Financial Report.*

29. PENDING LITIGATION

The university has been named as a defendant in a number of lawsuits. The final outcome of the lawsuits cannot be determined at this time. However, management is of the opinion that any ultimate liability to which the university may be exposed will not have a material effect upon the university's financial position.

30. SUBSEQUENT EVENTS

Acquisition of Falls Church Property
In 1994, Virginia Tech and the University of Virginia (UVA) acquired ownership of 2.19 acres on Haycock Road in Falls Church, Virginia. In 1995, both universities acquired a shared interest in a ground lease of an adjoining 5.33 acres which leased real property owned by the City of Falls Church. The universities subsequently constructed an academic building on the leased 5.33 acres. This area, containing a total of 7.52 acres and all improvements, is commonly known as the VT/UVA Northern Virginia Center. Based upon the costs and funding of the Center, and by agreement between the universities, Virginia Tech held a sixty percent interest in the Center and UVA held a forty percent interest.

On April 1, 2019, the Virginia Tech Board of Visitors affirmed its intent to acquire UVA's right, title, and interest in the universities' shared fee simple title ownership and shared leasehold interest in the center for $8.23 million. On August 1, 2019, the university paid UVA $8.22 million to complete the purchase as approved by the board of visitors.

The land lease includes a purchase option price of $3.35 million, with a net balance due of $2.85 million after consideration of a $0.5 million deposit made in 1996. The option has an exercise date of 2021, and the university is working collaboratively with the City of Falls Church to accelerate the transaction timing.

Long-term Debt
In July 2019, the Commonwealth of Virginia, on behalf of the university, issued $1,010,000 of general obligation revenue bonds to refund $1,065,000 of general obligation revenue bonds. The following is a listing of the bonds refunded *(all dollars in thousands):*

	Debt Refunded	Refunding Debt Issued
Dormitory and dining hall system		
Series 2009D, issued $1,891	$ 945	$ 895
Other nonsystem notes payable		
Parking facilities		
Series 2009D, issued $190	120	115
	$ 1,065	$ 1,010

In November 2019, the Virginia College Building Authority, on behalf of the university, issued $7,920,000 of notes payable for the renovation of Holden Hall (Series 2019A).

Required Supplementary Information

REQUIRED SUPPLEMENTARY INFORMATION FOR PENSION PLANS

Schedule of Virginia Tech's Share of Net Pension Liability (SERP)*

For the years ended June 30, 2019-2015

(all dollars in thousands)

	Proportion of net pension liability	Proportionate share of net pension liability	Employer's covered payroll	Proportionate share of net pension liability as a percentage of employer's covered payroll	Plan fiduciary net position as a percentage of total pension liability
2019	6.46%	$ 349,811	$ 270,309	129.41%	77.39%
2018	6.55%	$ 381,766	$ 262,376	145.50%	75.33%
2017	6.58%	$ 433,375	$ 263,416	164.52%	71.29%
2016	6.52%	$ 398,980	$ 246,888	161.60%	72.81%
2015	6.30%	$ 352,916	$ 243,099	145.17%	74.28%

Schedule of Virginia Tech's Share of Net Pension Liability (VaLORS)*

For the years ended June 30, 2019-2015

(all dollars in thousands)

	Proportion of net pension liability	Proportionate share of net pension liability	Employer's covered payroll	Proportionate share of net pension liability as a percentage of employer's covered payroll	Plan fiduciary net position as a percentage of total pension liability
2019	0.66%	$ 4,144	$ 2,294	180.65%	69.56%
2018	0.67%	$ 4,397	$ 2,315	189.94%	67.22%
2017	0.67%	$ 5,201	$ 2,328	223.41%	61.01%
2016	0.66%	$ 4,716	$ 2,247	209.88%	62.64%
2015	0.70%	$ 4,706	$ 2,461	191.22%	63.05%

**The amounts presented have a measurement date of the previous fiscal year end.*

Schedule of Virginia Tech's Pension Contributions (SERP)

For the years ended June 30, 2019 - 2015

(all dollars in thousands)

	Contractually required contribution	Contributions in relation to contractually required contribution	Contribution deficiency (excess)	Employer's covered payroll	Contributions as a percentage of employer's covered payroll
2019	$ 36,003	$ 36,003	$ -	$ 270,954	13.29%
2018	$ 36,466	$ 36,466	$ -	$ 270,309	13.49%
2017	$ 35,348	$ 35,348	$ -	$ 262,376	13.47%
2016	$ 36,931	$ 36,931	$ -	$ 263,416	14.00%
2015	$ 30,392	$ 30,392	$ -	$ 246,488	12.30%

Schedule of Virginia Tech's Pension Contributions (VaLORS)

For the years ended June 30, 2019 - 2015

(all dollars in thousands)

	Contractually required contribution	Contributions in relation to contractually required contribution	Contribution deficiency (excess)	Employer's covered payroll	Contributions as a percentage of employer's covered payroll
2019	$ 496	$ 496	$ -	$ 2,293	21.63%
2018	$ 483	$ 483	$ -	$ 2,294	21.05%
2017	$ 487	$ 487	$ -	$ 2,315	21.04%
2016	$ 439	$ 439	$ -	$ 2,328	18.86%
2015	$ 397	$ 397	$ -	$ 2,247	17.67%

All schedules above are intended to show information for 10 years. Since 2015 was the first year for this presentation, only five years are available. Additional years will be included as they become available.

