



## **UNIVERSITY OF MASSACHUSETTS**

Independent Auditors' Report as Required by Title 2 U.S. Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards and Government Auditing Standards* and Related Information

Year ended June 30, 2019

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Year ended June 30, 2019

### Table of Contents

	<b>Page(s)</b>
<b>Financial Statements</b>	
University Administration	2
Letter from the President	3
Independent Auditors' Report	4-5
Management's Discussion and Analysis (Unaudited)	6-15
Statement of Net Position	16
Statement of Revenues, Expenses, and Changes in Net Position	17
Statements of Cash Flows	18-19
Component Units Statements of Financial Position	20
Notes to Financial Statements	21-53
Required Supplementary Information (Unaudited)	54-55
<b>Supplementary Information</b>	
Schedule of Expenditures of Federal Awards	56-81
Notes to the Schedule of Expenditures of Federal Awards	82-83
<b>Reports on Internal Control and Compliance</b>	
Independent Auditors' Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With <i>Government Auditing Standards</i>	84-85
Independent Auditors' Report on Compliance for Each Major Program; and Report on Internal Control Over Compliance Required by the Uniform Guidance; and Report on Schedule of Expenditures of Federal Awards Required by the Uniform Guidance	86-87
<b>Findings and Questioned Costs</b>	
Schedule of Findings and Questioned Costs	88

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As of November 2019

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Secretary to the Board of Trustees



December 18, 2019

I am pleased to present the annual financial report of the University of Massachusetts, which outlines the university's financial activities over the past year and serves to underscore our long-held commitment to fiscal management and accountability.

As the Commonwealth's public research university, UMass continues to be a beacon of excellence and is widely recognized for its highly engaged faculty, rigorous academic offerings and groundbreaking research.

This year, UMass has maintained its position among top-ranked campuses by *U.S. News & World Report*, remaining one of the only university systems in the country with all of its undergraduate campuses in the top tier. For the fourth consecutive year, UMass was named to *Reuters'* list of the World's Most Innovative Universities, placing it among the institutions doing the most to advance science, invent new technologies and power new markets.

With more than 300,000 alumni living in Massachusetts and roughly 18,000 students graduating every year, UMass is the single-largest contributor to the Massachusetts workforce. UMass continues to educate and prepare students for careers in high-demand fields, like healthcare, engineering and computer science.

Alongside this growth, UMass has remained unwavering in our mission to maintain affordability, increasing our own commitment to institutional financial aid to a record high \$347 million this year.

We also continue to take our responsibility to prudently manage the university's resources seriously. We have established accountability in finance structures, increased transparency and more effectively managed operating costs across the five campuses. Over the past year, the university has maintained its strong bond ratings, with an Aa2 rating from Moody's, an AA- rating from S&P and an AA rating by Fitch. These reports reflect continued confidence in the institution's overall financial health, bucking the trend for colleges and universities nationwide and highlighting our own effective stewardship.

Additionally, we are implementing a Unified Procurement Services Team, which will continue to realize efficiencies in our operations. Over the first 18 months alone, we expect to realize \$16.5 million in savings, with more to come in subsequent years as additional areas of opportunity are identified.

With the dedication of students, faculty and staff across our five campuses, we will ensure UMass continues to fulfill its critical mission of affordability, opportunity and service to the Commonwealth.

Martin T. Meehan  
President



KPMG LLP  
Two Financial Center  
60 South Street  
Boston, MA 02111

## Independent Auditors' Report

Board of Trustees of the  
University of Massachusetts:

### *Report on the Financial Statements*

We have audited the accompanying financial statements of the business-type activities and aggregate discretely presented component units of the University of Massachusetts (the University), an enterprise fund of the Commonwealth of Massachusetts, as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise the University's basic financial statements for the year then ended 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 U.S. generally accepted accounting principles; 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.

### *Auditors' Responsibility*

Our responsibility is to express opinions on these financial statements based on our audit. 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 from material misstatement. The financial statements of the discretely presented component units identified in note 1 were not audited 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 auditors' 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 presentation of the financial statements.

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

### *Opinions*

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and the aggregate discretely presented component units of the University of Massachusetts, as of June 30, 2019, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with U.S. generally accepted accounting principles.

KPMG LLP is a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity.



### *Emphasis of Matter*

As discussed in Note 1, the financial statements of the University are intended to present the financial position, the changes in financial position and, where applicable, cash flows of only that portion of the business-type activities and the aggregate remaining fund information of the Commonwealth of Massachusetts that is attributable to the transactions of the University. They do not purport to, and do not, present fairly the financial position of the Commonwealth of Massachusetts as of June 30, 2019, the changes in its financial position, or where applicable, its cash flows for the year then ended in conformity with U.S. generally accepted accounting principles. Our opinion is not modified with respect to this matter.

### *Other Matters*

#### *2018 Financial Statements*

The accompanying financial statements of the University of Massachusetts as of and for the year ended June 30, 2018 were audited by other auditors whose report thereon, expressed an unmodified opinion on those financial statements.

#### *Required Supplementary Information*

U.S. generally accepted accounting principles require that the Management's Discussion and Analysis on pages 6-15 and the Schedules of the University's Proportionate Share of the Net Pension and Other Post Employment Benefit Liabilities and the Schedules of the University's Contributions on pages 54-55 be presented to supplement the basic financial statements. 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 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.

#### *Other Reporting Required by Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated December 18, 2019 on our consideration of the University'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 solely 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 on the effectiveness of the University's opinion on 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 the University's internal control over financial reporting and compliance.

KPMG LLP

Boston, Massachusetts  
December 18, 2019

# Management's Discussion and Analysis (unaudited)

June 30, 2019

## Introduction

This Management's Discussion and Analysis provides an overview of the financial position and activities of the University of Massachusetts (the University or UMass) for the fiscal years ended June 30, 2019 and 2018, and should be read in conjunction with the accompanying financial statements and notes. The financial statements, notes and this discussion are the responsibility of management.

The University of Massachusetts was established in 1863 as the Massachusetts Agricultural College, located in Amherst. Since then it has grown into a five-campus system that is nationally and internationally known for the quality of its academic programs and the scope and excellence of its faculty research. From Nobel Prize-winning gene-silencing research to research in such areas as renewable energy, nanotechnology, cybersecurity, life sciences and marine science, the University of Massachusetts is expanding the boundaries of knowledge and opening doors of discovery that benefit the Commonwealth of Massachusetts (Commonwealth), the nation and the world. UMass consistently ranks as one of the best universities in the world and as one of the most innovative.

**UMass Amherst** is the flagship campus of the University. True to its land-grant roots, UMass Amherst is engaged in research and creative work in all fields and is classified by the Carnegie Foundation for the Advancement of Teaching as a doctoral university with the "highest research activity". Major areas of emphasis include climate science, food science, alternative energy, nano manufacturing, polymer science, computer science and linguistics. Consistently rated as a "Top Producer of Fulbright Students," UMass Amherst is ranked 24th among the nation's top public schools in the 2020 *U.S. News & World Report*.

**UMass Boston** is nationally recognized as a model of excellence for urban public research universities. Located on Boston Harbor, it is the metropolitan area's only public

research university. UMass Boston's distinguished intellectual contributions span the social sciences, education, health and wellness. With a student population that represents 150 countries. UMass Boston is committed to educating people from modest-income backgrounds, first-generation college students and those from urban areas here and abroad.

**UMass Dartmouth** distinguishes itself as a vibrant university dedicated to engaged learning and innovative research resulting in personal and lifelong student success. Located on 710 acres on the south coast of Massachusetts, UMass Dartmouth offers students high-quality academic programs through undergraduate majors and professional and doctoral programs, including the state's only public law school.

**UMass Law**, the only public law school in Massachusetts, is committed to providing an excellent, affordable, and accessible legal education that balances legal theory, doctrine, skills, experience, and professionalism. UMass Law prepares students to thrive in a changing profession and advances justice through research, writing, teaching, learning, and practice. UMass Law's July 2018 Massachusetts first-time bar passage rate was 92.6%, the third highest passage rate of the Massachusetts law schools.

**UMass Lowell** is ranked 179th among the National Universities Rankings within the 2020 *U.S. News & World Report*, with programs supporting workforce and economic development through innovation, entrepreneurship and public-private partnerships. UMass Lowell prepares students emphasizing experiential learning through cooperative education, service and research.

**UMass Medical School (UMMS)**, founded in 1962 and situated in Worcester, is the Commonwealth's only public medical school and serves as the University's Nobel-prize winning health sciences campus. Consistently ranked in the top 10 percent for primary care training according to *U.S. News & World Report*, UMMS has remained true to its

founding mission while also becoming globally recognized in biomedical research. UMMS has three graduate schools—the School of Medicine, the Graduate School of Biomedical Sciences and the Graduate School of Nursing. Unique among all medical schools, UMMS is also home to Commonwealth Medicine, a health care consulting division that partners with states in delivering health services to vulnerable populations, and MassBiologics, the only non-profit, FDA-licensed vaccine manufacturer in the nation.

**UMassOnline**, the University of Massachusetts' nationally acclaimed online education consortium, features more than 1,500 online courses and 150 online certificate and degree programs from the five UMass campuses. Since its founding in 2001, UMassOnline continues to grow, with over 80,000 course enrollments across the five campuses. UMassOnline students can pursue an associate's, bachelor's, master's or doctoral degree in a variety of in-demand subject areas, including liberal arts, education, management, nursing, public health and information technology. Online students learn from the same world-class instructors as students who study on campus, and they receive an identical degree. UMassOnline programs consistently earn high rankings in *U.S. News & World Report* and *GetEducated.com*.

## Financial highlights

The University's combined net position increased \$114.0 million from \$2.4 billion in fiscal year 2018 to \$2.5 billion in fiscal year 2019.

The University's income before other revenues, expenses, gains, and losses was \$78.1 million for fiscal year 2019. Excluding the impact on operating expenses for both Governmental Accounting Standards Board (GASB) Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* (GASB 75) and GASB 68, *Accounting and Reporting for Pensions* (GASB 68), the University's income before other revenues, expenses, gains, and losses was \$108.2 million.

From fiscal year 2018 to fiscal year 2019, the University's operating revenues decreased by \$15.5 million driven primarily by a decrease in revenue generated from public service activities provided by UMMS through

its Commonwealth Medicine (CWM) programs offset by increases in grant and contract revenues. Operating expenses decreased by \$29.6 million primarily driven by the decrease in expenses related to public service activities, which can be directly correlated to the decrease in revenues for these activities. Non-operating revenues increased \$61.1 million primarily attributed to an increase in state appropriations and strong investment performance.

## Using the annual financial report

The University's financial statements are prepared in accordance with U.S. generally accepted accounting principles as prescribed by GASB, which establishes financial reporting standards for public colleges and universities. The University's significant accounting policies are summarized in Note 1 of the accompanying financial statements, including further information on the financial reporting entity.

This report includes the University's Statements of Net Position, Statements of Revenues, Expenses and Changes in Net Position and the Statements of Cash Flows for the fiscal years ended June 30, 2019 and 2018. The University's net position (the difference between assets, deferred outflows, deferred inflows, and liabilities) is one indicator of the University's financial health. Over time, increases or decreases in net position are indicators of the improvement or erosion of an institution's financial health when considered together with non-financial factors such as enrollment levels and the condition of the facilities.

The Statements of Net Position include all assets and liabilities, as well as deferred inflows and outflows of resources of the University. Net position is further broken down into three categories: net investment in capital



assets, restricted and unrestricted. Amounts reported in net investment in capital assets represent the historical cost of property and equipment, reduced by the balance of related debt outstanding and depreciation expense charged over the years. Net position is reported as restricted when constraints are imposed by third parties, such as donors or enabling legislation. Restricted net position is either non-expendable, as in the case of endowment gifts to be held in perpetuity, or expendable, as in the case of funds to be spent on scholarships and research. All other assets are unrestricted; however, they may be committed for use under contract or designation by the Board of Trustees (the Board). Note 15 to the accompanying financial statements depicts the designations of unrestricted net position at June 30, 2019 and 2018, respectively.

The Statements of Revenues, Expenses and Changes in Net Position present the revenues earned and expenses incurred during the year. Activities are reported as either operating or non-operating, as prescribed by GASB. According to the GASB definitions, operating revenues and expenses include tuition and fees, grant and contract activity, auxiliary enterprises and activity for the general operations of the institution not including appropriations from state and federal sources. Non-operating revenues and expenses include appropriations, capital grants and contracts, gifts, investment income, and non-operating federal grants (such as Pell grants). With a public university's dependency on support from the state, Pell grants, and gifts, it is common for institutions to have operating expenses exceed operating revenues. This is because the financial reporting model prescribed by GASB classifies state and federal appropriations, Pell grants, and gifts as non-operating revenues. Due to the materiality of the state appropriations upon which the University relies, these appropriation amounts are included in certain analyses throughout this MD&A as operating revenue. The utilization of long-lived assets, referred to as capital assets, is reflected in the financial statements as depreciation expense, which amortizes the cost of a capital asset over its expected useful life.

Another important factor to consider when evaluating financial viability is the University's ability to meet financial obligations as they mature. The Statements of Cash Flows present information related to cash inflows and outflows summarized by operating, capital and non-capital, financing and investing activities.

## Reporting entity

The financial statements of the University include financial activities of the following blended component units: the University of Massachusetts Building Authority (Building Authority), Worcester City Campus Corporation and Subsidiary (WCCC), and the University of Massachusetts Amherst Foundation. Separate Statements of Financial

Position and Statements of Activities are presented in this report for the University's discretely presented component units, the University of Massachusetts Foundation, Inc., and the University of Massachusetts Dartmouth Foundation, Inc. The statements for these entities are presented in accordance with Financial Accounting Standards Board (FASB) standards, which differ from GASB standards in certain areas such as reporting of pledges to endowment and net position.

## Net position

Condensed statements of net position at June 30, 2019, 2018, and 2017, respectively, are presented on page 9.

At June 30, 2019, total net position was \$2.5 billion. The University's largest asset continues to be its capital assets, net of accumulated depreciation, of \$5.2 billion at June 30, 2019, \$5.1 billion at June 30, 2018 and \$4.9 billion at June 30, 2017.

Liabilities totaled \$4.9 billion at June 30, 2019, a decrease of \$236.5 million over fiscal year 2018. Long-term liabilities represent 84% of total liabilities at June 30, 2019, primarily consisting of \$2.7 billion of long-term debt and \$1.1 billion of pension and other postemployment benefit (OPEB) liabilities.

The University's current assets at June 30, 2019 of \$921.6 million exceeded current liabilities of \$799.3 million, and as a result the current ratio was \$1.15 in assets to every one dollar in liabilities. This is due to a decrease of the current portion of long-term debt related to the refinancing of debt in 2019. At June 30, 2018, current assets of \$918.7 million were less than current liabilities of \$934.5 million, resulting in a current ratio of \$0.98. At June 30, 2017, current assets of \$742.5 million exceeded current liabilities of \$662.1 million, resulting in a current ratio of \$1.19.

## Revenues, expenses, and changes in net position

Condensed statements of revenues, expenses, and changes in net position for the three years ended June 30, 2019, 2018, and 2017, are presented on page 9.

**CONDENSED STATEMENTS OF NET POSITION**

As of June 30, 2019, 2018, and 2017 (\$ in thousands)	2019	2018	2017
<b>Assets</b>			
Current assets	\$ 921,582	\$ 918,685	\$ 742,482
Noncurrent assets			
Capital assets, net	5,164,200	5,075,476	4,854,110
All other noncurrent assets	1,281,662	1,291,309	1,404,203
Total assets	7,367,444	7,285,470	7,000,795
<b>Deferred outflows of resources</b>	356,683	341,335	275,725
<b>Liabilities</b>			
Current liabilities	799,310	934,525	622,084
Noncurrent liabilities	4,060,669	4,161,911	3,562,485
Total liabilities	4,859,979	5,096,436	4,184,569
<b>Deferred inflows of resources</b>	361,245	141,485	37,671
<b>Net position</b>			
Net investment in capital assets	2,343,872	2,288,599	2,208,370
Restricted:			
Nonexpendable	28,617	28,022	27,443
Expendable	206,023	222,343	201,710
Unrestricted	(75,609)	(150,080)	616,757
<b>Total net position</b>	<b>\$ 2,502,903</b>	<b>\$ 2,388,884</b>	<b>\$ 3,054,280</b>

**CONDENSED STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION**

As of June 30, 2019, 2018, 2017 (\$ in thousands)	2019	2018	2017
<b>Operating revenues</b>			
Tuition and fees, net of scholarships	\$ 894,904	\$ 874,826	\$ 847,832
Grants and contracts	593,086	560,990	560,081
Auxiliary enterprises	441,795	416,733	400,822
Other operating revenues	523,569	616,265	631,854
Total operating revenues	2,453,354	2,468,814	2,440,589
<b>Operating expenses</b>	3,270,790	3,300,392	3,158,953
<b>Operating loss</b>	(817,436)	(831,578)	(718,364)
<b>Nonoperating revenues (expenses)</b>			
Federal appropriations	7,004	6,688	6,602
State appropriations	780,221	751,894	720,817
Interest on indebtedness	(116,217)	(115,851)	(110,069)
Nonoperating federal grants	84,454	81,590	74,050
Other nonoperating income	140,047	110,062	117,248
Total nonoperating revenues (expenses)	895,509	834,383	808,648
<b>Income before other revenues, expenses, gains and losses</b>	78,073	2,805	90,284
<b>Other Revenues, Expenses, Gains and Losses</b>			
Capital appropriations, grants and other sources	38,665	76,169	150,460
Other (deductions) additions	(2,719)	(1,388)	13,443
Total other revenues, expenses, gains, and losses	35,946	74,781	163,903
<b>Total increase in net position</b>	114,019	77,586	254,187
<b>Net position</b>			
Net position at the beginning of the year	2,388,884	3,054,280	2,800,093
Cumulative effect of adopting GASB 75*	-	(742,982)	-
Net position at the beginning of the year, restated	2,388,884	2,311,298	2,800,093
<b>Net position at the end of the year</b>	<b>\$ 2,502,903</b>	<b>\$ 2,388,884</b>	<b>\$ 3,054,280</b>

\* Refer to Note 13 of the accompanying financial statements for further discussion related to the adoption of GASB 75

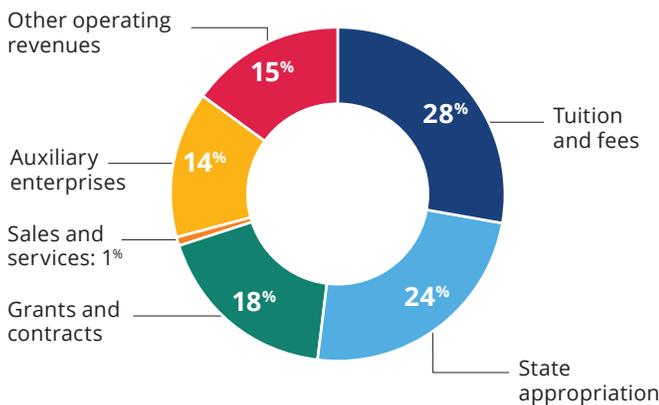
## Operating revenues and expenses

While not classified on the financial statements as operating revenue, state appropriations serve as a primary source for funding the core mission of the University. State appropriations revenue, described in detail below, is used almost exclusively to fund payroll for University employees, and as such is considered as operating revenue for management's planning and analysis purposes. Total operating revenues, including state appropriations, increased \$12.9 million (0.4%) from \$3.2 billion in fiscal year 2018 to \$3.2 billion in FY19. Total operating revenues in fiscal year 2018, including state appropriations, increased \$59.3 million (1.9%) from \$3.2 billion in fiscal year 2017.

As noted in the fiscal year 2019 operating revenues chart below, over 50% of the University's operating revenues were from tuition and fees and state appropriations.

Other operating revenues includes revenues generated from CWM programs. These programs provide public consulting and services in health care financing, administration and policy to federal, state and local agencies and not-for-profit health and policy organizations. In addition to CWM activities, other operating revenues also include revenue earned by UMMS for educational services it provides to its clinical affiliate UMass Memorial Health Care, Inc. (UMass Memorial) as required by the enabling legislation enacted by the Commonwealth in 1997.

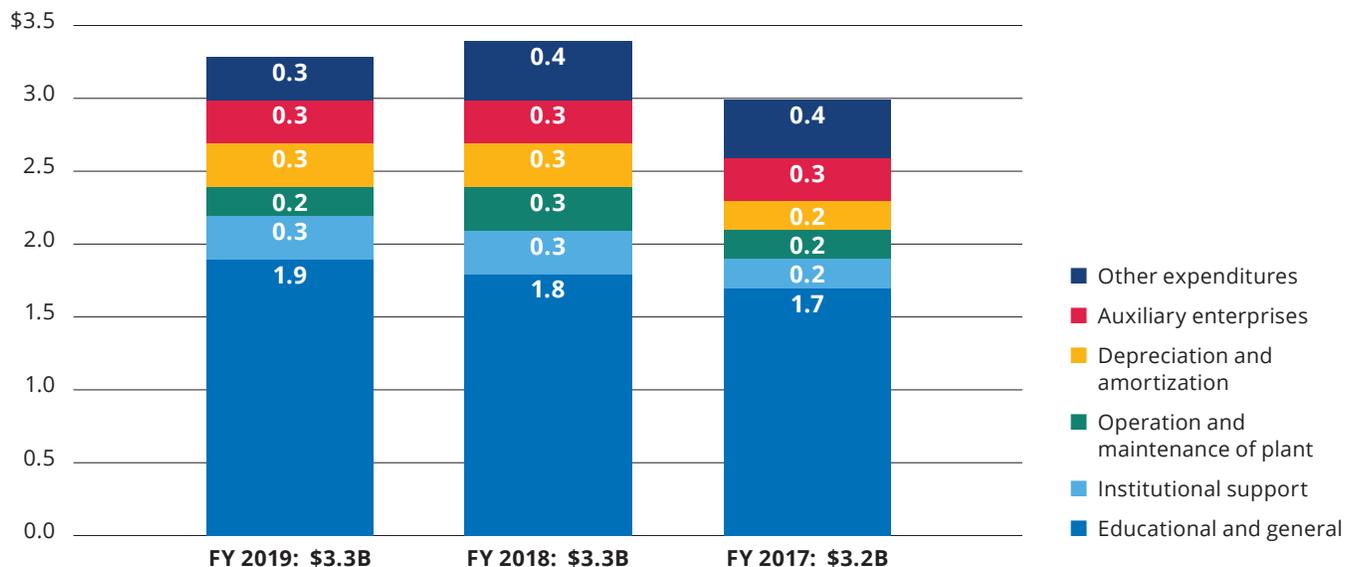
### FISCAL YEAR 2019 OPERATING REVENUES (including State Appropriations)



In fiscal year 2019, operating expenses, including depreciation and amortization, totaled \$3.3 billion, as compared to \$3.3 billion in 2018 and \$3.2 billion in 2017. Of the fiscal year 2019 total, \$1.9 billion or 57% was used to support the academic core activities of the University, including \$487.7 million in research. The education and general portion of the three year operating expenses chart below represents expenses in the following functional categories: instruction, research, public service, academic support, student services and scholarships and fellowships. Public service activities expenditures include payments made to the Commonwealth pursuant to requirements of legislation enacted by the State Legislature of Massachusetts.

### THREE YEAR OPERATING EXPENSES

(\$ in billions)





## State appropriations

In fiscal year 2019, state appropriations represented approximately 23% of all operating and non-operating revenues. The level of state support is a key factor influencing the University's overall financial condition. Although the state appropriations are unrestricted revenue, nearly 100% of the state appropriations support payroll and benefits for University employees. In addition to the direct state appropriation there are several smaller appropriations that add to the total state support for the University such as the Star Store lease at the Dartmouth campus and the Springfield Satellite Center, among others. While these smaller line items are in support of campus-specific programs and do not support general University operations, they are included in the state appropriations line in the accompanying financial statements, and in the state appropriations line in the table below.

The Commonwealth pays fringe benefits for University employees paid from state appropriations. Therefore, such fringe benefit support is added to the state appropriations financial statement line item in the accompanying Statements of Revenues, Expenses and Changes in Net Position. The University pays the Commonwealth for the fringe benefit cost of the employees paid from funding sources other than state operating appropriations. These amounts are not included in state appropriations.

The University's state appropriations including fringe benefits increased in fiscal year 2019 by \$28.3 million from fiscal year 2018 primarily due to increased collective bargaining costs determined by the State, as well as an increase in the State's fringe benefit rate.

The table below details the state appropriations for the fiscal years ended June 30, 2019, 2018, and 2017:

## STATE APPROPRIATIONS

(\$ in thousands)

	FY 2019	FY 2018	FY 2017
State appropriations	\$ 551,953	\$ 528,868	\$ 512,900
Plus: fringe benefits	228,268	223,026	207,917
<b>Commonwealth support</b>	<b>\$ 780,221</b>	<b>\$ 751,894</b>	<b>\$ 720,817</b>

## State capital appropriations

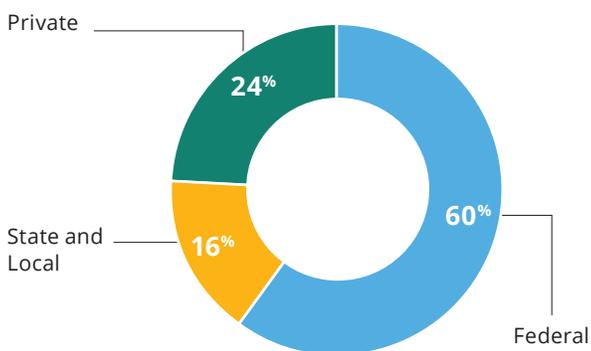
The University faces a financial challenge to maintain and upgrade its capital assets including its infrastructure, buildings and grounds. In order to have a successful capital program, the University must rely on a combination of revenue sources to fund its capital investments. In fiscal years 2019, 2018 and 2017, the capital support provided to the University through appropriations and grants from the Commonwealth was \$25.5 million, \$67.4 million and \$121.4 million, respectively. Beginning in fiscal year 2019, the Commonwealth established a new strategic framework for approving the allocation of state funding for capital projects across higher education. The new framework provides funding in four distinct categories: major projects, critical repairs, critical infrastructure and readiness determination projects. The Commonwealth's fiscal year 2019 capital plan included approved projects from the prior year and the following new capital investments.

- Major Projects - Science and Engineering Building Renovation at Dartmouth for \$25 million.
- Critical Repairs - UMass is expected to receive \$75 million over the next five years to fund small-scale critical repairs (deferred maintenance) projects across the five campuses.

## Grant and contract revenue

Among Massachusetts colleges and universities, the University ranks fourth in research and development expenditures, behind only MIT, Harvard, and Boston University. Most research at the University is externally funded, with the federal government providing a majority of the funding through the National Institutes of Health, the National Science Foundation, and other agencies.

### GRANT AND CONTRACT REVENUE FY2019



Collectively, UMass Amherst and UMass Medical School account for approximately 76% of the University's total research enterprise of \$593.1 million. The chart below details the University's grant and contract revenues by source for the year ended June 30, 2019.

## Discretely presented component units

The University's financial statements include the financial information of the University's discretely presented component units, the University of Massachusetts Foundation, Inc. (UMF) and the University of Massachusetts Dartmouth Foundation, Inc. (UMDF). Further information about these foundations can be found in Notes 1 and 18 to the accompanying financial statements. Additionally, the individual financial statements of each foundation can be obtained by contacting the foundations directly: jmurphy@umassp.edu for UMF and giving@umassd.edu for UMDF.

### University of Massachusetts Foundation, Inc.

UMF was established in 1950 to foster and promote the growth, progress and general welfare of the University, and to solicit, receive and administer gifts and donations for such purposes. UMF maintains a portion of the University's investment portfolio, predominantly the endowment and the quasi-endowment investments. The total portfolio held at UMF at June 30, 2019, 2018 and 2017 was \$973.3 million, \$871.9 million and \$819.7 million, respectively.

### University of Massachusetts Dartmouth Foundation, Inc.

UMDF was established in 1973 to raise funds for the development and improvement of the academic and educational environment for students at the Dartmouth campus and the continued engagement of its alumni. In addition to holding investments for the University, UMF holds a significant portion of the UMDF investments. The total portfolio held by UMDF at June 30, 2019, 2018 and 2017 was \$56.4 million, \$54.8 million and \$53.1 million, of which the majority is invested with UMF.

## Tuition and fees

For academic year 2018–2019, tuition was raised an average of 2.5% for in-state undergraduate students over the prior year. For academic year 2017–2018, tuition was raised on average 3.0% over the prior year. Affordability continues to be a priority of the University and increases in fees are considered in conjunction with State support on an annual basis.

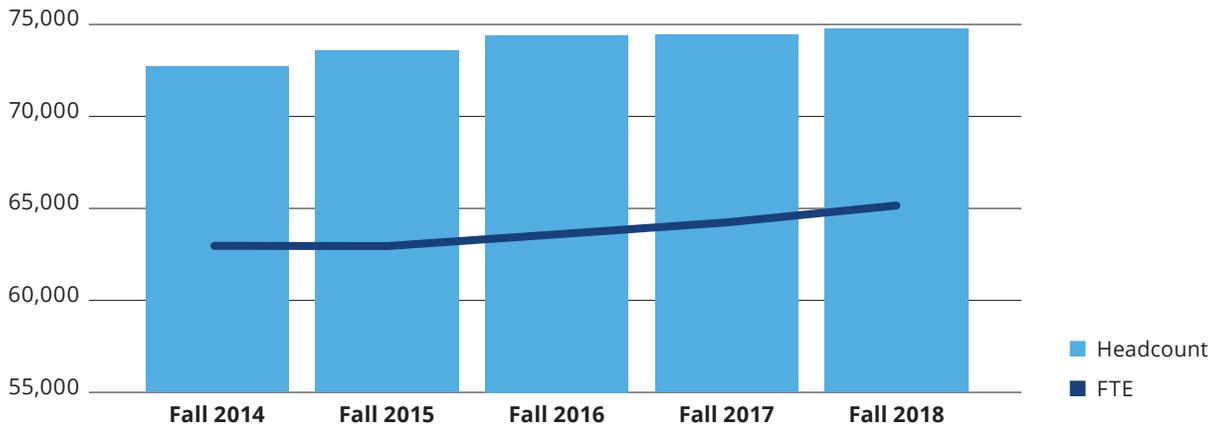
## Enrollment

As shown in the table below, total enrollment in the fall of 2018 was 65,346 FTE (74,705 headcount students), an increase of 1.3% over the previous year's enrollment of 64,530 FTE (74,572 headcount students). Enrollment in the fall of 2016 was 63,977 FTE (74,496 headcount students). The five year enrollment growth of 4.7% is meaningful as other institutions of higher education have experienced declining enrollments over this period. This growth is consistent with the University's efforts to increase its reach across the Commonwealth and to recruit non-resident students, and is reflective of the quality education provided by the University of Massachusetts.

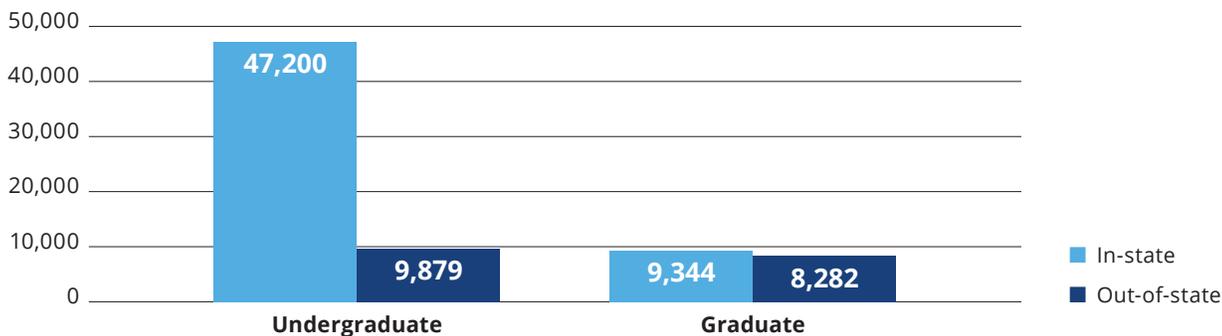
Admission to the University is open to residents of the Commonwealth and non-residents on a competitive basis. For the fall semester, Massachusetts residents accounted for 83.5% and 82.6% of the University's total undergraduate enrollment in Fall 2018 and Fall 2017, respectively as shown in the table below.

The online learning consortium of the University, UMassOnline, has shown significant growth in enrollments, course offerings and revenue generation, benefiting the campuses and raising the profile of the University. UMassOnline provides marketing and technology support for UMass' online offerings that enable students, professionals, and lifelong learners to take courses anywhere, anytime. For fiscal year 2019, UMassOnline and the Continuing Education units at the five campuses collaboratively generated tuition revenue of \$116.1 million and supported 80,399 course enrollments, an increase of 2.6% for revenue and an increase of 2.5% for course enrollments as compared to fiscal year 2018. For fiscal year 2018, UMassOnline generated tuition revenue of \$113.2 million and supported 78,404 course enrollments, an increase of 7.9% for revenue and an increase of 3.8% for course enrollments as compared to fiscal year 2017.

### TOTAL ENROLLMENT



### FALL 2018 ENROLLMENT BY TYPE



## Long-term debt

Long-term debt is the University's largest liability at June 30, 2019, 2018 and 2017. The University had outstanding debt of \$3.0 billion at June 30, 2019, and \$3.1 billion at June 30, 2018 and 2017. The principal issuer of the University's debt is the Building Authority. Additional issuers utilized by the University include Massachusetts Health and Educational Facilities Authority (MHEFA) and Worcester City Campus Corporation.

The debt financed through the Building Authority is being used for construction and renovation of residence halls and general education buildings, replacement of core infrastructure, and construction of academic, laboratory, and research facilities. The proceeds from the UMass MHEFA bonds were used to create an internal revolving loan program and to fund the construction of two new campus centers at the Boston and Lowell campuses (funded jointly with the Commonwealth). For further details on outstanding balances with each issuer, refer to Note 9 of the accompanying financial statements.

## University bond rating

The University is relying on a carefully planned and executed debt strategy to support master and strategic planning at the campuses and for the University as a whole. Bonds issued by the University and the Building Authority are rated AA, Aa2 and AA- as rated by Fitch, Moody's and Standard & Poor's rating agencies, respectively.

During fiscal year 2018, Moody's revised the University's outlook from negative to stable citing the University's strong management team, steady enrollment, positive operating performance, growth in financial resources and manageable plans for future borrowing. The Moody's rating exceeds some of the University's peer public research universities in New England. The stable outlook for the University is also notable because Moody's revised its rating for the higher education industry to negative in December 2017, noting that negative rating actions are more likely on average in the higher education sector.



## Limitations on additional indebtedness

The University may, without limit, issue additional indebtedness or request the Building Authority to issue additional indebtedness on behalf of the University so long as such indebtedness is payable from all available funds of the University. As noted in the Board policy, each campus' outstanding debt cannot exceed 8% of its total operating expenditures.

The Building Authority is authorized by its enabling act to issue bonds with the unconditional guarantee of the Commonwealth for the punctual payment of the interest and principal on the guaranteed bonds. The full faith and credit of the Commonwealth are pledged for the performance of its guarantee. The enabling act, as amended, currently limits to \$200.0 million the total principal amount of notes and bonds of the Building Authority that may be Commonwealth guaranteed and outstanding at any one time. The amount of bond obligations guaranteed by the Commonwealth at June 30, 2019, 2018 and 2017 was \$111.1 million, \$113.5 million and \$115.3 million, respectively.

## Capital plan

A majority of the capital spending during fiscal year 2019 related to continued investments in deferred maintenance. In September 2018, the Board approved an updated five-year capital plan for fiscal years 2019–2023 totaling \$2.1 billion. The University's capital plan is funded through a combination of



University operations, bonds issued by the Building Authority and MHEFA, Commonwealth appropriations, and private fundraising.

The University's five-year capital plan for fiscal years 2019-2023 includes major projects that were previously approved by the Board in prior-year capital plans. The University's capital approval process provides for a two-step review process involving the President's Office, the Building Authority and the Board. Additional approvals have been put in place for any capital project seeking alternative funding and/or delivery options.