Notes to Required Supplementary Information for Pension Plans

There have been no actuarially material changes to the System benefit provisions since the prior actuarial valuation. The following changes in actuarial assumptions were made for the retirement plans effective June 30, 2016 based on the most recent experience study of the System for the four-year period ending June 30, 2016:

VRS – State Employee Retirement Plans (SERP)

Mortality Rates	Update to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from age 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
Line of Duty Disability	Increase rate from 14% to 25%

VaLORS Retirement Plan

Mortality Rates	Update to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience
Retirement Rates	Increased age 50 rates and lowered rates at older ages
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
Line of Duty Disability	Decrease rate from 50% to 35%

REQUIRED SUPPLEMENTARY INFORMATION FOR OTHER POSTEMPLOYMENT BENEFIT PLANS

Schedule of Virginia Tech's Share of OPEB Liability (Asset)

For the years ended June 30, 2019-2018

(all dollars in thousands)

	Year*	PMRH	VSDP	GLI	HIC	LODA
Employer's proportion of the collective total OPEB liability (asset)	2019	8.53%	3.81%	2.95%	8.32%	0.23%
	2018	8.34%	3.79%	2.87%	8.19%	0.25%
Employer's proportionate share of the collective total OPEB liability (asset)	2019	$ 85,746	$ (8,583)	$ 44,770	$ 75,868	$ 735
	2018	$ 108,278	$ (7,790)	$ 43,235	$ 74,567	$ 663
Employer's covered payroll *(where applicable)*	2019		$ 147,739	$ 553,929	$ 558,853	
	2018		$ 142,553	$ 526,681	$ 531,560	
Proportionate share of the collective total OPEB liability (asset) as a percentage of **employer's covered payroll**	2019		5.81%	8.08%	13.58%	
	2018		5.46%	8.02%	14.03%	
Covered-employee payroll *(where applicable)*	2019	$ 575,313				N/A**
	2018	$ 548,609				N/A**
Proportionate share of the collective total OPEB liability (asset) as a percentage of **covered-employee payroll**	2019	14.90%				N/A**
	2018	19.74%				N/A**
Plan Fiduciary Net Position as a percentage of the total OPEB (asset)	2019	N/A	194.74%	51.22%	9.51%	0.60%
	2018	N/A	186.63%	48.86%	8.03%	1.30%

**The amounts presented have a measurement date of the previous fiscal year end.*

***The contributions for the Line of Duty Act Program (LODA) are based on the number of participants in the program using a per capita-based contribution versus a payroll-based contribution.*

This schedule is intended to show information for 10 years. Since 2018 is the first year for this presentation, only two years are available. Additional years will be included as they become available.

Schedule of Virginia Tech's OPEB Contributions

For the years ended June 30, 2019-2018

(all dollars in thousands)

	Year	VSDP	GLI	HIC	LODA
Contractually required contribution	2019	$ 950	$ 3,039	$ 6,836	$ 32
	2018	$ 977	$ 2,880	$ 6,653	$ 25
Contributions in relation to contractually required contribution	2019	$ 950	$ 3,039	$ 6,836	$ 32
	2018	$ 977	$ 2,880	$ 6,653	$ 25
Contribution deficiency (excess)	2019	$ -	$ -	$ -	-
	2018	$ -	$ -	$ -	-
Employer's covered payroll *(where applicable)*	2019	$ 153,447	$ 585,890	$ 585,614	
	2018	$ 147,739	$ 553,929	$ 558,853	
Contributions as a percentage of **employer's covered payroll**	2019	0.63%	0.52%	1,17%	
	2018	0.66%	0.52%	1.19%	
Covered-employee payroll *(where applicable)*	2019				N/A*
	2018				N/A*
Contributions as a percentage of **covered-employee payroll**	2019				N/A*
	2018				N/A*

**The contributions for the Line of Duty Act Program (LODA) are based on the number of participants in the program using a per capita-based contribution versus a payroll-based contribution.*

This schedule is intended to show information for 10 years. Since 2018 is the first year for this presentation, only two years are available. Additional years will be included as they become available.

Notes to Required Supplementary Information for OPEB Plans

PMRH program

There are no assets accumulated in a trust to pay related benefits.

Changes of benefit terms – There have been no changes to the benefit provisions since the prior actuarial valuation.

Changes of assumptions – The following assumptions were updated since the July 1, 2017 valuation based on recent experience:

- Spousal Coverage – reduced the rate from 50% to 35%
- Retiree Participation – reduced the rate from 70% to 60%

Spousal coverage and retiree participation were both reduced based on a blend of recent experience and the prior year assumptions. The mortality assumption was modified slightly to reflect mortality improvement projection scale BB to 2020. Additionally, the discount rate was increased from 3.58% to 3.87% based on the Bond Buyers GO 20 Municipal Bond Index.