### Factors impacting future periods

There are a number of issues of University-wide importance that directly impact the financial operations of the University. Many of these issues, such as improving academic quality, realizing strong financial results, investing in capital assets, expanding fundraising capacity, operating more efficiently, being the most effective University for students and the Commonwealth given the available resources, and measuring performance are ongoing activities of continuous importance to the Board and University leadership that impact the financial and budget planning each year. Student enrollment, the level of state support, the impact of collectively bargained

wage increases, and the ability of student-fee supported activities to meet inflationary pressures determine the limits of program expansion, new initiatives and strategic investments, as well as the ability of the University to meet its core mission and ongoing operational needs.

### Contacting the University

This financial report is designed to provide the University, the Commonwealth, the public and other interested parties with an overview of the financial results of the University and an explanation of the University's financial condition. If you have any questions about this report or require additional information, please contact the University Controller, Barbara Cevallos, at (617) 287-6017 or by email at [bcevallos@umassp.edu](mailto:bcevallos@umassp.edu).

## STATEMENTS OF NET POSITION

As of June 30, 2019 and 2018 (\$ in thousands)	2019	2018
<b>Assets</b>		
<b>Current assets</b>		
Cash and cash equivalents	\$ 84,986	\$ 88,463
Cash held by state treasurer	12,560	14,689
Accounts receivable, net	286,028	310,371
Short-term investments	489,907	470,139
Other current assets	48,101	35,023
Total current assets	921,582	918,685
<b>Noncurrent assets</b>		
Cash held by state treasurer	8,420	8,009
Deposits with bond trustees	211,926	319,228
Accounts receivable, net	55,123	64,251
Long-term investments	869,663	775,294
Other assets	136,530	124,527
Capital assets, net	5,164,200	5,075,476
Total noncurrent assets	6,445,862	6,366,785
<b>Total assets</b>	<b>7,367,444</b>	<b>7,285,470</b>
<b>Deferred outflows of resources</b>	<b>356,683</b>	<b>341,335</b>
<b>Liabilities</b>		
<b>Current liabilities</b>		
Accounts payable and accrued expenses	325,624	336,077
Unearned revenues and advances	61,340	59,323
Long-term debt, current portion	341,888	445,035
Other current liabilities	70,458	94,090
Total current liabilities	799,310	934,525
<b>Noncurrent liabilities</b>		
Unearned revenues and advances	61,658	120,990
Long-term debt	2,700,490	2,644,033
Derivative instruments, interest rate swaps	55,622	41,602
Net pension liability	409,319	420,234
Net other postemployment benefits liability	718,955	817,357
Other long-term liabilities	114,625	117,695
Total noncurrent liabilities	4,060,669	4,161,911
<b>Total liabilities</b>	<b>4,859,979</b>	<b>5,096,436</b>
<b>Deferred inflows of resources</b>	<b>361,245</b>	<b>141,485</b>
<b>Net position</b>		
Net investment in capital assets	2,343,872	2,288,599
Restricted:		
Nonexpendable	28,617	28,022
Expendable	206,023	222,343
Unrestricted	(75,609)	(150,080)
<b>Total net position</b>	<b>\$ 2,502,903</b>	<b>\$ 2,388,884</b>

See accompanying notes to the financial statements.

## STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

For The Years Ended June 30, 2019 and 2018 (\$ in thousands)

	2019	2018
<b>Revenues</b>		
<b>Operating revenues</b>		
Tuition and fees (net of scholarship allowances of \$328,845 at June 30, 2019 and \$310,106 at June 30, 2018)	\$ 894,904	\$ 874,826
Grants and contracts	593,086	560,990
Sales and services, educational activities	34,984	30,591
Auxiliary enterprises	441,795	416,733
Other operating revenues:		
Sales and services, independent operations	59,893	68,497
Sales and services, public service activities	291,085	381,018
Other	137,607	136,159
Total operating revenues	2,453,354	2,468,814
<b>Expenses</b>		
<b>Operating expenses</b>		
Educational and general		
Instruction	901,235	876,235
Research	487,725	471,135
Public service	83,566	78,238
Academic support	184,462	187,495
Student services	158,991	156,934
Institutional support	269,126	271,535
Operation and maintenance of capital assets	246,725	255,825
Depreciation and amortization	276,638	261,417
Scholarships and fellowships	49,509	50,410
Auxiliary enterprises	338,207	313,741
Other expenditures		
Independent operations	47,785	52,211
Public service activities	226,821	325,216
Total operating expenses	3,270,790	3,300,392
<b>Operating loss</b>	<b>(817,436)</b>	<b>(831,578)</b>
<b>Nonoperating revenues (expenses)</b>		
Federal appropriations	7,004	6,688
State appropriations	780,221	751,894
Gifts	43,705	39,022
Investment income	48,943	37,622
Unrealized gain on investments	18,082	5,558
Endowment income distributed for operations	27,741	26,742
Interest on indebtedness	(116,217)	(115,851)
Nonoperating federal grants	84,454	81,590
Other nonoperating income	1,576	1,118
Net nonoperating revenues	895,509	834,383
<b>Income before other revenues, expenses, gains, and losses</b>	<b>78,073</b>	<b>2,805</b>
<b>Other revenues, expenses, gains and losses</b>		
Capital appropriations	25,500	67,437
Capital grants, contracts and gifts	13,165	8,732
Endowment return, net of amount used for operations	13,467	8,166
Other deductions	(16,186)	(9,554)
Total other revenues, expenses, gains, and losses	35,946	74,781
<b>Total increase in net position</b>	<b>114,019</b>	<b>77,586</b>
<b>Net position</b>		
Net position at beginning of year	2,388,884	3,054,280
Cumulative effect of adopting GASB 75	-	(742,982)
<b>Net position at beginning of year, adjusted</b>	<b>2,388,884</b>	<b>2,311,298</b>
<b>Net position at end of year</b>	<b>\$ 2,502,903</b>	<b>\$ 2,388,884</b>

See accompanying notes to the financial statements.

## STATEMENTS OF CASH FLOWS

For The Years Ended June 30, 2019 and 2018 (\$ in thousands)

	2019	2018
<b>Cash flows from operating activities</b>		
Tuition and fees	\$ 985,247	\$ 974,631
Grants and contracts	587,539	569,408
Payments to suppliers	(950,398)	(848,595)
Payments to employees	(1,603,488)	(1,690,799)
Payments for benefits	(480,477)	(402,823)
Payments for scholarships and fellowships	(76,927)	(50,402)
Loans issued to students and employees	(8,882)	(8,068)
Collections of loans to students and employees	17,660	8,751
Auxiliary enterprises	441,563	416,628
Sales and services, educational	35,360	30,573
Sales and services, independent operations	59,893	68,497
Sales and services, public service activities	293,383	394,927
Other receipts, net	190,651	194,419
<b>Net cash used for operating activities</b>	<b>(508,876)</b>	<b>(342,853)</b>
<b>Cash flows from noncapital financing activities</b>		
State appropriations	780,221	751,894
Federal appropriations	7,004	6,688
Grants, contracts and gifts for other than capital purposes	52,308	38,809
Nonoperating federal grants	84,454	81,590
Student organization agency transactions	(1,297)	1,549
<b>Net cash provided by noncapital financing activities</b>	<b>922,690</b>	<b>880,530</b>
<b>Cash flows from capital and other financing activities</b>		
Proceeds from capital debt	278,041	105,380
Proceeds from premiums received	47,633	-
Capital lease payments received	4,252	-
Bond issuance costs paid	(1,430)	-
Capital appropriations	25,500	67,437
Capital grants, contracts and gifts	4,562	8,945
Purchases of capital assets and construction	(382,048)	(487,912)
Retirement of debt	(254,910)	-
Principal paid on capital debt and leases	(103,170)	(96,325)
Interest paid on capital debt and leases	(137,517)	(125,825)
<b>Net cash used for capital financing activities</b>	<b>(519,087)</b>	<b>(528,300)</b>
<b>Cash flows from investing activities</b>		
Proceeds from sales and maturities of investments	1,350,013	1,244,020
Interest on investments	47,623	19,774
Purchases of investments	(1,404,860)	(1,396,424)
<b>Net cash used for investing activities</b>	<b>(7,224)</b>	<b>(132,630)</b>
<b>Net decrease in cash and cash equivalents</b>	<b>(112,497)</b>	<b>(123,253)</b>
<b>Cash and cash equivalents: beginning of the year</b>	<b>430,389</b>	<b>553,642</b>
<b>Cash and cash equivalents: end of the year</b>	<b>317,892</b>	<b>430,389</b>

## STATEMENTS OF CASH FLOWS

For The Years Ended June 30, 2019 and 2018 (\$ in thousands)

	2019	2018
<b>Reconciliation of operating loss to net cash used by operating activities</b>		
Operating loss	(817,436)	(831,578)
Adjustments to reconcile loss to net cash used by operating activities:		
Depreciation and amortization expense	276,638	261,417
Changes in assets and liabilities:		
Accounts receivable, net	29,219	3,574
Other assets	(23,761)	2,734
Accounts payable and accrued expenses	5,335	41,749
Unearned revenues and advances	(57,315)	67,108
Other liabilities	(26,702)	33,411
Pension liability	(10,915)	(9,637)
Other postemployment benefits liability	(98,402)	74,375
Changes in deferred outflows related to assets	(1,782)	-
Changes in deferred inflows related to future revenues	76,839	-
Changes in deferred outflows and inflows related to employee benefits	139,406	13,994
<b>Net cash used for operating activities</b>	<b>(508,876)</b>	<b>(342,853)</b>
<b>Supplemental disclosure of noncash activities</b>		
Assets acquired and included in accounts payable and other liabilities	36,558	49,110
Loss on disposals of capital assets	(14,331)	(6,695)
Donated assets	1,390	1,727

See accompanying notes to the financial statements.



## STATEMENTS OF FINANCIAL POSITION

For The Years Ended June 30, 2019 and 2018 (\$ in thousands)	2019	2018
<b>Assets</b>		
Cash	\$ 925	\$ 1,153
Bequests receivable	2,311	399
Pledges receivable, net	20,417	25,180
Investments of the Foundations and held on behalf of the University	1,338,359	1,223,596
Prepaid expenses and other assets	2,917	2,592
Land, property, plant and equipment, net	16,481	16,906
<b>Total assets</b>	<b>1,381,410</b>	<b>1,269,826</b>
<b>Liabilities and net assets</b>		
<b>Liabilities</b>		
Accounts payable and accrued expenses	492	448
Deferred revenue	944	1,049
Obligations to beneficiaries of split-interest agreements	2,386	2,384
Assets held on behalf of others	762,232	678,890
<b>Total liabilities</b>	<b>766,054</b>	<b>682,771</b>
<b>Net assets</b>		
Without donor restrictions	37,404	34,342
With donor restrictions	577,952	552,713
<b>Total net assets</b>	<b>615,356</b>	<b>587,055</b>
<b>Total liabilities and net assets</b>	<b>\$ 1,381,410</b>	<b>\$ 1,269,826</b>

## STATEMENTS OF ACTIVITIES

For The Years Ended June 30, 2019 (with summarized financial information for the year ended June 30, 2018) (\$ in thousands)	Without donor restriction	With donor restriction	Total 2019	Total 2018
<b>Support and revenue</b>				
Gifts, bequests and grants	\$ 891	\$ 20,173	\$ 21,064	\$ 31,603
Other contributions	60,237	636	60,873	1,970
Total investment income, including net gains (losses) - net of fees	46,124	29,199	75,323	64,715
Investment management fee	10,935	-	10,935	11,022
Other income	41	230	271	323
Net assets released from restrictions	25,803	(25,803)	-	-
<b>Total support and revenue</b>	<b>144,031</b>	<b>24,435</b>	<b>168,466</b>	<b>109,633</b>
<b>Expenses</b>				
Distributions to University	36,334	-	36,334	30,846
Program services	9,718	-	9,718	10,084
Fundraising support	7,999	-	7,999	6,210
Administrative and general	2,353	-	2,353	3,122
<b>Total expenses</b>	<b>56,404</b>	<b>-</b>	<b>56,404</b>	<b>50,262</b>
<b>Excess of support and revenue over expenses</b>	<b>87,627</b>	<b>24,435</b>	<b>112,062</b>	<b>59,371</b>
Less: Fiscal 2019 activity related to assets held on behalf of University	(87,384)	-	(87,384)	(18,697)
Less: Fiscal 2019 activity related to assets held on behalf of Edward M. Kennedy Institute	4,011	-	4,011	(1,683)
Transfers (from) to other funds	(804)	804	-	-
Change in value of split interest agreements	(388)	-	(388)	(387)
<b>Change in net assets</b>	<b>3,062</b>	<b>25,239</b>	<b>28,301</b>	<b>38,604</b>
Net assets, beginning of year	34,342	552,713	587,055	548,451
<b>Net assets, end of year</b>	<b>\$ 37,404</b>	<b>\$ 577,952</b>	<b>\$ 615,356</b>	<b>\$ 587,055</b>

See accompanying notes to the financial statements.

# Notes to Financial Statements

## 1. Summary of Significant Accounting Policies

### Reporting entity

The University of Massachusetts (University), a federal land grant institution, is governed by Massachusetts General Laws Chapter 75. Its Board consists of nineteen voting members and three non-voting members. The voting members consist of two full-time students, the Secretary of Education of the Commonwealth of Massachusetts (Commonwealth) and sixteen members appointed by the governor. The non-voting members consist of student representatives who may only participate in open meetings of the full Board.

The University is a business-type activity of the Commonwealth. The financial balances and activities included in these financial statements are, therefore, also included in the Commonwealth's comprehensive annual financial report.

The financial statements of the University include the campuses of Amherst, Boston, Dartmouth, Lowell, Medical School, and the President's Office of the University, Worcester City Campus Corporation (WCCC), the University of Massachusetts Amherst Foundation (UMass Amherst Foundation), as well as the University of Massachusetts Building Authority (Building Authority).

The Building Authority is a public instrumentality of the Commonwealth created by Chapter 773 of the Acts of 1960 (referred to as the Enabling Act), whose purpose is to provide dormitories, dining commons, and other buildings and structures for use by the University. WCCC is a tax exempt organization founded to support research and real property activities for the University. The UMass Amherst Foundation was established in 2003 to support private fundraising on behalf of the faculty and students of the Amherst campus. These component units are blended in the financial statements of the University because of the significance and exclusivity of their financial relationships with the University. Refer to Note 17 for condensed financial information for these blended component units.

The University also includes the financial information of the University's discretely presented component units, the University of Massachusetts Foundation, Inc. (UMF) and the University of Massachusetts Dartmouth Foundation, Inc. (UMDF). In these financial statements, UMF and UMDF are collectively known as The Foundations. These are related tax-exempt organizations founded to foster and promote the growth, progress and general welfare of the University.

The Building Authority and the Foundations issue separate standalone financial statements which may be obtained by contacting the respective organizations or by contacting the University Controller, [bcevallos@umassp.edu](mailto:bcevallos@umassp.edu).

### Basis of presentation

The accompanying financial statements have been prepared in accordance with U.S. generally accepted accounting principles (GAAP) as prescribed by the Governmental Accounting Standards Board (GASB) using the economic resources measurement focus and the accrual basis of accounting. The Foundations' financial statements are prepared in accordance with accounting and reporting requirements prescribed by the Financial Accounting Standards Board (FASB). As such, certain revenue recognition criteria and presentation features are different from GASB revenue recognition criteria and presentation features. No modifications have been made to the Foundations' financial information in the University's financial reporting entity for these differences. These financial statements are reported on a combined basis, and all intra-University transactions are eliminated.

The University's activities are considered to be a single business-type activity and accordingly, are reported in a single column in the financial statements. Business-type activities are those that are financed in whole or part by funds received by external parties for goods or services.

On the Statements of Revenues, Expenses and Changes in Net Position, the University's operating activities consist of tuition and fees, grants and contracts, sales and services, auxiliary enterprise and other operating revenues. Other operating revenues include sales and services provided by the UMass Medical School (UMMS) under its Commonwealth Medicine (CWM) programs, which provide consulting and services in health care financing, administration and policy to federal, state and local agencies and not-for-profit health and policy organizations. Also included in other operating revenues are payments received by the Medical School for educational services it provides to its clinical affiliate, UMass Memorial Medical Center (UMass Memorial).

Operating expenses include, among other items, payroll, fringe benefits, utilities, supplies and services, depreciation, and amortization. Nonoperating revenues or expenses are those in which the University receives or gives value without directly giving or receiving equal value, such as State and Federal appropriations, Federal Pell grants, private gifts, and investment income.

Revenues for exchange transactions are recognized when earned and expenses are recognized when incurred. Restricted grant revenue is recognized only when all eligibility requirements have been met.

The University receives unconditional promises to give through private donations or pledges from corporations, foundations, alumni and other supporters of the University. Revenue is recognized when a pledge is received and all eligibility requirements, including time and purpose requirements, are met.

## Net position

Net position is classified into the following categories:

- **Net investment in capital assets:** Capital assets, at historical cost or fair market value on date of gift, net of accumulated depreciation and outstanding principal balances of debt attributable to the acquisition, construction or improvement of those assets.
- **Restricted nonexpendable:** Resources subject to externally imposed stipulations that they be maintained permanently by the University.
- **Restricted expendable:** Resources whose use by the University is subject to externally imposed stipulations. Such assets include restricted grants and contracts, the accumulated net gains/losses on true endowment funds, as well as restricted funds loaned to students, restricted gifts and endowment income, and other similar restricted funds.
- **Unrestricted:** The net position that is not subject to externally imposed restrictions governing their use are classified as unrestricted net position. The University's unrestricted net position may be designated for specific purposes by management or the Board of Trustees. Substantially all of the University's unrestricted net position is designated to support academic and research initiatives or programs, auxiliary enterprises, quasi-endowments, or commitments to capital construction projects. Note 15 describes these designations in more detail.

## Cash and cash equivalents

Cash and cash equivalents include cash balances maintained in checking accounts, overnight repurchase agreements and amounts held in permitted money market mutual funds with an original maturity date of three months or less.

In addition, the Building Authority is authorized to invest in the Massachusetts Municipal Depository Trust ("MMDT"), a pooled money market-like fund, established under General Laws, Chapter 29, Section 38A. MMDT is an external investment pool that meets the criteria to report its holdings at amortized cost. As such, the Building Authority reports its position in MMDT at amortized cost which approximates the net asset value of \$1.00 (one dollar) per share. MMDT has a maturity of less than one year and is not rated.

## Accounts receivable, net

Accounts receivable consist of receivables for tuition and fees, grants and contracts, student loans, pledges and CWM related activities. The University establishes an allowance for receivables based on management's expectation regarding the collection of the receivables and the University's historical experience for collections.

## Investments

Investments are reported at fair value. Short-term investments consist of deposits with original maturities of less than one year and are available for current use. Securities received as a gift are recorded at estimated fair value at the date of the gift. Investment income includes dividends and interest income and is recognized on the accrual basis. In computing realized gains and losses, cost is determined on a specific identification basis.

## Endowment

UMF maintains and administers the University's endowment assets and Intermediate Term Investment Fund (ITIF). UMF utilizes the pooled investment concept whereby all invested funds are included in one investment pool, unless otherwise required by the donor.

Pooled investment funds will receive an annual distribution, based on the endowment fund's average market value for the preceding twelve quarters on a one year lag. Only quarters with funds on deposit are included in the average. In addition, a prudence rule is utilized, limiting spending from a particular endowment fund to be no lower than 93% of its carrying value. The actual spending rate approved for the years ended June 30, 2019 and 2018 was 4%.

## Inventories

The University inventories consist of books, general merchandise, and vaccines which are carried at the lower of cost (first-in, first-out and average cost methods) or market value. Inventory balances are included within other current assets on the Statements of Net Position.

## Capital assets

Capital assets are stated at cost on the date of acquisition or, in the case of gifts, fair value upon date of donation. Net interest costs incurred during the construction period for major capital projects are capitalized. Repairs and maintenance costs are expensed as incurred, whereas major improvements that extend the estimated useful lives of the assets are capitalized as additions to capital assets. The University does not capitalize works of art, historical treasures or library books.

The University capitalizes assets with useful lives greater than one year and acquisition costs greater than or equal to \$5,000. The University computes depreciation using the straight-line method over the asset's useful life and applies a half year convention in the year the asset is acquired or placed in service. Land is not depreciated.

Following is the range of useful lives for the University's depreciable assets:

Depreciable asset category	Useful life in years
Land improvements	20
Buildings	20-40
Infrastructure	50
Building improvements	3-20
Equipment, furniture and IT infrastructure	3-15
Software	5

The University leases various facilities and equipment through capital leases. Facilities and equipment under capital leases are recorded at the present value of future minimum lease payments.

## Deferred outflows and inflows of resources

The University accounts for certain transactions that result in the consumption or acquisition of one period that are applicable to future periods as deferred outflows and deferred inflows, respectively, to distinguish them from assets and liabilities. Deferred outflows of resources increase net position, similar to assets and deferred inflows of resources decrease net position, similar to liabilities.

The components of deferred outflows and inflows of resources as of June 30, 2019 and 2018 included the following (\$ in thousands):

For the years ended June 30, 2019 and 2018 (\$ in thousands)	2019	2018
<b>Deferred outflows of resources</b>		
Fair value of interest rate swaps	\$ 34,262	\$ 18,887
Loss on debt refundings	69,119	74,443
Certain asset retirement obligations	1,782	-
Impact of assumption changes and investment losses to:		
Pension liability	113,654	126,244
Other postemployment benefits liability	137,866	121,761
	<b>\$ 356,683</b>	<b>\$ 341,335</b>
<b>Deferred inflows of resources</b>		
Sale of future revenues	76,839	-
Experience gains for:		
Pension liability	60,182	45,540
Other postemployment benefits liability	224,224	95,945
	<b>\$ 361,245</b>	<b>\$ 141,485</b>

## Compensated absences

Employees earn the right to be compensated during absences for annual vacation leave and sick leave. Upon retirement, termination, or death, certain employees are compensated for unused sick and vacation leave, subject to certain limitations, at their current rate of pay. Within the Statements of Net Position, a liability is recorded for vacation and sick leave benefits earned as of the fiscal year-end. The recorded liability is classified as current and noncurrent on the Statements of Net Position based on the amount estimated to be paid to eligible employees in one year and beyond one year, respectively.

## Unearned revenue and advances

Unearned revenue consists of amounts billed or received in advance of the University providing goods or services. Unearned revenue is subsequently earned as qualifying expenses are incurred.

In addition, unearned revenues and advances include funds advanced to the University by the U.S. government under the Federal Perkins Loan Program (the Program). Under federal law, the authority for schools to make new loans under the Program ended on September 30, 2017, and final distributions were permitted through June 30, 2018. The University's Statements of Net Position include both the notes receivable and the related federal refundable loan liability.

## Bond issuance costs

The University incurs certain costs associated with bond issuances. For the years ended June 30, 2019 and 2018, bond issuance costs amounted to \$1.4 million and \$0.2 million, respectively, and were expensed.

## Tuition and fees, net of scholarship allowances

Student tuition and fees, housing, dining, and other similar auxiliary revenues are reported net of any related scholarships and fellowships applied to student accounts. However, scholarships and fellowships paid directly to students are separately reported as scholarships and fellowships expenses.

## Grants and contracts

The University receives grants and contracts for research and other activities including medical service reimbursements from federal and state government agencies. The University records revenue and a corresponding receivable at the point all eligibility requirements (e.g. allowable costs are incurred) are met.

The University records the recovery of indirect costs applicable to research programs and other activities which provide for the full or partial reimbursement of such costs, as revenue. Recovery of indirect costs for the years ended June 30, 2019 and 2018 was \$136.8 million and \$131.4 million, respectively, and is a component of grants and contracts revenue on the Statements of Revenues, Expenses, and Changes in Net Position.

## Auxiliary enterprises

An auxiliary enterprise is an activity that exists to furnish a service to students, faculty or staff acting in a personal capacity, and that charges a fee for the use of goods and services.

## Fringe benefits for current employees and postemployment obligations: pension and non-pension

The University participates in the Commonwealth's fringe benefit programs, including active employee and postemployment health insurance, unemployment compensation, pension, and workers' compensation benefits. Health insurance and pension costs for active employees and retirees are paid through a fringe benefit rate charged to the University by the Commonwealth. Workers' compensation costs are assessed separately based on actual University experience.

## Use of estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the dates of the financial statements, and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from these estimates. The most significant areas that require management estimates relate to valuation of certain investments and derivative instruments, useful lives and related depreciation of capital assets, and accruals for pension and other postemployment related benefits.

## Income tax status

The University is exempt from Federal and state income tax under the doctrine of intergovernmental tax immunity. The University qualifies as a public charity eligible to receive charitable contributions under Section 170(b)(1)(A)(v) of the Internal Revenue Code, as amended (the Code).

WCCC, UMF and UMDF are organizations described in Section 501(c)(3) of the Code, and are generally exempt from income taxes pursuant to Section 501(a) of the Code. WCCC, UMF and UMDF are required to assess uncertain tax positions and have determined that there were no such positions that are material to the financial statements as of June 30, 2019 and 2018, respectively.

## Newly implemented accounting standards

Effective for fiscal year 2019, the University implemented GASB Statement No. 83, *Certain Asset Retirement Obligations*, which addresses the accounting and financial reporting for legally enforceable liabilities associated with the retirement of certain tangible capital assets. The adoption of this standard required the University to record a deferred outflow and a related liability of \$1.8 million.

Effective for fiscal year 2019, the University implemented GASB Statement No. 88, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements*, which is intended to improve the information that is disclosed in the notes to government financial statements related to these types of debt instruments. The adoption of this standard required the University to disclose certain direct borrowings in the notes of the financial statements.

## Reclassifications

Certain reclassifications were made in the prior year to conform to current year presentation.

## 2. Cash Held by State Treasurer

Accounts payable, accrued salaries and outlays for future capital projects to be funded from state-appropriated funds totaled \$21.0 and \$22.7 million at June 30, 2019 and June 30, 2018. The University has recorded a comparable amount of cash held by the State Treasurer for the benefit of the University, which will be subsequently utilized to pay for such liabilities. The cash is held in the State Treasurer's pooled cash account. The Commonwealth requires all bank deposits in excess of insurance coverage by the FDIC to be collateralized with a perfected pledge of eligible collateral. Eligible collateral must be pledged in an amount equal to 102% of the amount of the deposits that exceed FDIC insurance. Sufficient collateral to cover total Commonwealth deposits in excess of the FDIC insured amount must be pledged and held in safekeeping by a custodian that is approved by and under the control of the Treasurer and Receiver - General.

## 3. Deposits with Bond Trustees

Deposits with bond trustees primarily consist of unspent bond proceeds, amounts held for the future payment of debt service on such borrowings and designated funds from the University's pool loan program.

At June 30, 2019 and 2018, deposits with bond trustees consisted of the following (\$ in thousands):

	2019	2018
Cash	\$ 10,253	\$ 10,480
MMDT	191,988	299,292
Permitted money market accounts	4,367	4,138
Repurchase agreements and other investments	5,318	5,318
<b>Total cash and cash equivalents</b>	<b>\$ 211,926</b>	<b>\$ 319,228</b>

At June 30, 2019, amounts restricted by bond trust agreements for capital projects, debt service and other purposes were \$182.4 million, \$18.9 million, and \$10.6 million, respectively.

**Custodial Credit Risk** – 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. As of June 30, 2019 and 2018, the bank balances of uninsured deposits totaled \$3.6 million and \$4.4 million, respectively.

**Interest Rate Risk** – MMDT and permitted money market accounts have effective maturities of less than one year.

**Credit Risk** – Credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. The risk is measured by the assignment of a rating by a nationally recognized statistical rating organization. MMDT and permitted money market accounts are not rated.

## 4. Investments

The investment portfolio of the University reflected on the Statements of Net Position for the year ended June 30, 2019 and 2018, respectively, includes the following:

	2019	2018
Short-term investments	\$ 489,907	\$ 470,139
Long-term investments	869,663	775,294
<b>Total</b>	<b>\$ 1,359,570</b>	<b>\$ 1,245,433</b>

Investment policies are established by the Board. The goals of these policies are to preserve capital, provide liquidity, and generate investment income. The University has statutory authority under Massachusetts General Laws Chapter 75 to collect, manage, and disburse trust funds of the University. UMF holds certain investments on behalf of the University. In the table below, these investments are identified as Foundation Agency Funds.

The endowment and similar investment holdings of the University, Foundation Agency Funds, and the Foundations, as of June 30, 2019 and 2018, respectively are summarized below (\$ in thousands):

	University		Foundations	
	2019	2018	2019	2018
Cash and cash equivalents	\$ 111,408	\$ 118,491	\$ 31,914	\$ 30,545
Money market and other investments	260,000	226,900	4,411	4,430
MMDT	95,000	95,000	-	-
Fixed income investments	139,398	135,852	3,784	4,662
Pooled investments - Fund I	-	-	556,031	528,921
Commercial ventures and intellectual property	1,857	1,994	-	-
Annuity life income funds	13,160	15,833	3,472	3,675
	<b>\$ 620,823</b>	<b>\$ 594,070</b>	<b>\$ 599,612</b>	<b>\$ 572,233</b>
Foundation agency funds:				
Pooled investments - Fund I	415,445	341,464	415,445	341,464
Pooled investments - Fund II	323,302	309,899	323,302	309,899
<b>Total</b>	<b>\$ 1,359,570</b>	<b>\$ 1,245,433</b>	<b>\$ 1,338,359</b>	<b>\$ 1,223,596</b>

Investments held at UMF within Fund I represent the University's endowment funds. These funds include both donor-restricted endowments and quasi-endowments. Investments held at UMF within Fund II represent the operating cash of the University that has been transferred to UMF for investment purposes.

**Custodial Credit Risk** – Investment securities are exposed to custodial credit risk if they are uninsured or not registered in the name of the University and are held by either the counterparty or the counterparty's trust department or agent but not in the University's name.

The carrying amounts of cash balances with uninsured or uncollateralized deposits were \$107.1 million and \$132.1 million, at June 30, 2019 and 2018, respectively.

The University held non-money market investments with a carrying and fair market value of \$871.4 million and \$743.6 million at June 30, 2019 and 2018, respectively. In the event of negligence due to the University's custodian and/or investment manager(s), it is expected that the investment balances would be fully recovered. However, these amounts are subject to both interest rate risk and credit risk.

**Concentration of Credit Risk** – As of June 30, 2019 and 2018, there is no concentration of investments from one issuer equal or greater than 5% of the portfolio. Investments issued or guaranteed by the U.S. government, as well as investments in mutual funds and other pooled investments are excluded from consideration when evaluating concentration risk.

**Credit Risk** – The University's Investment Policy and Guidelines Statement allows each portfolio manager full discretion within the parameters of the investment guidelines specific to that manager. Nationally recognized statistical rating organizations, such as Standards & Poor's (S&P) assign credit ratings to security issues and issuers that indicate a measure of potential credit risk to investors.

The table below presents the rated debt investments, excluding U.S. Treasury funds, at fair value by credit quality of the University's investment portfolio as of June 30, 2019 (\$ in thousands):

	S&P quality ratings								Total
	AAA	AA	A	BBB	BB	B	<B	Unrated	
<b>Debt securities</b>									
Government agency bonds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 582	\$ 582
Asset backed securities	16,374	-	176	569	-	-	-	2,263	19,382
Commercial mortgage-backed securities	8,015	-	-	-	-	-	-	1,103	9,118
Government issued commercial mortgage-backed securities	-	-	-	-	-	-	-	11	11
Government mortgage-backed securities	-	-	-	-	-	-	-	4,539	4,539
Non-government backed CMOs	1,217	-	-	-	-	-	-	114	1,331
Corporate bonds	-	4,390	24,672	33,019	231	-	-	42	62,354
Municipal and provincial bonds	-	1,835	-	402	-	-	-	-	2,237
Bond fund, including exchange traded funds	56,472	16,512	17,318	26,615	7,815	2,351	210	8,781	136,074
<b>Total debt securities</b>	<b>\$82,078</b>	<b>\$22,737</b>	<b>\$42,166</b>	<b>\$60,605</b>	<b>\$8,046</b>	<b>\$2,351</b>	<b>\$210</b>	<b>\$ 17,435</b>	<b>\$ 235,628</b>

The table below presents the rated debt investments, excluding U.S. Treasury funds, at fair value by credit quality of the University's investment portfolio as of June 30, 2018 (\$ in thousands):

	S&P quality ratings								Total
	AAA	AA	A	BBB	BB	B	<B	Unrated	
<b>Debt securities</b>									
Government agency bonds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 351	\$ 351
Asset backed securities	11,763	-	167	389	-	-	-	5,333	17,652
Commercial mortgage-backed securities	298	-	-	-	-	-	-	6,966	7,264
Government issued commercial mortgage-backed securities	-	-	-	-	-	-	-	122	122
Government mortgage-backed securities	-	-	-	-	-	-	-	3,772	3,772
Non-government backed CMOs	640	-	-	-	-	-	-	799	1,439
Corporate bonds	561	4,119	28,168	29,328	314	-	-	763	63,253
Municipal and provincial bonds	412	731	405	647	-	-	-	-	2,195
Bond fund, including exchange traded funds	35,074	18,373	16,452	22,319	7,658	2,451	276	8,049	110,652
<b>Total debt securities</b>	<b>\$48,748</b>	<b>\$23,223</b>	<b>\$45,192</b>	<b>\$52,683</b>	<b>\$7,972</b>	<b>\$2,451</b>	<b>\$276</b>	<b>\$ 26,155</b>	<b>\$ 206,700</b>

**Interest Rate Risk** – The University's Investment Policy and Guidelines Statement establishes targets for the preferred duration of the fixed income component of the investment portfolio by limiting investments through targeted allocations to different asset classes.

The following table presents the fair value of the rated debt investments component of the University's investment portfolio by investment maturity as of June 30, 2019 (\$ in thousands):

	Investment maturity (in years)				
	Less than 1	1 to 5	6 to 10	More than 10	Total
<b>Debt securities</b>					
U.S. Treasury securities	\$ -	\$ 71,340	\$ 5,675	\$ -	\$ 77,015
Government agency bonds	-	78	504	-	582
Asset backed securities	7,879	10,041	1,462	-	19,382
Commercial mortgage-backed securities	1,426	7,250	-	442	9,118
Government issued commercial mortgage-backed securities	11	-	-	-	11
Government mortgage-backed securities	2,211	2,082	246	-	4,539
Non-government backed CMOs	627	704	-	-	1,331
Corporate bonds	8,778	49,604	3,460	512	62,354
Municipal and provincial bonds	2,091	146	-	-	2,237
Bond fund, including exchange traded funds	25,471	80,406	25,615	4,582	136,074
<b>Total debt securities</b>	<b>\$ 48,494</b>	<b>\$ 221,651</b>	<b>\$ 36,962</b>	<b>\$ 5,536</b>	<b>\$ 312,643</b>

The following table presents the fair value of the rated debt investments component of the University's investment portfolio by investment maturity as of June 30, 2018 (\$ in thousands):

	Investment maturity (in years)				
	Less than 1	1 to 5	6 to 10	More than 10	Total
<b>Debt securities</b>					
U.S. Treasury securities	\$ -	\$ 69,819	\$ 8,917	\$ -	\$ 78,736
Government agency bonds	-	351	-	-	351
Asset backed securities	4,960	12,525	167	-	17,652
Commercial mortgage-backed securities	529	5,797	938	-	7,264
Government issued commercial mortgage-backed securities	122	-	-	-	122
Government mortgage-backed securities	446	3,326	-	-	3,772
Non-government backed CMOs	640	799	-	-	1,439
Corporate bonds	15,131	45,172	2,527	423	63,253
Municipal and provincial bonds	2,051	144	-	-	2,195
Bond fund, including exchange traded funds	27,843	59,569	16,009	7,231	110,652
<b>Total debt securities</b>	<b>\$ 51,722</b>	<b>\$ 197,502</b>	<b>\$ 28,558</b>	<b>\$ 7,654</b>	<b>\$ 285,436</b>

**Fair Value Measurement** – Fair value represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The University categorizes these assets and liabilities measured at fair value using a three-tiered hierarchy based on the valuation methodologies employed. The hierarchy is defined as follows:

**Level 1** – Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that are available at the measurement date.

**Level 2** – Inputs to the valuation methodology include:

- Quoted prices for similar assets or liabilities in active markets;
- Quoted prices for identical or similar assets or liabilities in inactive markets;
- Inputs other than quoted prices that are observable for the asset or liability;
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

**Level 3** – Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

Unobservable inputs reflect the University's own assumptions about the inputs market participants would use in pricing the asset or liability (including assumption about risk). Unobservable inputs are developed based on the best information available in the circumstances and may include the University's own data.