GLI, HIC, LODA, and VSDP programs

Changes of benefit terms – There have been no actuarially material changes to the System benefit provisions since the prior actuarial valuation.

Changes of assumptions – The following changes in actuarial assumptions were made effective June 30, 2016 based on the most recent experience study of the System for the four-year period ending June 30, 2016:

General State Employees (GLI, HIC, LODA, VSDP)

Mortality Rates	Updated 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
Line of Duty Disability	Increased rate from 14% to 25%

Teachers (GLI)

Mortality Rates	Updated 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

Notes to Required Supplementary Information for OPEB Plans *(continued)*

SPORS Employees (GLI, HIC, LODA, VSDP)

Mortality Rates	Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted rates to better fit experience
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Increased rate from 60% to 85%

VaLORS Employees (GLI, HIC, LODA, VSDP)

Mortality Rates	Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience
Retirement Rates	Increased age 50 rates and lowered rates at older ages
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
Line of Duty Disability	Increased rate from 50% to 35%

JRS (GLI, HIC)

Mortality Rates	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Decreased rates at first retirement eligibility
Withdrawal Rates	No change
Disability Rates	Removed disability rates
Salary Scale	No change

Largest Ten Locality Employers – General Employees (GLI)

Mortality Rates	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages and extended final retirement age from 70 to 75
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Lowered disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 20%

Non-Largest Ten Locality Employers – General Employees (GLI)

Mortality Rates	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages and extended final retirement age from 70 to 75
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Lowered disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 15%

Largest Ten Locality Employers – Hazardous Duty Employees (GLI)

Mortality Rates	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Increased disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 60% to 70%

Non-Largest Ten Locality Employers – Hazardous Duty Employees (GLI)

Mortality Rates	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Increased rate from 60% to 45%

Largest Ten Locality Employers with Public Safety Employees (LODA)

Mortality Rates	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Increased disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 60% to 70%

Non-Largest Ten Locality Employers with Public Safety Employees (LODA)

Mortality Rates	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Increased rate from 60% to 45%

Optional Supplementary Information

VIRGINIA TECH FOUNDATION INC.

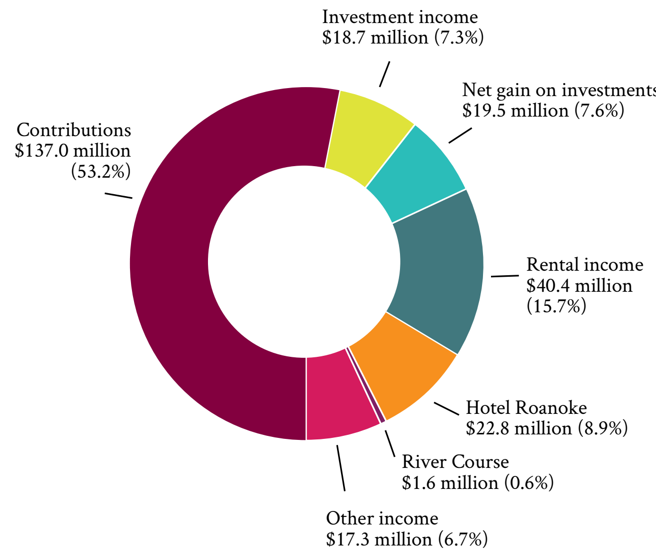
The purpose of Virginia Tech Foundation Inc. is to receive, invest, and manage private funds given for the support of programs at Virginia Tech and to foster and promote the growth, progress, and general welfare of the university.

During the current fiscal year, the foundation recognized $137.0 million in contributions for support of the university. Investment income of $18.7 million, along with net gain on investments of $19.5 million, resulted in a $38.2 million net gain on investment activity. Property rental, hotel operating, and golf course income totaled $64.8 million. Other income accounted for $17.3 million.

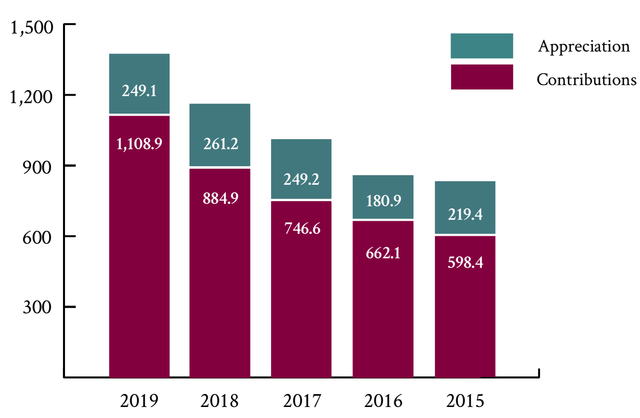
Total income of $257.1 million was offset by $170.0 million in expenses that supported the university and its programs. Direct support to various university programs aggregated $102.9 million, which included $29.4 million in scholarship support to students and faculty and $9.3 million towards university capital projects. Additional expenses such as fund-raising, management and general, research center, hotel operating, golf course, and other costs totaled $67.1 million. Total net position increased by $87.7 million over the previous year.