When available, quoted prices are used to determine fair value. When quoted prices in active markets are available, investments are classified within Level 1 of the fair value hierarchy. The University's Level 1 investments primarily consist of investments in U.S. Treasury obligations, equity securities, and mutual funds. When quoted prices in active markets are not available, fair values are based on evaluated prices received from the University's investment custodian in conjunction with a third party service provider and are reported within Level 2 of the fair value hierarchy. The inputs for Level 2 include, but are not limited to, pricing models such as benchmarking yields, reported trades, broker-dealer quotes, issuer spreads and benchmarking securities, among others. The University's Level 2 investments primarily consist of investments in U.S. government and agency obligations, asset-backed securities, and corporate debt securities that did not trade on the University's fiscal year end date.

As a practical expedient to estimate the fair value of the University's interests, certain investments in commingled funds and limited partnerships are reported at the net asset value (NAV) determined by the fund managers. Because these investments are not readily marketable, their estimated fair values may differ from the values that would have been assigned had a ready market for such investments existed, and such differences could be material. As of June 30, 2019 and 2018, the University had no plans or intentions to sell such investments at amounts different from NAV.

The following table summarizes the fair value of the University's investments by type as of June 30, 2019 (\$ in thousands):

	Investments measured at NAV	Investments classified in the fair value hierarchy			
		Level 1	Level 2	Level 3	Total
Money market funds	\$ -	\$ 284,110	\$ -	\$ -	\$ 284,110
<b>Debt securities</b>					
U.S. Treasury securities	-	77,015	-	-	77,015
Government agency bonds	-	-	582	-	582
Asset backed securities	-	-	19,382	-	19,382
Commercial mortgage-backed securities	-	-	9,118	-	9,118
Government issued commercial mortgage-backed securities	-	-	11	-	11
Government mortgage-backed securities	-	-	4,539	-	4,539
Non-government backed CMOs	-	-	1,331	-	1,331
Corporate bonds	-	-	62,312	42	62,354
Municipal and provincial bonds	-	-	2,237	-	2,237
Bond Funds, including exchange traded funds	-	136,074	-	-	136,074
<b>Total debt securities</b>	-	<b>213,089</b>	<b>99,512</b>	<b>42</b>	<b>312,643</b>
<b>Equity securities</b>					
Domestic equities	-	94,472	-	1,585	96,057
International equities	-	77,612	-	-	77,612
<b>Total equity securities</b>	-	<b>172,084</b>	-	<b>1,585</b>	<b>173,669</b>
<b>Alternative investments</b>					
Multi-strategy hedge funds					
Equity	121,787	-	-	-	121,787
Long/short	87,890	-	-	-	87,890
Fixed income	60,235	-	-	-	60,235
Absolute return	35,238	-	-	-	35,238
Real assets	12,466	-	-	-	12,466
Private equity	18,253	-	-	-	18,253
Private debt	18,834	-	-	-	18,834
Private real estate	7,422	-	-	-	7,422
<b>Total alternative investments</b>	<b>362,125</b>	-	-	-	<b>362,125</b>
<b>Other securities</b>	-	20,615	-	-	20,615
<b>Investments at fair value</b>	<b>362,125</b>	<b>689,898</b>	<b>99,512</b>	<b>1,627</b>	<b>1,153,162</b>
Cash and cash equivalents	-	-	-	-	63,408
Certificate of deposit	-	-	-	-	48,000
MMDT	-	-	-	-	95,000
<b>Total investments at costs</b>	-	-	-	-	<b>206,408</b>
<b>Total investments</b>	<b>\$ 362,125</b>	<b>\$ 689,898</b>	<b>\$ 99,512</b>	<b>\$ 1,627</b>	<b>\$ 1,359,570</b>

The following table presents unfunded commitments, redemption terms, restrictions, and notice period for investments that have been valued using NAV as a practical expedient as of June 30, 2019 (\$ in thousands):

	NAV	Unfunded commitments	Redemption terms	Notice period	Redemption restrictions
<b>Alternative investments</b>					
Multi-strategy hedge funds					
Equity	\$ 121,787	\$ -	Daily to quarterly	01-60 days	No lock-up restrictions
Long/short	87,890	-	Quarterly to annual	45-80 days	Lock-up provisions range from none to 1 year
Fixed income	60,235	-	Quarterly to annual	30-90 days	Lock-up provisions range from none to 2 years
Absolute return	35,238	-	Daily to annual	45-65 days	No lock-up restrictions
Real assets	12,466	-	Annual	90 days	No lock-up restrictions
Private equity	18,253	14,626	Closed end funds	(1)	Not redeemable
Private debt	18,834	16,942	Closed end funds	(1)	Not redeemable
Private real estate	7,422	2,889	Closed end funds	(1)	Not redeemable
<b>Total</b>	<b>\$ 362,125</b>	<b>\$ 34,457</b>			

(1) The University has made commitments to various private equity, private debt and private real estate partnerships. The University expects these funds to be called over the next 1-5 years. Liquidity is expected to be received in the next 1-9 years.



The following table summarizes the fair value of the University's investments by type as of June 30, 2018 (\$ in thousands):

	Investments measured at NAV	Investments classified in the fair value hierarchy			
		Level 1	Level 2	Level 3	Total
Money market funds	\$ -	\$ 376,422	\$ -	\$ -	\$ 376,422
<b>Debt securities</b>					
U.S. Treasury securities	-	78,736	-	-	78,736
Government agency bonds	-	-	351	-	351
Asset backed securities	-	-	17,652	-	17,652
Commercial mortgage-backed securities	-	-	7,264	-	7,264
Government issued commercial mortgage-backed securities	-	-	122	-	122
Government mortgage-backed securities	-	-	3,772	-	3,772
Non-government backed CMOs	-	-	1,439	-	1,439
Corporate bonds	-	-	63,209	44	63,253
Municipal and provincial bonds	-	-	2,195	-	2,195
Bond Funds, including exchange traded funds	-	110,652	-	-	110,652
<b>Total debt securities</b>	<b>-</b>	<b>189,388</b>	<b>96,004</b>	<b>44</b>	<b>285,436</b>
<b>Equity securities</b>					
Domestic equities	-	120,875	-	1,384	122,259
International equities	-	106,955	-	-	106,955
<b>Total equity securities</b>	<b>-</b>	<b>227,830</b>	<b>-</b>	<b>1,384</b>	<b>229,214</b>
<b>Alternative investments</b>					
Multi-strategy hedge funds					
Equity	69,885	-	-	-	69,885
Long/short	19,971	-	-	-	19,971
Fixed income	34,798	-	-	-	34,798
Absolute return	40,213	-	-	-	40,213
Real assets	11,689	-	-	-	11,689
Private equity	8,652	-	-	-	8,652
Private debt	19,462	-	-	-	19,462
Private real estate	4,762	-	-	-	4,762
<b>Total alternative investments</b>	<b>209,432</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>209,432</b>
<b>Other securities</b>	<b>-</b>	<b>18,015</b>	<b>-</b>	<b>-</b>	<b>18,015</b>
<b>Total investments at fair value</b>	<b>209,432</b>	<b>811,655</b>	<b>96,004</b>	<b>1,428</b>	<b>1,118,519</b>
Cash and cash equivalents	-	-	-	-	31,866
Certificates of deposit	-	-	-	-	48
MMDT	-	-	-	-	95,000
<b>Total investments at costs</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>126,914</b>
<b>Total investments</b>	<b>\$ 209,432</b>	<b>\$ 811,655</b>	<b>\$ 96,004</b>	<b>\$ 1,428</b>	<b>\$ 1,245,433</b>

The following table presents unfunded commitments, redemption terms, restrictions, and notice period for investments that have been valued using NAV as a practical expedient as of June 30, 2018 (\$ in thousands):

	NAV	Unfunded commitments	Redemption terms	Notice period	Redemption restrictions
<b>Alternative investments</b>					
Multi-strategy hedge funds					
Equity	\$ 69,885	\$ -	Daily to quarterly	01-60 days	No lock-up restrictions
Long/short	19,971	-	Quarterly to annual	30-90 days	No lock-up restrictions
Fixed income	34,798	-	Quarterly to annual	60 days	No lock-up restrictions
Absolute return	40,213	-	Daily to annual	01-65 days	No lock-up restrictions
Real assets	11,689	-	Annual	90 days	No lock-up restrictions
Private equity	8,652	18,574	Closed end funds	(1)	Not redeemable
Private debt	19,462	12,408	Closed end funds	(1)	Not redeemable
Private real estate	4,762	4,170	Closed end funds	(1)	Not redeemable
<b>Total</b>	<b>\$ 209,432</b>	<b>\$ 35,152</b>			

(1) The University has made commitments to various private equity, private debt and private real estate partnerships. The University expects these funds to be called over the next 1-5 years. Liquidity is expected to be received in the next 1-9 years.

## 5. Accounts Receivable, Net

Accounts receivable as of June 30, 2019 and 2018 are as follows (\$ in thousands):

	2019	2018
Student tuition and fees	\$ 56,676	\$ 60,454
Student loans	54,403	62,462
Pledges receivable	24,655	25,199
Grants and contracts	102,761	94,235
CWM program receivable	60,322	64,690
UMass Memorial	22,131	42,157
Other receivables	44,457	55,983
	<b>365,405</b>	<b>405,180</b>
Less: allowance for doubtful accounts and discount to present value for pledges	(24,254)	(30,558)
<b>Accounts receivable, net</b>	<b>\$ 341,151</b>	<b>\$ 374,622</b>

The receivable from UMass Memorial, which is uncollateralized, represents a potential concentration of credit risk for the University. This receivable represents 6.5% and 11.3% of total accounts receivable for the University at June 30, 2019 and 2018, respectively.

## 6. UMass Memorial Medical Center

The University has granted UMass Memorial the right to occupy portions of the University's Medical School campus facilities for a period of 99 years, expiring on June 30, 2097. As part of the ongoing agreement entered into on June 24, 1998, UMass Memorial has agreed to share responsibility for various capital and operating expenses relating to the occupied premises. UMass Memorial also contributes to capital improvements to shared facilities.

In addition, UMass Memorial has agreed to make certain payments to the University, including an annual fee of \$12.0 million, adjusted for inflation as necessary, for 99 years as long as the University continues to operate a medical school, and a participation payment based on a percentage of the net operating income of UMass Memorial. The University recognizes revenue when the participation payments are received.

The University is reimbursed by, and reimburses UMass Memorial for shared services, cross-funded employees, and other agreed upon activities provided and purchased. For the years ended June 30, 2019 and 2018, the reimbursements received for services provided to UMass Memorial were \$168.4 million and \$140.5 million, respectively. Included in these amounts are payroll paid by the University on behalf of UMass Memorial in an agency capacity in the amount of \$109.3 million and \$85.5 million for the years ended June 30, 2019 and 2018, respectively. As of June 30, 2019 and 2018, the University has recorded a receivable in the amount of \$22.1 million and \$42.2 million, respectively from UMass Memorial which includes \$11.7 million and \$29.6 million, respectively, in payroll and related fringe charges. The University has recorded a payable of \$9.5 million and \$4.5 million at June 30, 2019 and 2018, respectively, primarily for cross-funded payroll.

## 7. Capital Assets

The following table represents the University's capital assets activity for the years ended June 30, 2019 and 2018 (\$ in thousands):

	2017	Additions	Retirements/ adjustments	2018	Additions	Retirements/ adjustments	2019
Land	\$ 97,660	\$ 68,771	\$ (1,063)	\$ 165,368	\$ 1,336	\$ (680)	\$ 166,024
Buildings and improvements	6,055,606	444,250	(991)	6,498,865	642,801	(35,340)	7,106,326
Software	111,038	10,224	(8,078)	113,184	6,747	(5,639)	114,292
Equipment and furniture	685,066	52,453	(37,626)	699,893	41,929	(24,779)	717,043
Library books	60,144	-	(6,570)	53,574	-	(6,609)	46,965
	<b>7,009,514</b>	<b>575,698</b>	<b>(54,328)</b>	<b>7,530,884</b>	<b>692,813</b>	<b>(73,047)</b>	<b>8,150,650</b>
Accumulated depreciation	(2,852,988)	(261,417)	37,509	(3,076,896)	(276,495)	48,654	(3,304,737)
	<b>4,156,526</b>	<b>314,281</b>	<b>(16,819)</b>	<b>4,453,988</b>	<b>416,318</b>	<b>(24,393)</b>	<b>4,845,913</b>
Construction in progress	697,584	407,191	(483,287)	621,488	328,232	(631,433)	318,287
<b>Total capital assets, net</b>	<b>\$4,854,110</b>	<b>\$ 721,472</b>	<b>\$ (500,106)</b>	<b>\$5,075,476</b>	<b>\$ 744,550</b>	<b>\$ (655,826)</b>	<b>\$5,164,200</b>

The University has capitalized interest on borrowings, net of interest earned on related debt reserve funds, during the construction period of major capital projects. Capitalized interest is added to the cost of the underlying assets being constructed, and is amortized over the useful lives of the assets. For the years ended June 30, 2019 and 2018, the University capitalized net interest costs of \$8.7 million and \$11.6 million, respectively.

## 8. Public Private Partnerships and Leases

### Public Private Partnerships (PPPs)

On November 8, 2016, the Building Authority entered into an agreement whereby sub-leased land on the University of Massachusetts Boston campus to Provident Commonwealth Educational Resources, Inc. (PCER), a Massachusetts not-for-profit corporation, for a term of 40 years. The land is ground-leased to the Building Authority by the Commonwealth. PCER engaged a contractor to construct a 1,082-bed student housing facility on the site (the "Boston Project"). The Boston Project reverts to the Building Authority when the lease terminates. Commencing January 1, 2019, the annual rental amount payable to the Building Authority under the ground lease will be \$1.0 million.

The Boston Project was financed with \$130.1 million of revenue bonds issued on October 26, 2016 (Series 2016 Bonds) by the Massachusetts Development Finance Agency ("MassDevelopment") pursuant to a Loan and Trust Agreement between MassDevelopment and PCER. Neither the Building Authority, the University nor UMass Boston have pledged revenues to secure the payment of the Series 2016 bonds or have any obligation with respect to payment of the Series 2016 bonds.

Pursuant to a Dining Facility Sublease dated November 8, 2016 between PCER, as sub-lessor and the Building Authority, as sub-lessee, PCER leased the dining facility, located within the Boston Project, to the Building Authority and the Building Authority shall operate or cause to be operated the dining facility. The University funded the construction costs of the dining facility through debt issued by the Building Authority. This lease only relates to the operations and maintenance of the dining facility. The annual rent payable to PCER by the Building Authority is \$1.00.

On November 14, 2018, the Building Authority entered into an agreement whereby sub-leased land on the University of Massachusetts Dartmouth campus to Provident Commonwealth Educational Resources II, Inc. (PCER II), a Massachusetts not-for-profit corporation, for a term of 45 years. The land is ground-leased to the Building Authority by the Commonwealth. PCER II has engaged a contractor to construct a 1,210-bed student housing facility on the site (the "Dartmouth Project"). The Dartmouth Project reverts to the Building Authority when the lease terminates. Commencing approximately one year following the completion of the project, the annual rental amount received by the Building Authority under the ground lease will be \$625.0 thousand, increasing by 3% every five years. The first ground lease payment is anticipated to be received in fiscal 2021.

The Dartmouth Project was financed with \$132.2 million of revenue bonds issued on November 14, 2018 (Series 2018 Bonds) by MassDevelopment pursuant to a Loan and Trust Agreement between MassDevelopment and PCER II. Neither the Building Authority, the University nor UMass Dartmouth have pledged revenues to secure the payment of the Series 2018 bonds or have any obligation with respect to payment of the Series 2018 bonds.

Pursuant to a Dining Facility Sublease dated November 13, 2018 between PCER II, as sub-lessor and the Building Authority, as sub-lessee, PCER II leased the dining facility, located within the Dartmouth Project, to the Building Authority and the Building Authority shall operate or cause to be operated the dining facility. The University funded the construction costs of the dining facility through debt issued by the Building Authority. This lease only relates to the operations and maintenance of the dining facility. The annual rent payable to PCER II by the Building Authority is \$1.00.

Management evaluated the applicability of relevant GASB guidance (including GASB 14, *The Financial Reporting Entity*, GASB 39, *Determining Whether Certain Organizations Are Component Units*, GASB 60, *Accounting for Financial Reporting for Service Concession Arrangements*, and GASB 61, *The Financial Reporting Entity: Omnibus*) against the underlying Boston and Dartmouth Project agreements and indentures and has concluded that the associated debt should not be recognized on the financial statements of the Building Authority.

### Capital leases

On October 27, 2009, the Building Authority entered into an agreement to lease its facility located on Morrissey Boulevard in Dorchester, Massachusetts to the Edward M. Kennedy Institute for the United States Senate ("EMKI"), a charitable corporation registered in the District of Columbia. The lease agreement provides for an initial term of ninety-nine years commencing in October 2009, and thereafter, at the option of EMKI, may be extended for two additional, nine year periods.

The project was financed with \$74.4 million of revenue bonds. Rent is equal to the debt service on the outstanding bonds and payable semi-annually through fiscal 2043.

On October 27, 2009, the Building Authority also entered into an agreement whereby the Building Authority sub-leased land, ground-leased to the Building Authority by the Commonwealth, to EMKI. The sublease agreement provides for an initial term of ninety-nine years commencing in October 2009, and thereafter, at the option of EMKI, may be extended for two additional,

ninety-nine year periods. At the time of signing, the Building Authority received payment of \$10.0 thousand in full payment of rent due for the initial term of the sublease.