The graphs on this page are categorized as presented in the audited financial statements for the foundation that follows the Financial Accounting Standards Board (FASB) presentation requirements.

Virginia Tech Foundation Revenues and Investment Gains
For the year ended June 30, 2019
(all dollars in millions)

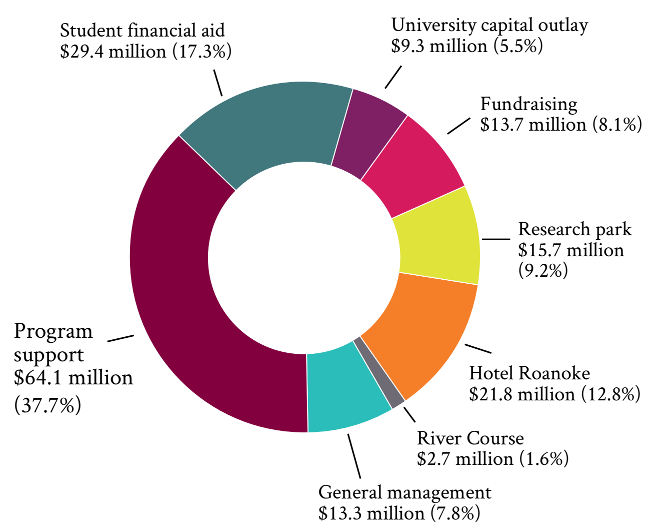


Virginia Tech Foundation Endowment Market Value*
For the year ended June 30, 2019
(all dollars in millions)



*Market value of endowment funds includes agency deposits held in trust of $446.1 million.
(Source: Virginia Tech Investment Managers, unaudited)

Virginia Tech Foundation Expenses
For the year ended June 30, 2019
(all dollars in millions)



CONSOLIDATING SCHEDULE OF NET POSITION

As of June 30, 2019

(all dollars in thousands)

	Current Funds Unrestricted	Current Funds Restricted	Loan Funds	Endowment & Similar Funds	Plant Funds	Agency Funds	Total
Assets							
Current Assets							
Cash and cash equivalents (Note 4)	$ 124,620	$ 34,347	$ 3,745	$ -	$ -	$ 14,384	$ 177,096
Short-term investments (Notes 4, 25)	-	-	-	-	-	-	-
Accounts and contributions receivable, net (Notes 1, 5, 25)	9,671	58,710	-	-	-	-	68,381
Notes receivable, net (Note 1)	384	-	1,154	-	-	-	1,538
Due from Commonwealth of Virginia (Note 9)	15,017	373	-	-	-	-	15,390
Inventories	11,984	-	-	-	-	-	11,984
Prepaid expenses	14,844	153	-	-	-	-	14,997
Other current assets	3		-	-		-	3
Due to (from) other funds	(30,561)	7,763	-	(542)	23,340	-	-
Total current assets	145,962	101,346	4,899	(542)	23,340	14,384	289,389
Noncurrent assets							
Cash and cash equivalents (Note 4)	6	-	-	4	34,608	-	34,618
Short-term investments (Notes 4, 25)	-	-	-	-	-	-	-
Due from Commonwealth of Virginia (Note 9)	-	-	-	-	6,174	-	6,174
Accounts and contributions receivable, net (Notes 1, 5, 25)	-	-	-	-	12,233	-	12,233
Notes receivable, net (Note 1)	3,275	-	11,519	-	-	-	14,794
Net investments in direct financing leases	-	-	-	-	-	-	-
Irrevocable trusts held by others, net	-	-	-	-	-	-	-
Long-term investments (Notes 4, 25)	462,692	-	-	69,977	72,465	0	605,134
Depreciable capital assets, net (Notes 8, 25)	-	-	-	-	1,602,330	-	1,602,330
Nondepreciable capital assets (Notes 8, 25)	-	-	-	-	183,716	-	183,716
Intangible assets, net	-	-	-	-	-	-	-
Other assets	252	8,583	-	-	-	-	8,835
Total noncurrent assets	466,225	8,583	11,519	69,981	1,911,526	0	2,467,834
Total assets	612,187	109,929	16,418	69,439	1,934,866	14,384	2,757,223
Deferred Outflows of Resources							
Deferred loss on long-term debt defeasance (Note 14)	-	-	-	-	7,768	-	7,768
Deferred outflow for VRS pension (Note 18)	36,189	3,394	-	-	-	-	39,583
Deferred outflow for other postemployment benefits (Note 20)	21,838	1,909	-	-	-	-	23,747
Total deferred outflows	58,027	5,303	-	-	7,768	-	71,098
Liabilities							
Current liabilities							
Accounts payable and accrued liabilities (Note 6)	102,791	20,823	-	-	21,328	964	145,906
Accrued compensated absences (Notes 1, 15)	23,581	4,621	-	-	-	-	28,202
Unearned revenue (Notes 1, 7)	22,677	23,721	-	-	-	-	46,398
Funds held in custody for others		-	-	-	-	13,420	13,420
Commercial paper (Note 11)	-	-	-	-	34,275	-	34,275
Long-term debt payable (Notes 12, 13, 25)	-	-	-	-	34,086	-	34,086
Other postemployment benefits liabilities (Note 20)	3,084	467	-	-	-	-	3,551
Other liabilities	-	-	-	-	-	-	-
Total current liabilities	152,133	49,632	-	-	89,689	14,384	305,838
Noncurrent liabilities							
Accrued compensated absences (Notes 1, 15)	16,202	3,170	-	-	-	-	19,372
Federal student loan contributions refundable (Note 15)	-	-	13,013	-	-	-	13,013
Unearned revenue (Notes 1, 7)	-	-	-	-	-	-	-
Long-term debt payable (Notes 12, 13, 25)	-	-	-	-	444,174	-	444,174
Liabilities under trust agreements	-	-	-	-	-	-	-
Agency deposits held in trust (Note 25)	-	-	-	-	-	-	-
Pension liability	354,489	(534)	-	-	-	-	353,955
Other postemployment benefits liabilities	202,193	1,374	-	-	-	-	203,567
Other liabilities	2,945	-	-	-	-	-	2,945
Total noncurrent liabilities	575,829	4,010	13,013	-	444,174	-	1,037,026
Total liabilities	727,962	53,642	13,013	-	533,863	14,384	1,342,864
Deferred Inflows of Resources							
Deferred gain on long-term debt defeasance (Note 14)	-	-	-	-	852	-	852
Deferred inflow for VRS pension (Note 18)	35,419	-	-	-	-	-	35,419
Deferred inflow for other postemployment benefits (Note 20)	57,530	1,403	-	-	-	-	58,933
Total deferred outflows	92,949	1,403	-	-	852	-	95,204
Net Position							
Net investment in capital assets	-	-	-	-	1,326,057	-	1,326,057
Restricted, nonexpendable	-	-	-	14,034	-	-	14,034
Restricted, expendable							
Scholarships, research, instruction, and other	-	60,187	3,405	55,405	-	-	118,997
Capital projects	-	-	-	-	6,159	-	6,159
Debt service and auxiliary operations	-	-	-	-	75,703	-	75,703
Unrestricted	(150,697)	-	-	-	-	-	(150,697)
Total net position	$ (150,697)	$ 60,187	$ 3,405	$ 69,439	$ 1,407,919	$ -	$ 1,390,253