## Other leases

The Building Authority has executed long-term leases with the Commonwealth, acting by and through the Trustees of the Building Authority, covering the land on which facilities owned by the Building Authority are located on the University's campuses. These leases call for nominal annual payments to the Commonwealth. Certain of these leases renew automatically for subsequent five or ten year periods unless the Building Authority notifies the University that it does not wish to renew. Other leases require the Building Authority to notify the University of its desire to renew. As of June 30, 2019, all leases with the Commonwealth were in good standing and any leases requiring action by the Building Authority during the year to facilitate their renewal were properly renewed.

As provided in the Enabling Act, each of the above-referenced leases also terminates when the Building Authority no longer has any bonds outstanding, at which time all Building Authority property becomes the property of the Commonwealth.

On April 1, 2014, the Building Authority entered into a lease, as lessee, with Massachusetts Mutual Life Insurance Company, as lessor, for space at Tower Square, 1500 Main Street, Springfield, Massachusetts. The initial lease began August 1, 2014 and ends July 31, 2019. In fiscal 2019, the Building Authority exercised its option to extend the lease for a period of five years. The lease now ends on July 31, 2024. Annual rent payments range from \$297.0 thousand to \$320.0 thousand. The Building Authority subleases the space to the University to be used as classroom space for its Springfield Satellite campus.

On July 17, 2014, the Building Authority entered into a lease, as lessee, with One Beacon Street Limited Partnership, as lessor, for space at One Beacon Street, Boston, Massachusetts. The lease ends December 31, 2030. Annual rent payments range from \$2.1 million to \$2.6 million. The Building Authority subleases office and classroom space at One Beacon Street to the University.

The following presents a schedule of future minimum payments under non-cancelable leases for the next five years and in subsequent five-year periods for the University as of June 30, 2019 (\$ in thousands):

Fiscal year end	Lessor (minimum lease payments to receive)				Lessee (minimum lease payments to pay)
	Direct financing lease	Operating leases		Total	
		PPPs	Other		
2020	\$ 5,355	\$ 1,025	\$ 12,376	\$ 18,756	\$ 26,606
2021	5,368	1,338	12,348	19,054	25,117
2022	5,374	1,650	11,628	18,652	19,449
2023	5,375	1,650	9,758	16,783	18,362
2024	3,478	1,650	9,009	14,137	16,970
2025-2029	25,858	8,316	34,428	68,602	87,708
2030-2034	25,686	8,411	27,970	62,067	50,537
2035-2039	26,145	8,510	5,870	40,525	850
2040-2044	11,997	8,611	-	20,608	-
2045-2049	-	8,716	-	8,716	-
2050-2054	-	8,824	-	8,824	-
2055-2059	-	6,202	-	6,202	-
2060-2064	-	3,396	-	3,396	-
<b>Total payments</b>	<b>\$ 114,636</b>	<b>\$ 68,299</b>	<b>\$ 123,387</b>	<b>\$ 306,322</b>	<b>\$ 245,599</b>
Less amounts representing interest:	<b>(36,014)</b>				
<b>Net investment in direct financing lease</b>	<b>\$ 78,622</b>				

The University leases certain equipment and facilities under operating leases with terms exceeding one year, which are cancelable at the University's option with 30 day notice. The rent expense related to these operating leases amounted to \$34.6 million and \$27.1 million for the years ended June 30, 2019 and 2018, respectively. The leases primarily relate to telecommunications, software, and co-generation systems. The University also leases space to third party tenants. During the years ended June 30, 2019 and 2018, the amount reported as rental income was \$25.2 million and \$24.5 million, respectively.

## 9. Long-Term Debt

The following table represents the outstanding long-term debt as of June 30, 2019, and the related activity during the fiscal year (\$ in thousands):

	Original borrowing	Maturity date	Interest rate	As of June 30, 2018	Additions	Reductions	As of June 30, 2019
<b>Building authority</b>							
Series 2008-A	\$ 26,580	2038	variable	\$ 18,150	\$ -	\$ (1,030)	\$ 17,120
Series 2008-1	232,545	2038	variable	163,115	-	(8,635)	154,480
Series 2009-1	247,810	2039	3.0-5.0%	15,285	-	(15,285)	-
Series 2009-2	271,855	2039	6.4-6.6%	271,855	-	(254,910)	16,945
Series 2009-3	28,570	2039	5.8-6.2%	25,100	-	(620)	24,480
Series 2010-1	118,985	2020	5.0%	45,485	-	(14,430)	31,055
Series 2010-2	430,320	2040	3.8-5.5%	430,320	-	-	430,320
Series 2010-3	3,005	2040	5.8%	2,675	-	(60)	2,615
Series 2011-1	135,040	2034	variable	124,990	-	(1,450)	123,540
Series 2011-2	101,700	2034	variable	95,055	-	(1,100)	93,955
Series 2013-1	212,585	2043	2.0-5.0%	193,745	-	(5,070)	188,675
Series 2013-2	71,970	2043	0.4-2.7%	62,825	-	(2,295)	60,530
Series 2013-3	24,640	2043	4.0-5.0%	24,640	-	(400)	24,240
Series 2014-1	293,890	2044	3.0-5.0%	292,490	-	(600)	291,890
Series 2014-2	14,085	2019	0.4-2.1%	5,750	-	(2,845)	2,905
Series 2014-3	67,635	2029	2.0-5.0%	58,160	-	(3,605)	54,555
Series 2014-4	157,855	2025	0.2-3.4%	92,095	-	(30,495)	61,600
Series 2015-1	298,795	2036	4.0-5.0%	298,795	-	-	298,795
Series 2015-2	191,825	2036	3.0-5.0%	189,000	-	(2,925)	186,075
Series 2017-1	165,130	2047	3.3-3.8%	165,130	-	-	165,130
Series 2017-2	19,510	2027	1.6-3.4%	19,510	-	(1,445)	18,065
Series 2017-3	35,945	2038	3.0-5.0%	184,760	-	(5,815)	178,945
Series 2018-1	37,650	2043	2.0-2.9%	37,650	-	-	37,650
Series 2019-1	208,725	2039	5.0%	-	208,725	-	208,725
Unamortized bond premium				150,699	47,633	(14,160)	184,172
				<b>2,967,279</b>	<b>256,358</b>	<b>(367,175)</b>	<b>2,856,462</b>
<b>MHEFA/MDFA</b>							
Series A	20,000	2030	variable	20,000	-	-	20,000
Series 2011	29,970	2034	2.5-4.0%	24,880	-	(1,085)	23,795
Unamortized bond premium				817	-	(25)	792
				<b>45,697</b>	<b>-</b>	<b>(1,110)</b>	<b>44,587</b>
<b>WCCC MHEFA/MDFA</b>							
Series 2005-D	99,325	2029	5.0-5.3%	615	-	(120)	495
Series 2011	10,495	2023	2.0-5.0%	5,860	-	(865)	4,995
Unamortized bond premium				526	-	(98)	428
				<b>7,001</b>	<b>-</b>	<b>(1,083)</b>	<b>5,918</b>
<b>MDFA</b>							
Clean renewable energy bonds	1,625	2027	3.50%	860	-	(95)	765
<b>Total bonds payable</b>				<b>3,020,837</b>	<b>256,358</b>	<b>(369,463)</b>	<b>2,907,732</b>
<b>Notes and commercial paper</b>				65,969	69,061	(2,220)	132,810
<b>Capital lease obligations</b>				2,262	255	(681)	1,836
<b>Total long-term debt</b>				<b>\$ 3,089,068</b>	<b>\$ 325,674</b>	<b>\$ (372,364)</b>	<b>\$ 3,042,378</b>

The following table represents the outstanding long-term debt as of June 30, 2018, and the related activity during the fiscal year (\$ in thousands):

	As of June 30, 2017	Additions	Reductions	As of June 30, 2018
<b>Building authority</b>				
Series 2008-A	\$ 19,145	\$ -	\$ (995)	\$ 18,150
Series 2008-1	171,430	-	(8,315)	163,115
Series 2008-2	3,065	-	(3,065)	-
Series 2009-1	28,400	-	(13,115)	15,285
Series 2009-2	271,855	-	-	271,855
Series 2009-3	25,685	-	(585)	25,100
Series 2010-1	59,230	-	(13,745)	45,485
Series 2010-2	430,320	-	-	430,320
Series 2010-3	2,730	-	(55)	2,675
Series 2011-1	126,540	-	(1,550)	124,990
Series 2011-2	96,115	-	(1,060)	95,055
Series 2013-1	198,655	-	(4,910)	193,745
Series 2013-2	65,090	-	(2,265)	62,825
Series 2013-3	24,640	-	-	24,640
Series 2014-1	293,015	-	(525)	292,490
Series 2014-2	8,555	-	(2,805)	5,750
Series 2014-3	61,640	-	(3,480)	58,160
Series 2014-4	122,125	-	(30,030)	92,095
Series 2015-1	298,795	-	-	298,795
Series 2015-2	191,825	-	(2,825)	189,000
Series 2017-1	165,130	-	-	165,130
Series 2017-2	19,510	-	-	19,510
Series 2017-3	187,680	-	(2,920)	184,760
Series 2018-1	-	37,650	-	37,650
Unamortized bond premium	164,887	-	(14,188)	150,699
	<b>3,036,062</b>	<b>37,650</b>	<b>(106,433)</b>	<b>2,967,279</b>
<b>MHEFA/MDFA</b>				
2000 Series A	20,000	-	-	20,000
Series 2011	25,925	-	(1,045)	24,880
Unamortized bond premium	870	-	(53)	817
	<b>46,795</b>	<b>-</b>	<b>(1,098)</b>	<b>45,697</b>
<b>WCCC MHEFA/MDFA</b>				
Series 2005-D	715	-	(100)	615
Series 2011	6,690	-	(830)	5,860
Unamortized bond premium	624	-	(98)	526
	<b>8,029</b>	<b>-</b>	<b>(1,028)</b>	<b>7,001</b>
<b>MDFA</b>				
Clean renewable energy bonds	956	-	(96)	860
<b>Total bonds payable</b>	<b>3,091,842</b>	<b>37,650</b>	<b>(108,655)</b>	<b>3,020,837</b>
<b>Notes and commercial paper</b>	<b>1,917</b>	<b>64,535</b>	<b>(483)</b>	<b>65,969</b>
<b>Capital lease obligations</b>	<b>592</b>	<b>3,195</b>	<b>(1,525)</b>	<b>2,262</b>
<b>Total long-term debt</b>	<b>\$ 3,094,351</b>	<b>\$ 105,380</b>	<b>\$ (110,663)</b>	<b>\$ 3,089,068</b>

**Pledged Revenues** – The University is obligated under its contracts for financial assistance, management and services with the Building Authority to collect rates, rents, fees and other charges with respect to such facilities sufficient to pay principal and interest on the Building Authority's bonds and certain other costs such as insurance on such facilities.

The University's spendable cash and investments secures the obligations of the University with respect to the MHEFA/MDFA Series A Bonds. The University is required to certify annually that there are sufficient funds in the spendable cash and investments to cover the debt service on the Series A Bonds.

**Principal and Interest** – Principal and interest, which is estimated using rates in effect at June 30, 2019, on long-term debt for the next five fiscal years and in subsequent five-year periods are as follows (\$ in thousands):

Fiscal year	Bonds			Direct placement bonds		Total
	Principal	Interest	Interest subsidy*	Principal	Interest	
2020	\$ 103,931	\$ 121,167	\$ (7,555)	\$ -	\$ 766	\$ 218,309
2021	107,865	117,154	(7,567)	-	763	218,215
2022	100,356	113,035	(7,463)	-	763	206,691
2023	104,641	108,913	(7,247)	-	763	207,070
2024	107,506	104,769	(7,015)	1,655	754	207,669
2025–2029	502,766	459,783	(30,829)	8,565	3,493	943,778
2030–2034	452,745	346,676	(22,396)	8,530	3,500	789,055
2035–2039	558,820	229,429	(11,373)	9,880	2,142	788,898
2040–2044	494,805	90,149	(1,029)	9,020	592	593,537
2045–2049	151,255	10,623	-	-	-	161,878
<b>Total</b>	<b>\$ 2,684,690</b>	<b>\$ 1,701,698</b>	<b>\$ (102,474)</b>	<b>\$ 37,650</b>	<b>\$ 13,536</b>	<b>\$ 4,335,100</b>

\* These interest rate subsidies are provided by the United States Government related to the Authority's issuance of bonds under the Build America Bond ("BAB") program. Under the BAB program, the Government provides a direct subsidy of the interest rate paid to bondholders up to 35%. The Authority's November 1, 2018, and May 1, 2019 subsidy payments related to the Senior Series 2009-2 Project Revenue Build America Bonds and the Senior Series 2010-2 Project Revenue Build America Bonds were 32.7% and 32.8%, respectively. For Fiscal Year 2020 through Fiscal Year 2041, the estimated subsidy reflected in the table above is 32.9%.

The University classifies variable rate bonds subject to remarketing as current, unless supported by liquidity arrangements such as lines of credit or standby bond purchase agreements, which could refinance the debt on a long-term basis. In the event that variable rate bonds are put back to the University by the debt holder, management believes that the University's strong credit rating will ensure the bonds will be remarketed within a reasonable period of time.

The University has standby purchase agreements with Barclays Bank PLC (Barclays) for the 2008-1 and 2008-A bonds which requires Barclays to purchase bonds that are tendered and not remarketed. These agreements were extended until July 6, 2022. Fees incurred under the agreements related to the bonds totaled \$583.0 thousand and \$657.6 thousand for the years ended June 30, 2019 and 2018, respectively.

The University has standby purchase agreement with Wells Fargo Bank, N.A. (Wells) for the 2011-1 bonds which requires Wells to purchase bonds that are tendered and not remarketed. This agreement was extended until July 6, 2022. Fees incurred under the agreements related to the bonds totaled \$425.7 thousand and \$434.4 thousand for the years ended June 30, 2019 and 2018, respectively.

On June 27, 2018, the Authority issued \$37.7 million of direct placement bonds. The annual principal and interest payments of this outstanding debt is disclosed above.

**Bond Premium** – During the year ended June 30, 2019, premiums received totaled \$47.6 million. The University amortizes premiums received as a reduction of interest expense over the life of the respective bond issue. There were no new premiums received during the year ended June 30, 2018.

**Commercial Paper** – The maximum aggregate principal amount of commercial paper the Building Authority may have outstanding at one time is \$200.0 million. The Building Authority currently has standby liquidity facility agreements with State Street Bank and Trust Company for \$125.0 million and with U.S. Bank National Association for \$75.0 million. Each agreement expires on August 12, 2022.

During the fiscal year 2019 and 2018, the Building Authority issued \$69.1 million and \$64.5 million of commercial paper, respectively. As of June 30, 2019 and 2018, the Building Authority had an outstanding balance commercial paper of \$131.9 million and \$64.5 million, respectively. The Building Authority incurred total fees of \$0.7 million and \$0.7 million for the years ending

June 30, 2019 and 2018, respectively, associated with the use of commercial paper.

**Bond Refundings** – There was no refunding of bonds in the year ended June 30, 2018. During the year ended June 30, 2019, the Building Authority issued \$208.7 million of Refunding Revenue Senior Series 2019-1 Bonds which partially refunded the 2009-2 Senior Series Building America Bonds. There was no loss or gain on the refunding.

For the years ended June 30, 2019 and 2018, the amortization of the loss on debt refundings totaled \$5.3 million, which increases interest expense.

**Interest Rate Swaps** – The Building Authority uses derivative instruments to manage the impact of interest rate changes on its cash flows and net position by mitigating its exposure to certain market risks associated with operations, and does not use derivative instruments for trading or speculative purposes.

The Building Authority's interest rate swap liabilities at June 30, 2019 and 2018 are as follows (\$ in thousands):



	Notional value	As of June 30, 2018	Net change	As of June 30, 2019	Effective date	Term date	Authority pays	Authority receives
Series 2008-1	\$ 154,480	\$ 16,577	\$ 6,732	\$ 23,309	05/01/08	05/01/38	3.39%	70% of 1-Month LIBOR
Series 2008-A	17,120	1,931	789	2,720	11/13/08	05/01/38	3.38%	70% of 1-Month LIBOR
Series 2011	217,495	23,094	6,499	29,593	04/20/06	11/01/34	3.48%	60% of 3-Month LIBOR + .18%
<b>Total</b>		<b>\$ 41,602</b>	<b>\$ 14,020</b>	<b>\$ 55,622</b>				

**Swap Payments and Associated Debt** – Using rates as of June 30, 2019, the debt service requirements of the variable-rate debt and net swap payments, assuming current interest rates remain the same for their term, were as follows (\$ in thousands):

Fiscal year ending June 30	Principal	Interest	Interest rate swaps, net	Total
2020	\$ 12,720	\$ 7,388	\$ 7,060	\$ 27,168
2021	28,390	7,000	6,692	42,082
2022	29,545	6,453	6,163	42,161
2023	33,915	5,855	5,583	45,353
2024	35,200	5,204	4,950	45,354
2025–2029	149,550	17,326	16,392	183,268
2030–2034	90,205	4,974	4,660	99,839
2035–2039	9,570	215	198	9,983
<b>Total</b>	<b>\$ 389,095</b>	<b>\$ 54,415</b>	<b>\$ 51,698</b>	<b>\$ 495,208</b>

## 10. Other Liabilities

During the year ended June 30, 2019, the following changes occurred in other liabilities as recorded in the Statements of Net Position (\$ in thousands):

	As of June 30, 2018	Additions	Reductions	As of June 30, 2019	Due in one year
Compensated absences	\$ 108,305	\$ 6,212	\$ (7,119)	\$ 107,398	\$ 81,155
Workers' compensation	14,769	80	(999)	13,850	2,882
Unearned revenues	146,024	69,875	(127,036)	88,863	54,946
Advances and deposits	34,289	7,056	(7,210)	34,135	6,394
Other liabilities	168,672	75,228	(96,028)	147,872	70,458
<b>Total</b>	<b>\$ 472,059</b>	<b>\$ 158,451</b>	<b>\$ (238,392)</b>	<b>\$ 392,118</b>	<b>\$ 215,835</b>

	As of June 30, 2017	Additions	Reductions	As of June 30, 2018	Due in one year
Compensated absences	\$ 111,752	\$ 4,192	\$ (7,639)	\$ 108,305	\$ 76,749
Workers' compensation	14,586	841	(658)	14,769	3,225
Unearned revenues	76,725	126,581	(57,282)	146,024	52,884
Advances and deposits	36,480	6,929	(9,120)	34,289	6,439
Other liabilities	136,374	94,077	(61,779)	168,672	94,077
<b>Total</b>	<b>\$ 375,917</b>	<b>\$ 232,620</b>	<b>\$ (136,478)</b>	<b>\$ 472,059</b>	<b>\$ 233,374</b>

The University includes compensated absences and workers' compensation short-term liabilities within accounts payable and accrued expenses on the Statements of Net Position.