CONSOLIDATING SCHEDULE OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

As of June 30, 2019

(all dollars in thousands)

	Current Funds		Loan	Endowment &	Plant	
	Unrestricted	Restricted	Funds	Similar Funds	Funds	Total
Operating Revenues						
Student tuition and fees	$ 532,223	$ 1,989	$ -	$ -	$ -	$ 534,212
Federal appropriations	-	14,919	-	-	-	14,919
Federal grants and contracts	53,978	166,814	-	-	668	221,460
State grants and contracts	1,042	12,066	-	-	-	13,108
Local grants and contracts	323	13,414	-	-	-	13,737
Nongovernmental grants and contracts	14,597	43,552	-	-	-	58,149
Sales and services of educational departments	20,083	26	-	-	-	20,109
Auxiliary enterprise revenue	274,355	-	-	-	-	274,355
Other operating revenues	7,864	2,426	88	-	16	10,394
Total operating revenues	904,465	255,206	88	-	684	1,160,443
Operating Expenses						
Instruction	392,501	6,406	-	-	-	398,907
Research	124,822	206,125	-	-	-	330,947
Public service	50,617	42,209	-	-	-	92,826
Academic support	96,364	2,562	-	-	-	98,926
Student services	23,148	1,308	-	-	-	24,456
Institutional support	64,220	9,217	-	-	-	73,437
Operation and maintenance of plant	83,058	96	-	-	8,610	91,764
Student financial assistance	6,823	12,543	-	-	-	19,366
Auxiliary enterprises	228,046	(128)	-	-	-	227,918
Depreciation and amortization	-	-	-	-	108,190	108,190
Other operating expenses	170	-	1,030	-	-	1,200
Total operating expenses	1,069,769	280,338	1,030	-	116,800	1,467,937
Operating Loss	(165,304)	(25,132)	(942)	-	(116,116)	(307,494)
Non-Operating Revenues (Expenses)						
State appropriations	235,902	30,261	-	-	-	266,163
Gifts	17,388	49,637	(165)	-	-	66,860
Non-operating grants and contracts	-	550	-	-	-	550
Federal student financial aid (Pell)	-	19,635	-	-	-	19,635
Investment income, net of investment expense	17,674	(510)	-	920	2,374	20,458
Interest expense on debt related to capital assets	-	-	-	-	(15,102)	(15,102)
Other additions	(20,064)	(9,044)	-	-	30,558	1,450
Net non-operating revenues (expenses)	250,900	90,529	(165)	920	17,830	360,014
Income (Loss) before Other Revenues, Expenses, Gains, or Losses	85,596	65,397	(1,107)	920	(98,286)	52,520
Capital appropriations	-	-	-	-	-	-
Capital grants and gifts	14,834	2,088	-	-	62,290	79,212
Loss on disposal of capital assets	-	-	-	-	(1,236)	(1,236)
Total other revenues, expenses, gains, losses	14,834	2,088	-	-	61,054	77,976
Increase in Net Position	100,430	67,485	(1,107)	920	(37,232)	130,496
Mandatory transfers	(60,382)	(686)	-	-	61,068	-
Nonmandatory transfers	7,901	9,326	-	(25)	(17,202)	-
Equipment and library book transfers	(37,770)	(7,072)	-	-	44,842	-
Scholarship allowance transfer	65,430	(65,430)	-	-	-	-
Total transfers	(24,821)	(63,862)	-	(25)	88,708	-
Increase in Net Position after Transfers	75,609	3,623	(1,107)	895	51,476	130,496
Net position - beginning of year	(226,306)	56,564	4,512	68,544	1,356,443	1,259,757
Net position - end of year	$ (150,697)	$ 60,187	$ 3,405	$ 69,439	$ 1,407,919	$ 1,390,253