## 11. Fringe Benefits

During the years ended June 30, 2019 and 2018, the Commonwealth paid \$383.6 million and \$358.1 million, respectively, for the University's portion of fringe benefit costs which includes pension expense, health insurance for active employees and retirees, and terminal leave. Of this amount, the University reimbursed the Commonwealth \$149.1 million and \$134.1 million during the years ended June 30, 2019 and 2018, respectively. The remaining portion is included in revenue as state appropriations.

## 12. Benefit Plans

### Defined benefit plan

The Massachusetts State Employees' Retirement System (MSERS) is a public employee retirement system (PERS) that administers a cost-sharing multi-employer defined benefit plan covering substantially all employees of the Commonwealth including University employees.

MSERS provides retirement, disability, survivor and death benefits to members and their beneficiaries. Massachusetts General Laws (MGL) establishes uniform benefit and contribution requirements for all contributory PERS. These requirements provide for superannuation retirement allowance benefits up to a maximum of 80% of a member's highest three-year to five-year average annual rate of regular compensation depending on the date of hire. Benefit payments are based upon a member's age, length of creditable service, and group creditable service, and group classification. The authority for amending these provisions rests with the Legislature.

The MSERS' funding policies were established by Chapter 32 of MGL. The Legislature has the authority to amend these policies. The annuity portion of the MSERS retirement allowance is funded by employees, who contribute a percentage of their regular compensation. Costs of administering the plan are funded out of plan assets.

Member contributions for MSERS vary depending on the most recent date of membership:

Hire date	% of Compensation
Prior to 1975	5% of regular compensation
1975 – 1983	7% of regular compensation
1984 – 6/30/1996	8% of regular compensation
7/1/1996 – present	9% of regular compensation except for State Police which is 12% of regular compensation
1979 – present	An additional 2% of regular compensation in excess of \$30,000

In addition, members within this group who join the system on or after April 2, 2012 will have their withholding rate reduced to 6% after achieving 30 years of creditable service.

The University makes contributions on behalf of the employees through a fringe benefit charge assessed by the Commonwealth. The fringe benefit charge amounted to \$125.5 million and \$107.4 million for the years ended June 30, 2019 and 2018, respectively. Annual covered payroll was 77.4% and 75.9% of annual total payroll for the University for the years ended June 30, 2019 and 2018, respectively.

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

– The net pension liability as of June 30, 2019 was determined based on a measurement date of June 30, 2018 from an actuarial valuation as of January 1, 2018 rolled forward to June 30, 2018. The net pension liability measured as of June 30, 2018 was determined based on a measurement date of June 30, 2017 from an actuarial valuation as of January 1, 2017 rolled forward to June 30, 2017. There are no significant changes known which would impact the total pension liability between the measurement date and the reporting date, other than typical plan experience.

At June 30, 2019 and 2018, the University reported a liability of \$409.3 million and \$420.2 million, respectively, for its proportionate share of MSERS net pension liability, respectively. The University's proportion of the net pension liability was based on a projection of the University's long-term share of contributions to the pension plan relative to the total projected contributions of all participating entities, actuarially determined. The University's proportion of the pension plan at measurement dates of June 30, 2018 and 2017 was 3.09% and 3.28%, respectively.

For the fiscal years ended June 30, 2019 and 2018, the University recognized pension expense of \$52.2 million and \$58.5 million, respectively.

The University reported its proportionate share of MSERS deferred outflows of resources and deferred inflows of resources related to pensions from the following sources as of June 30, 2019 and 2018 (\$ in thousands):

	2019		2018	
	Deferred outflows of resources	Deferred inflows of resources	Deferred outflows of resources	Deferred inflows of resources
Changes of assumptions	\$ 41,482	\$ -	\$ 43,732	\$ -
Changes in proportion due to internal allocation	22,245	37,534	36,532	28,949
Employer contributions after measurement date	35,843	-	28,292	-
Differences between expected and actual experience	12,980	8,342	16,248	11,434
Net difference between projected and actual investment earnings on pension plan investments	-	14,228	-	5,007
Changes in proportion from Commonwealth	1,104	78	1,440	150
<b>Total</b>	<b>\$ 113,654</b>	<b>\$ 60,182</b>	<b>\$ 126,244</b>	<b>\$ 45,540</b>

Amounts reported as deferred outflows of resources relating to pension resulting from the University's contributions subsequent to the measurement date will be recognized as a reduction to pension expense in the net pension liability in the year 2020. Other amounts are reported as follows:

Year ended June 30	
2020	\$ 22,405
2021	8,482
2022	(9,190)
2023	(2,483)
2024	(1,585)
<b>Total</b>	<b>\$ 17,629</b>

**Actuarial Assumptions** – Significant actuarial assumptions used at each respective measurement date are as follows:

	June 30, 2018	June 30, 2017
Investment rate of return	7.35%	7.50%
Interest rate credited to the annuity savings fund	3.50%	3.50%
Cost of living increases on the first \$13,000 per year	3.00%	3.00%
Salary increases*	4.0% to 9.0%	4.0% to 9.0%
Mortality rates:		
Pre-retirement	RP-2014 Blue Collar Employees Scale MP-2016	RP-2014 Blue Collar Employees Scale MP-2016
Post-retirement	RP-2014 Blue Collar Healthy Annuitant Scale MP-2016	RP-2014 Blue Collar Healthy Annuitant Scale MP-2016
Disability	RP-2000 Healthy Annuitant Scale BB base year 2015	RP-2000 Healthy Annuitant Scale BB base year 2015

\*Salary increases were based on analysis of past experiences depending on group and length of service

**Investment Allocation** – Investment assets of MSERS are with the Pension Reserves Investment Trust (PRIT) Fund. The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future rates of return 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 rates of return by the target asset allocation percentage.

Best estimates of geometric rates of return for each major asset class included in the PRIT Fund's target asset allocation as of June 30, 2018 and 2017 are summarized in the following table:

Asset class	June 30, 2018		June 30, 2017	
	Target allocation	Long-term expected real rate of return	Target allocation	Long-term expected real rate of return
Global equity	39.00%	5.00%	40.00%	5.00%
Portfolio completion strategies	13.00%	3.70%	13.00%	3.60%
Core fixed income	12.00%	0.90%	12.00%	1.10%
Private equity	12.00%	6.60%	11.00%	6.60%
Real estate	10.00%	3.80%	10.00%	3.60%
Value added fixed income	10.00%	3.80%	10.00%	3.80%
Timber / natural resources	4.00%	3.40%	4.00%	3.20%
<b>Total</b>	<b>100.00%</b>		<b>100.00%</b>	

**Discount Rate** – The discount rate used to measure the total pension liability was 7.35% and 7.50% at June 30, 2018 and 2017, respectively. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rates and the Commonwealth's contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rates. Based on those assumptions, the net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

**Sensitivity Analysis** – The following illustrates the impact of a 1% change in the discount rate for the net pension liability at June 30, 2019 (\$ in thousands):

Fiscal year ended	1% Decrease	Discount rate	1% Increase
June 30, 2019	\$ 551,694	\$ 409,319	\$ 287,666
June 30, 2018	\$ 572,341	\$ 420,234	\$ 297,708

## Defined contribution plan

Non-vested faculty and certain other employees of the University can opt out of MSERS and participate in a defined contribution plan, the Optional Retirement Plan (ORP), administered by the Commonwealth's Department of Higher Education. As of June 30, 2019 and 2018, there were 2,011 and 1,916 participants in the ORP, respectively. Employees contribute at the same rate as members in MSERS and the Commonwealth matches 5% of employee contributions. The Commonwealth contributed \$7.8 million and \$7.2 million in 2019 and 2018, respectively. University employees contributed \$18.8 million and \$17.4 million in 2019 and 2018, respectively.

The MSERS and ORP retirement contributions of employees who become members of MSERS or ORP after January 1, 2011 are subject to a state compensation limit. Effective January 1, 2011, the University established a defined contribution plan, the University of Massachusetts 401(a) Retirement Gap Plan (Gap Plan). Employees with MSERS or ORP membership dates after January 1, 2011 are eligible to participate in the Gap Plan. Eligible employees begin participation in the Gap Plan when their regular compensation exceeds the state compensation limit in effect for the plan year, at which point their contributions to MSERS or ORP are required to stop for the remainder of the plan year. Employee contributions to the Gap Plan are mandatory and at the same rate as MSERS and ORP; the University contributes 4.3%. As of June 30, 2019 and 2018, the plan assets of the Gap Plan were \$4.7 million and \$3.4 million, respectively.

## 13. Other Postemployment Benefits

The Commonwealth administers the State Retirees' Benefit Trust, a single employer defined Postemployment Benefits Other Than Pensions (OPEB) Plan (the Plan). Benefits are managed by the Group Insurance Commission (GIC) and investments are managed by the Pension Reserves Investment Management Board (PRIM).

**Benefits Provided** – Under Chapter 32A of the MGL the Commonwealth is required to provide certain health care and life insurance benefits for retired employees of the Commonwealth. Substantially all of the Commonwealth's employees may become eligible for these benefits if they reach retirement age while working for the Commonwealth. Eligible retirees are required to contribute a specified percentage of the health care/benefit costs, which are comparable to contributions required from employees.

Employer and employee contribution rates are set in MGL. The Commonwealth recognizes its share of the costs on an actuarial basis. As of June 30, 2019 and 2018, the retirees' share of premium costs is between 0% – 20%, depending on the date of hire.

**OPEB Liabilities, OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB** – The total OPEB liability as of June 30, 2019 was determined based on a measurement date of June 30, 2018 from an actuarial valuation as of January 1, 2018 rolled forward to June 30, 2018. The total OPEB liability as of June 30, 2018 was determined based on a measurement date of June 30, 2017 from an actuarial valuation as of January 1, 2017 rolled forward to June 30, 2017. There are no significant changes known which would impact the total OPEB liability between the measurement date and the reporting date, other than typical plan experience.

As of June 30, 2019 and 2018, the University reported a liability of \$719.0 million and \$817.4 million, respectively, for its proportionate share of the OPEB liability. The University's proportion of the OPEB liability was based on a projection of the University's long-term share of contributions to the OPEB plan relative to the total projected contributions of all participating entities. The University's proportion of the OPEB plan at the measurement dates of June 30, 2018 and 2017 was 4.82% and 4.67%, respectively.

For the fiscal years ended June 30, 2019 and 2018, the University recognized OPEB expense of \$44.6 million and \$70.0 million, respectively.

The University reported its proportionate share of deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources as of June 30, 2019 (\$ in thousands):

	2019		2018	
	Deferred outflows of resources	Deferred inflows of resources	Deferred outflows of resources	Deferred inflows of resources
Changes of assumptions	\$ -	\$ 220,894	\$ -	\$ 92,574
Changes in proportion due to internal allocation	100,687	-	98,629	-
Employer contributions after measurement date	26,137	-	21,421	-
Differences between expected and actual experience	8,732	1,535	-	1,880
Net difference between projected and actual investment earnings on OPEB plan investments	-	1,795	-	1,491
Changes in proportion from Commonwealth	2,310	-	1,711	-
<b>Total</b>	<b>\$ 137,866</b>	<b>\$ 224,224</b>	<b>\$ 121,761</b>	<b>\$ 95,945</b>

Amounts reported as deferred outflows of resources relating to OPEB resulting from the University's contributions subsequent to the measurement date will be recognized as a reduction to OPEB expense in the net OPEB liability in the year 2020. Other amounts are reported as follows:

Year ended June 30	
2020	\$ (28,805)
2021	(28,805)
2022	(28,805)
2023	(24,148)
2024	(1,932)
	<b>\$ (112,495)</b>

**Actuarial Assumptions** – Significant actuarial assumptions used at the 2018 measurement date are as follows:

<b>Long-term rate of return on investment</b>	<b>7.35%</b>	
<b>Annual healthcare cost trend rates</b>		
Medical	8.0% decreasing by 0.5% each year to an ultimate rate of 5.5% in 2023 and then decreasing 0.25% each year to an ultimate rate of 5.0% in 2025 for medical and 5.0% for administration costs	
Employer group waiver program	5.0%	
Administrative costs	5.0%	
Mortality rates	RP-2014 Blue Collar Employees projected with Scale MP-2016	
Participation rates	100% of all retirees who currently have health care coverage will continue the same coverage, except the following: <ul style="list-style-type: none"> <li>• retirees under the age of 65 with POS/PPO coverage switch to Indemnity at age 65</li> <li>• retirees over the age of 65 with POS/PPO coverage switched to HMO</li> </ul> Current retirees and spouses - Medicare coverage upon attainment of age 65 Future retirees - Medicare coverage upon attainment of age 65 80% of current and future contingent eligible participants will elect health care benefits at 55 or later Actives, upon retirement, take coverage, and are assumed to have the following coverage:	
	<b>Retirement age under 65</b>	<b>Retirement age over 65</b>
Indemnity	40.0%	85.0%
POS/PPO	50.0%	0.0%
HMO	10.0%	15.0%

Significant actuarial assumptions used at the 2017 measurement date are as follows:

<b>Long-term rate of return on investment</b>	<b>7.50%</b>	
<b>Annual healthcare cost trend rates</b>		
Medical	8.5% decreasing by 0.5% each year to an ultimate rate of 5.0% in 2024	
Employer group waiver program	5.0%	
Administrative costs	5.0%	
Mortality rates	RP-2014 Blue Collar Employees projected with Scale MP-2016	
Participation rates	100% of all retirees who currently have health care coverage will continue the same coverage, except the following: <ul style="list-style-type: none"> <li>• retirees under the age of 65 with POS/PPO coverage switch to Indemnity at age 65</li> <li>• retirees over the age of 65 with POS/PPO coverage switched to HMO</li> </ul> Current retirees and spouses - Medicare coverage upon attainment of age 65 Future retirees - Medicare coverage upon attainment of age 65 80% of current and future contingent eligible participants will elect health care benefits at 65 or later Actives, upon retirement, take coverage, and are assumed to have the following coverage:	
	<b>Retirement age under 65</b>	<b>Retirement age over 65</b>
Indemnity	40.0%	85.0%
POS/PPO	50.0%	0.0%
HMO	10.0%	15.0%

**Investment Allocation** – Investment assets of the Plan are with the Pension Reserves Investment Trust (PRIT) Fund. The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future rates of return 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 rates of return by the target asset allocation percentage.

Best estimates of geometric rates of return for each major asset class included in the PRIT Fund's target asset allocation as of June 30, 2018 and 2017 are summarized in the following table:

Asset class	June 30, 2018		June 30, 2017	
	Target allocation	Long-term expected real rate of return	Target allocation	Long-term expected real rate of return
Global equity	39.00%	5.00%	40.00%	5.00%
Portfolio completion strategies	13.00%	3.70%	13.00%	3.60%
Core fixed income	12.00%	0.90%	12.00%	1.10%
Private equity	12.00%	6.60%	11.00%	6.60%
Real estate	10.00%	3.80%	10.00%	3.60%
Value added fixed income	10.00%	3.80%	10.00%	3.80%
Timber / natural resources	4.00%	3.40%	4.00%	3.20%
<b>Total</b>	<b>100.00%</b>		<b>100.00%</b>	

**Discount Rate** – The discount rates used to measure the total OPEB liability as of June 30, 2018 and 2017 were 3.95% and 3.63%, respectively. These rates were based on a blend of the Bond Buyer Index rates of 3.87% and 3.58%, respectively, as of the measurement dates June 30, 2018 and 2017 and the long term rate of return on Plan investments of 7.35% and 7.50%, respectively. The Plan's fiduciary net position was not projected to be available to make all projected future benefit payments for current plan members. The projected "depletion date" when projected benefits are not covered by projected assets is 2025. Therefore, the long-term expected rate of return on plan investments was not applied to all periods of projected benefit payments to determine the total OPEB liability as of June 30, 2018 and 2017.