AFFILIATED CORPORATIONS

Affiliated Corporations Financial Highlights
For the years ended June 30, 2019-2015
(all dollars in thousands)

	2019	2018	2017	2016	2015
Assets					
Virginia Tech Foundation Inc.	$ 2,107,138	$ 1,891,019	$ 1,723,910	$ 1,510,647	$ 1,507,958
Virginia Tech Innovation Corporation	10,798	11,646	11,956	12,645	-
Virginia Tech Services Inc.	6,602	8,762	10,595	11,334	12,786
Virginia Tech Applied Research Corporation	4,909	4,414	3,696	3,357	4,318
Virginia Tech Intellectual Properties Inc.	1,201	1,063	933	1,405	1,384
Total Assets	$ 2,130,648	$ 1,916,904	$ 1,751,090	$ 1,539,388	$ 1,526,446
Revenues					
Virginia Tech Foundation Inc.	$ 257,082	$ 266,582	$ 318,291	$ 172,130	$ 212,851
Virginia Tech Innovation Corporation	7,015	5,564	5,401	4,348	-
Virginia Tech Services Inc.	18,750	22,160	22,187	24,398	22,791
Virginia Tech Applied Research Corporation	11,455	12,038	9,233	6,284	6,785
Virginia Tech Intellectual Properties Inc.	2,193	1,932	2,016	2,366	2,190
Total Revenues	$ 296,495	$ 308,276	$ 357,128	$ 209,526	$ 244,617
Expenses					
Virginia Tech Foundation Inc.	$ 170,041	$ 179,567	$ 164,310	$ 184,904	$ 166,523
Virginia Tech Innovation Corporation	6,655	5,600	4,993	4,321	-
Virginia Tech Services Inc.	18,890	22,133	22,480	24,383	22,790
Virginia Tech Applied Research Corporation	10,715	10,985	8,640	7,919	8,856
Virginia Tech Intellectual Properties Inc.	2,155	1,727	2,235	2,389	2,481
Total Expenses	$ 208,456	$ 220,012	$ 202,658	$ 223,916	$ 200,650

The organizations included above are related to the university by affiliation agreements. These agreements, approved by the Virginia Tech Board of Visitors, require an annual audit to be performed by independent auditors. These auditors have examined the financial records of the organizations presented in the table above and copies of their audit reports have been provided to the university. Values presented in this table are based solely upon these audit reports and do not include any consolidation entries to alter these amounts. Affiliated organizations that hold no financial assets and certify all financial activities or transactions through the Virginia Tech Foundation Inc. may be exempt from the independent audit requirement. Virginia Tech Athletic Fund Inc., Virginia Tech Corps of Cadets Alumni Inc., and Virginia Tech Alumni Association meet exemption requirements and are not presented separately in this table. Additionally, Virginia Tech India Research and Education Forum (VTIREF) is not presented in this table due to the immateriality of its financial figures in comparison with the organizations included.

COMPLIANCE FINDING AND RECOMMENDATION

Improve the Process to Identify Individuals in a Position of Trust

Type: Compliance
Severity: Not Applicable
Repeat: No

Virginia Polytechnic Institute and State University (Virginia Tech) is not properly identifying and tracking individuals in a position of trust, to ensure such individuals complete the Statement of Economic Interest (SOEI) requirements. Virginia Tech did not identify seven individuals in a position of trust that had approval over contracts or audit. In addition, 28 individuals identified in a position of trust did not complete the required training, and seven individuals on Virginia Tech's filer list did not file the SOEI disclosure form.

Executive Order Number Eight (2018) requires Virginia Tech to submit a report to the Office of the Secretary of the Commonwealth identifying, by name and job title, the positions that are required to file a SOEI form. Additionally, per the Executive Order, positions of trust for institutions of higher education include presidents, vice presidents, provosts, deans, and any other person as designated by the institution including those persons with approval authority over contracts or audits. The Executive Order also requires that the head of each agency, institution, board, commission, council, and authority within the Executive Branch to be responsible for ensuring that designated officers and employees file their statements of economic interests in accordance with § 2.2-3114 of the Code of Virginia. Section 2.2-3130 of the Code of Virginia requires individuals in a position of trust to receive training within two months upon hire and every two years thereafter.

By not identifying and tracking all individuals in a position of trust, Virginia Tech cannot ensure that these individuals are filing a SOEI form as required. Unidentified individuals that should have filed may be unable to recognize a conflict of interest or unable to resolve the conflict due to the lack of the required training. Virginia Tech increases their risk for fraud and possible lawsuits involving the respective employees. Additionally, employees in a position of trust who do not complete the required SOEI form may, as stated by the Code of Virginia § 2.2-3124, be subject to a $250 civil penalty.

The current controls related to the identification of positions of trust in Virginia Tech's Human Resources system did not adequately identify all potential job positions that should require the employee to file an SOEI form and complete the required training because the process did not consider part time employees. In addition, there has been turnover within the SOEI program coordinator position, which resulted in miscommunication in both documentation and tracking.

Virginia Tech should modify existing procedures or implement additional procedures to ensure that the SOEI program coordinator identifies employees in positions of trust upon hire or change in employee job responsibilities to include part time employees. They should also ensure that an adequate tracking mechanism exists to ensure filers are completing their required training.

Commonwealth of Virginia

Auditor of Public Accounts

Martha S. Mavredes, CPA
Auditor of Public Accounts

P.O. Box 1295
Richmond, Virginia 23218

December 13, 2019

The Honorable Ralph S. Northam, Governor of Virginia

The Honorable Thomas K. Norment, Jr., Chairman, Joint Legislative Audit and Review Commission

Board of Visitors, Virginia Polytechnic Institute and State University

INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS

We have audited, in accordance with the 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 business-type activities and aggregate discretely presented component units of **Virginia Polytechnic Institute and State University** as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise Virginia Tech's basic financial statements and have issued our report thereon dated December 13, 2019. Our report includes a reference to other auditors. We did not consider internal controls over financial reporting or test compliance with certain provisions of laws, regulations, contracts, and grant agreements for the financial statements of the component units of Virginia Tech, which were audited by other auditors in accordance with auditing standards generally accepted in the United States of America, but not in accordance with Government Auditing Standards.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered Virginia Tech's internal control over financial reporting to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Virginia Tech's internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of Virginia Tech's internal control over financial reporting.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over financial reporting was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over financial reporting that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control over financial reporting that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether Virginia Tech's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed an instance of noncompliance or other matters that is required to be reported under Government Auditing Standards and which is described in the section titled "Compliance Finding and Recommendation" in the finding entitled "Improve the Process to Identify Individuals in a Position of Trust."

The University's Response to Findings

The University's response to the findings identified in our audit is described in the accompanying section titled "University Response." Virginia Tech's response was not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on it.

Status of Prior Findings

We did not perform audit work related to the finding included in our report dated November 28, 2018, entitled "Improve Reporting to the National Student Loan Data System" because Virginia Tech did not implement corrective action until July 2019, which was outside of our audit period. We will follow up on this finding during the fiscal year 2020 audit.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with Government Audit Standards in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Martha S. Mavredes
AUDITOR OF PUBLIC ACCOUNTS

DBC/clj

VIRGINIA TECH

University Controller (MC 0312)
Virginia Tech
North End Center, Suite 3300
300 Turner Street NW
Blacksburg, Virginia 24061
P: (540) 231-6418 F: (540) 231-7221
www.controller.vt.edu

December 9, 2019

Martha Mavredes, CPA
Auditor of Public Accounts
P. O. Box 1295
Richmond, Virginia 23218

Dear Ms. Mavredes:

We have reviewed the audit finding and recommendation resulting from the fiscal year 2019 audit by the Auditor of Public Accounts (APA) and Virginia Tech concurs with the audit finding. The following contains the APA's finding and management's response to the finding.

Finding of the APA:

Improve the Process to Identify Individuals in a Position of Trust

Virginia Polytechnic Institute and State University (Virginia Tech) is not properly identifying and tracking individuals in a position of trust, to ensure all such individuals complete the Statement of Economic Interest (SOEI) requirements. Virginia Tech did not identify seven individuals in a position of trust that had approval over contracts or audit. In addition, 28 individuals identified in a position of trust did not complete the required training, and seven individuals on Virginia Tech's filer list did not file the SOEI disclosure form.

Executive Order Number Eight (2018) requires Virginia Tech to submit a report to the Office of the Secretary of the Commonwealth identifying, by name and job title, the positions that are required to file a SOEI form. Additionally, per the Executive Order, positions of trust for institutions of higher education include presidents, vice presidents, provosts, deans, and any other person as designated by the institution including those persons with approval authority over contracts or audits. The Executive Order also requires that the head of each agency, institution, board, commission, council, and authority within the Executive Branch to be responsible for ensuring that designated officers and employees file their statements of economic interests in accordance with § 2.2-3114 of the Code of Virginia. Section 2.2-3130 of the Code of Virginia requires individuals in a position of trust to receive training within two months upon hire and every two years thereafter.

By not identifying and tracking all individuals in a position of trust, Virginia Tech cannot ensure that these individuals are filing a SOEI form as required. Unidentified individuals that should have filed may be unable to recognize a conflict of interest or unable to resolve the conflict due to the lack of the required training. Virginia Tech increases their risk for fraud and possible lawsuits involving the respective employees. Additionally, employees in a position of trust who do not complete the required SOEI form may, as stated by the Code of Virginia § 2.2-3124, be subject to a $250 civil penalty.

Virginia Tech should modify existing procedures or implement additional procedures to ensure that the SOEI program coordinator identifies employees in positions of trust upon hire or change in employee job responsibilities to include part time employees. They should also ensure that an adequate tracking mechanism exists to ensure filers are completing their required training.

University Response:

We concur that Virginia Tech failed to identify and track all eligible faculty and staff required to complete the Statement of Economic Interest form and training. Recognizing the criteria pose inherent challenges to tracking and compliance, we are moving forward with the following actions:

Completion Dates: October 1, 2019 through May 1, 2020

- Assign coordinator for SOEI program (completed October 1, 2019)
- Complete review of all 17,506 employees, including review with COI team to include their list (complete by December 20, 2019)
- Update SOEI spreadsheet identifying all required positions (complete by Dec 30, 2019)
- Review of new hires/terms (monthly, starting in December 2019, and monthly thereafter through 2020)
- Add/review required positions and initiate communication with new hires (monthly starting in December 2019 through 2020)
- Review monthly those who have completed the new hire requirements (monthly starting in December 2019 through 2020)
- Notify employee two times then senior management if the employee has not completed form or training
- Explore the possibility of adding SOEI tag to position descriptions in Page Up (complete review by March 31, 2020 – if feasible, complete by May 1, 2020)
- Explore additional options for onboarding communication
- Report those who do not complete the required training to senior management (Provost or SVP as appropriate) for further review (start in January 2020 with the annual reporting date)

Virginia Tech successfully completed the required processes for 256 faculty/staff in the prior year and we are confident we can close the gap with the measures above.

Responsible Person: Bryan Garey, VP for Human Resources

Sincerely,

Kenneth Miller
Interim VP for Finance & AVP for Finance & University Controller
Virginia Tech

University Administrative Officers

(as of June 30, 2019)

VIRGINIA TECH BOARD OF VISITORS

Dennis H. Treacy, *Rector*

Horacio A. Valeiras, *Vice Rector*

Edward H. Baine

Greta J. Harris

Charles T. Hill

Anna L. James

Mehmood Kazmi

Letitia A. Long

Robert J. Mills Jr

L. Chris Petersen

Deborah L. Petrine

Mehul P. Sanghani

Jeffrey E. Veatch

Preston M. White

FINANCIAL AND BUSINESS OFFICERS

John J. Cusimano
University Treasurer and Associate Vice President for Finance for the VT Foundation

Christopher H. Kiwus
Associate Vice President and Chief Facilities Officer

Kenneth E. Miller
Assistant Vice President for Finance and University Controller

Sharon M. Kurek
Executive Director of Audit, Risk, and Compliance

SENIOR OFFICERS

Timothy D. Sands
President

Cyril R. Clarke
Executive Vice President and Provost

Dwayne L. Pinkney
Senior Vice President for Operations and Administration

Charles D. Phlegar
Vice President for Advancement

Lisa J. Wilkes
Vice President for Business Affairs

Menah Pratt-Clarke
Vice President for Diversity, Inclusion and Strategic Affairs

M. Dwight Shelton Jr.
Vice President for Finance and Chief Financial Officer

Karen P. DePauw
Vice President and Dean for Graduate Education

Michael J. Friedlander
Vice President for Health Sciences and Technology

Bryan Garey
Vice President for Human Resources

Scott F. Midkiff
Vice President for Information Technology and Chief Information Officer

Steven H. McKnight
Vice President for National Capital Region

Sherwood G. Wilson
Vice President for Operations

Kim T. O'Rourke
Vice President for Policy and Governance

Theresa S. Mayer
Vice President for Research and Innovation

ACADEMIC DEANS

Alan L. Grant
College of Agriculture and Life Sciences

Richard J. Blythe
College of Architecture and Urban Studies

Julia M. Ross
College of Engineering

Paul Knox
Honors College

Rosemary Blieszner
College of Liberal Arts and Human Sciences

Paul M. Winistorfer
College of Natural Resources and Environment

Robert T. Sumichrast
Pamplin College of Business

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