**Sensitivity Analysis of Discount** – The following presents the net OPEB liability of the Commonwealth calculated using the discount rate, as well as what the net OPEB liability would be if it were calculated using a discount rate that is 1- percentage-point lower or 1-percentage-point higher than the current rate (\$ in thousands):

Fiscal year ended	1% Decrease	Current discount	1% Increase
June 30, 2018	\$ 848,963	\$ 718,955	\$ 615,016
June 30, 2017	\$ 970,268	\$ 817,357	\$ 695,781

**Sensitivity Analysis of Healthcare Cost Trend Rate** – The following presents the net OPEB liability of the Commonwealth, as well as what the net OPEB liability would be if it were calculated using a healthcare cost trend rate that is 1-percentage-point lower or 1-percentage-point higher than the current healthcare cost trend rate (\$ in thousands):

Fiscal year ended	1% Decrease	Current rate	1% Increase
June 30, 2018	\$ 597,328	\$ 718,955	\$ 877,734
June 30, 2017	\$ 676,259	\$ 817,357	\$ 1,003,033

## 14. Operating Expenses and Interest

The following table summarizes the University's operating expenses and interest by natural and functional classification for the year ended June 30, 2019 (\$ in thousands):

	Compensation and benefits	Supplies and services	Scholarships and fellowships	Depreciation and amortization	Interest	Total
<b>Educational and general</b>						
Instruction	\$ 775,540	\$ 125,695	\$ -	\$ -	\$ -	\$ 901,235
Research	282,040	205,685	-	-	-	487,725
Public service	67,908	15,658	-	-	-	83,566
Academic support	134,698	49,764	-	-	-	184,462
Student services	119,166	39,825	-	-	-	158,991
Institutional support	182,074	87,052	-	-	-	269,126
Operation and maintenance of plant	119,969	126,756	-	-	-	246,725
Depreciation and amortization	-	-	-	276,638	-	276,638
Scholarships and fellowships	-	-	49,509	-	-	49,509
<b>Auxiliary enterprises</b>	<b>154,468</b>	<b>183,739</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>338,207</b>
<b>Other expenditures</b>						
Independent operations	24,407	23,378	-	-	-	47,785
Public service activities	84,774	142,047	-	-	-	226,821
<b>Total operating expenses</b>	<b>1,945,044</b>	<b>999,599</b>	<b>49,509</b>	<b>276,638</b>	<b>-</b>	<b>3,270,790</b>
Interest on indebtedness	-	-	-	-	116,217	116,217
<b>Total operating expenses and interest</b>	<b>\$ 1,945,044</b>	<b>\$ 999,599</b>	<b>\$ 49,509</b>	<b>\$ 276,638</b>	<b>\$ 116,217</b>	<b>\$ 3,387,007</b>

The following table summarizes the University's operating expenses and interest by natural and functional classification for the year ended June 30, 2018 (\$ in thousands):

	Compensation and benefits	Supplies and services	Scholarships and fellowships	Depreciation and amortization	Interest	Total
<b>Educational and general</b>						
Instruction	\$ 758,474	\$ 117,761	\$ -	\$ -	\$ -	\$ 876,235
Research	281,811	189,324	-	-	-	471,135
Public service	64,329	13,909	-	-	-	78,238
Academic support	134,392	53,103	-	-	-	187,495
Student services	119,603	37,331	-	-	-	156,934
Institutional support	185,471	86,064	-	-	-	271,535
Operation and maintenance of plant	124,842	130,983	-	-	-	255,825
Depreciation and amortization	-	-	-	261,417	-	261,417
Scholarships and fellowships	-	-	50,410	-	-	50,410
<b>Auxiliary enterprises</b>	<b>146,623</b>	<b>167,118</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>313,741</b>
<b>Other expenditures</b>						
Independent operations	24,854	27,357	-	-	-	52,211
Public service activities	82,927	242,289	-	-	-	325,216
<b>Total operating expenses</b>	<b>1,923,326</b>	<b>1,065,239</b>	<b>50,410</b>	<b>261,417</b>	<b>-</b>	<b>3,300,392</b>
Interest on indebtedness	-	-	-	-	115,851	115,851
<b>Total operating expenses and interest</b>	<b>\$ 1,923,326</b>	<b>\$ 1,065,239</b>	<b>\$ 50,410</b>	<b>\$ 261,417</b>	<b>\$ 115,851</b>	<b>\$ 3,416,243</b>

## 15. Unrestricted Net Position

The University adopted a reserve policy and standards in fiscal year 2018. According to the policy, unrestricted net position is designated for certain purposes. Below are the designations used by the University, as described in the University's policy:

- **Unexpended plant and facilities** – funds designated for capital projects, equipment and the major renovations of all existing buildings including research, education and general, and auxiliary.
- **Auxiliary enterprises** – funds related to self-supporting activities which provide non-instructional support in the form of goods and services to students, faculty, and staff upon payment of a specific user charge or fee.
- **Education and general** – funds designated for operational requirements, academic initiatives, research, faculty recruitment, and University initiatives.
- **Quasi-endowment** – funds related to unrestricted resources invested in the Foundation's pooled endowment fund, intended to be invested for the long-term unless otherwise approved by the Board or a designated authority.
- **Stabilization** – funds designated to provide budgetary stabilization for operations due to unforeseen and/or uncontrollable circumstances to ensure responsible long-term financial stability.
- **Other unrestricted** – funds undesignated for a specific use or purpose.

The following table summarizes the University's unrestricted net position as of June 30, 2019 and 2018 (\$ in thousands):

	2019	2018
<b>Unrestricted resources</b>		
Unexpended plant and facilities	\$ 255,308	\$ 267,319
Auxiliary enterprises	100,154	91,539
Education and general	309,452	244,472
Quasi-endowment	352,743	280,517
Stabilization	114,594	109,168
Other unrestricted	(46,700)	(12,024)
<b>Subtotal</b>	<b>1,085,551</b>	<b>980,991</b>
Unfunded portion of pension liabilities	(355,847)	(339,530)
Unfunded portion of postretirement benefits other than pension liabilities	(805,313)	(791,541)
<b>Total unrestricted net position</b>	<b>\$ (75,609)</b>	<b>\$ (150,080)</b>

## 16. Commitments and Contingencies

The Building Authority, University, and WCCC have outstanding purchase commitments under construction contracts and real estate agreements of \$200.0 million and \$120.7 million at June 30, 2019 and 2018, respectively. The University has entered an Energy Performance Contract that is being managed by the Commonwealth's Division of Capital Asset Management and Maintenance (DCAMM) under its Clean Energy Investment Program. This project includes 32 energy conservation measures. The University has a commitment to the Commonwealth for Clean Energy Investment Program Funds used through June 30, 2019 and 2018 of \$43.3 million and \$26.1 million, respectively.

The University, as an agency of the Commonwealth, is self-insured for property loss exposure, subject to appropriation from the state legislature. However, properties owned by the Building Authority located on a campus of the University, such as the Mullins Center, dining commons, and most dormitories, are insured by the Building Authority. The University and its employees are protected against tort claims through sovereign immunity under Chapter 258 of the Massachusetts General Laws. The University maintains certain liability insurance policies, including commercial general liability, leased automotive liability, directors and officers and comprehensive crime policies. Employees of the University are covered for worker's compensation protection under Chapter 152 of the Massachusetts General Laws. The University has recorded a liability for future expected costs of its workers' compensation claims of \$13.9 million and \$14.8 million as of June 30, 2019 and 2018, respectively. Estimated future payments related to such costs have been discounted at a rate of 4%. Refer to Note 10 for further information on worker's compensation balances year over year.

The University is a defendant in various lawsuits and is subject to various contractual matters; however, University management is of the opinion that the ultimate outcome of all litigation or potential contractual obligations will not have a material effect on the financial position, financial results or cash flows of the University.

## 17. Blended Component Units

Condensed information for the University's blended component units, the Building Authority and WCCC, is presented in the table below for the year ended June 30, 2019 (\$ in thousands):

	June 30, 2019			
	Building authority	Eliminations	WCCC	Eliminations
<b>Condensed information from the Statements of Net Position</b>				
Capital assets, net	\$ 3,671,005	\$ -	\$ 332,002	\$ -
Other assets	624,776	(52,289)	96,219	(1,732)
Deferred outflows	95,954	-	7,429	-
Total assets and deferred outflows	4,391,735	(52,289)	435,650	(1,732)
Debt, including commercial paper	2,988,872	(3,667)	38,472	-
Other liabilities	168,398	(2,010)	230,137	(1,732)
Total liabilities	3,157,270	(5,677)	268,609	(1,732)
<b>Total net position</b>	<b>\$ 1,234,465</b>	<b>\$ (46,612)</b>	<b>\$ 167,041</b>	<b>\$ -</b>
<b>Condensed information from the Statements of Revenues, Expenses, and Changes in Net Position</b>				
Other revenues	\$ 281,311	\$ (227,997)	\$ 82,675	\$ (52,597)
<b>Total revenues</b>	<b>281,311</b>	<b>(227,997)</b>	<b>82,675</b>	<b>(52,597)</b>
Operation and maintenance of capital assets	8,600	(7,439)	28,871	(23,941)
Depreciation	140,771	-	19,857	-
Interest expense	118,213	(220,558)	7,866	-
Other expenses	3,875	-	17,514	(28,656)
Total expenses	271,459	(227,997)	74,108	(52,597)
<b>Increase in net position</b>	<b>\$ 9,852</b>	<b>\$ -</b>	<b>\$ 8,567</b>	<b>\$ -</b>
<b>Condensed information from the Statements of Cash Flows</b>				
Net cash provided by operating activities	\$ 201,430	\$ -	\$ 22,340	\$ -
Net cash provided by (used in) investing activities	7,849	-	(11,733)	-
Net cash provided by (used in) financing activities	(299,183)	-	(10,270)	-
<b>Change in cash and cash equivalents</b>	<b>\$ (89,904)</b>	<b>\$ -</b>	<b>\$ 337</b>	<b>\$ -</b>

The UMass Amherst Foundation is not material in relation to the other blended component units nor the University as a whole and is therefore not presented in the above condensed information.

## 18. Discretely Presented Component Units

As noted in Note 1, UMF and UMDF are discretely presented component units. These Foundations are presented in the aggregate on page 20 of these financial statements. Following is information on investments at UMF, as this disclosure is not included in its entirety elsewhere in these financial statements. UMF's investment portfolio represents approximately 99.8% of the aggregate discretely presented component units. This note does not include investment information for UMDF given the immaterial nature of UMDF's balances and activities.

**Investments** – Investments in debt and equity securities are measured at fair value primarily based on quoted market prices. Changes in fair value are recorded as unrealized gains or losses on investments. Purchases and sales of investments are recorded as of the trade date. Other investments for which no such quotation or valuations are readily available (alternative investments) are carried at net asset value as a practical expedient to fair value. The estimated fair value of these investments is based on valuations provided by the external investment managers and reviewed by management. Because these investments are not readily marketable, their estimated value is subject to uncertainty and therefore may differ from the value that would

have been used had a ready market for such investment existed. Such differences could be material. Investments contributed to UMF are recorded at fair value on the date of the gift.

UMF utilizes the pooled investment concept whereby all invested funds are included in one investment pool, except for investments of certain funds that are otherwise restricted. Additions, redemptions and transfers to pooled investment funds are assigned a number of shares based upon their fair value at the date of receipt from the pool. On a monthly basis, investment income and capital gains are distributed among unit holders of each pooled investment fund based upon their respective shares held.

**Custodial Credit Risk** – UMF maintains depository, payroll, disbursement, receipt, and imprest accounts. In addition to bank account deposits, UMF held money market instruments which are classified as investments. Interest bearing and money market accounts carry Federal Deposit Insurance Corporation (FDIC) insurance up to \$250,000 per account. None of the accounts are collateralized above the FDIC insured amounts.

**Concentration of Credit Risk** – As of June 30, 2019 and 2018, there is no concentration of investments from one issuer equal or greater than 5% of the portfolio. Investments issued or guaranteed by the U.S. government, as well as investments in mutual funds and other pooled investments are excluded from consideration when evaluating concentration risk.

**Credit Risk** – UMF's investment policy allows each portfolio manager full discretion within the parameters of the investment guidelines specific to that manager. Nationally recognized statistical rating organizations, such as Standards & Poor's (S&P) assign credit ratings to security issues and issuers that indicate a measure of potential credit risk to investors.

The table below presents the unrated debt investments at fair value by credit quality of UMF's investment portfolio as of June 30, 2019 (\$ in thousands):

	2019	S&P rating
<b>Debt securities</b>		
U.S. Treasury securities	\$ 38,132	Unrated
Bond fund, including exchange traded funds	1,321	Unrated
<b>Total debt securities</b>	<b>\$ 39,453</b>	

**Interest Rate Risk** – UMF's Investment Policy and Guidelines Statement establishes targets for the preferred duration of the fixed income component of the investment portfolio by asset class by limiting investments through targeted allocations to different asset classes.

The following table presents the fair value by investment maturity of the unrated debt investments of UMF's investment portfolio as of June 30, 2019 (\$ in thousands):

	2019	Investment maturity
<b>Debt securities</b>		
U.S. Treasury securities	\$ 38,132	1 to 5 years
Bond fund, including exchange traded funds	1,321	1 to 5 years
<b>Total debt securities</b>	<b>\$ 39,453</b>	

**Fair Value Measurement** – Fair value represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. UMF categorize these assets and liabilities measured at fair value using a three-tiered hierarchy based on the valuation methodologies employed. The hierarchy is defined as follows:

**Level 1** – Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that are available at the measurement date.

**Level 2** – Inputs to the valuation methodology include:

- Quoted prices for similar assets or liabilities in active markets;
- Quoted prices for identical or similar assets or liabilities in inactive markets;
- Inputs other than quoted prices that are observable for the asset or liability;
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

**Level 3** – Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

Unobservable inputs reflect the UMF's own assumptions about the inputs market participants would use in pricing the asset or liability (including assumption about risk). Unobservable inputs are developed based on the best information available in the circumstances and may include UMF's own data.

When available, quoted prices are used to determine fair value. When quoted prices in active markets are available, investments are classified within Level 1 of the fair value hierarchy. UMF's Level 1 investments primarily consist of investments in U.S. Treasury obligations, equity securities, and mutual funds. When quoted prices in active markets are not available, fair values are based on evaluated prices received from the UMF's custodian of investments in conjunction with a third party service provider and are reported within Level 2 of the fair value hierarchy. The inputs for Level 2 include, but are not limited to, pricing models such as benchmarking yields, reported trades, broker-dealer quotes, issuer spreads and benchmarking securities, among others. UMF's Level 2 investments primarily consist of investments in U.S. government and agency obligations, asset-backed securities, and corporate debt securities that did not trade on the UMF's fiscal year end date.

As a practical expedient to estimate the fair value of UMF's interests, certain investments in commingled funds and limited partnerships are reported at the net asset value (NAV) determined by the fund managers. Because these investments are not readily marketable, their estimated fair values may differ from the values that would have been assigned had a ready market for such investments existed, and such differences could be material. As of June 30, 2019, UMF had no plans or intentions to sell such investments at amounts different from NAV.

The following table summarizes the fair value of UMF's investments by type as of June 30, 2019 (\$ in thousands):

	Investments measured at NAV	Investments classified in the fair value hierarchy			
		Level 1	Level 2	Level 3	Total
<b>Money market funds</b>	\$ -	\$ 46,570	\$ -	\$ -	\$ 46,570
<b>Debt securities</b>					
U.S. Treasury securities	-	38,132	-	-	38,132
Bond funds, including exchange traded funds	-	1,321	-	-	1,321
<b>Total debt securities</b>	-	<b>39,453</b>	-	-	<b>39,453</b>
<b>Equity securities</b>					
Domestic equities	-	103,697	-	-	103,697
International equities	-	81,527	-	-	81,527
<b>Total equity securities</b>	-	<b>185,224</b>	-	-	<b>185,224</b>
<b>Alternative investments</b>					
Multi-strategy hedge funds					
Equity	95,244	-	-	-	95,244
Long/short	87,152	-	-	-	87,152
Fixed income	39,278	-	-	-	39,278
Absolute return	27,789	-	-	-	27,789
Real assets	8,174	-	-	-	8,174
Private equity	24,511	-	-	-	24,511
Private debt	18,869	-	-	-	18,869
Private real estate	9,967	-	-	-	9,967
<b>Total alternative investments</b>	<b>310,984</b>	-	-	-	<b>310,984</b>
<b>Other securities</b>	-	<b>15,360</b>	-	-	<b>15,360</b>
<b>Total investments</b>	<b>\$ 310,984</b>	<b>\$ 286,607</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 597,591</b>

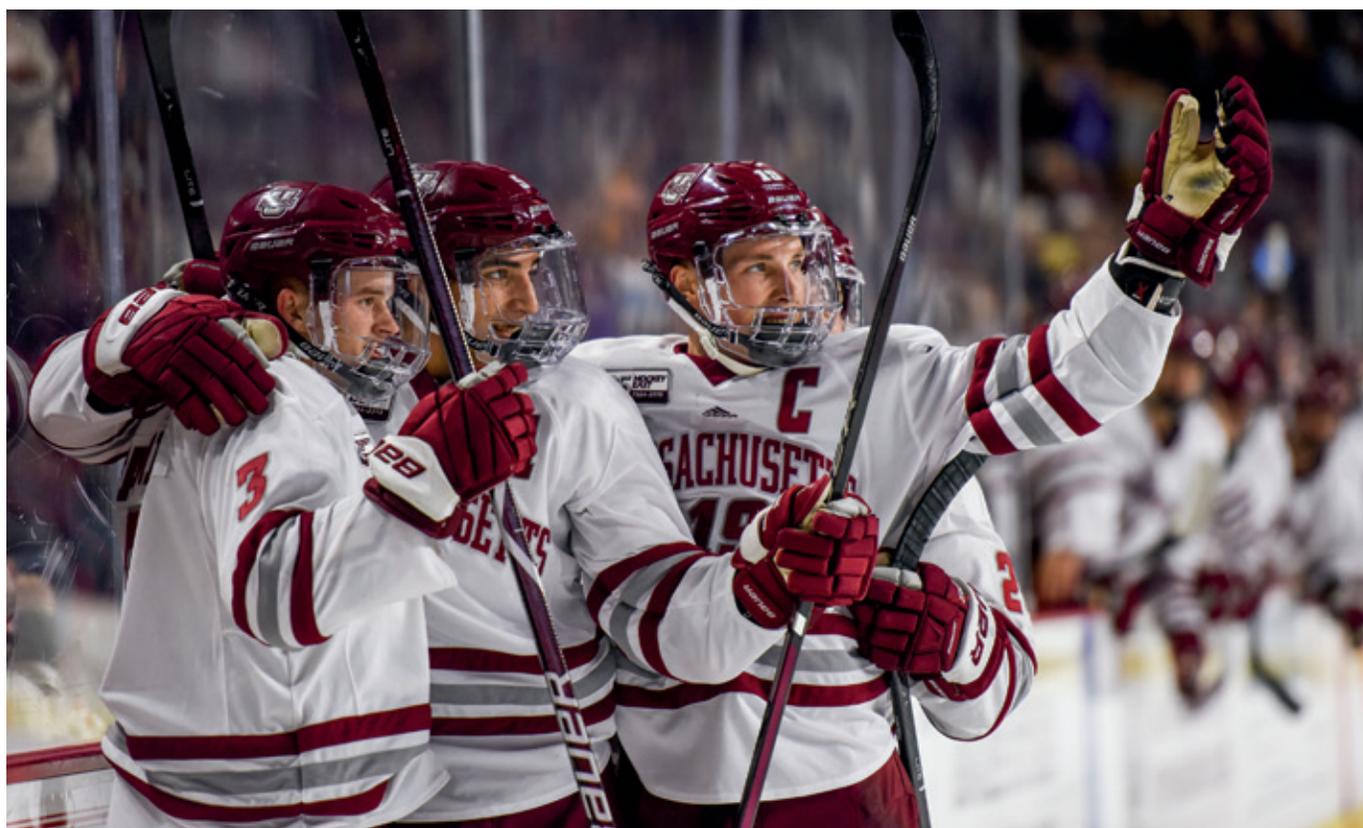
The following table presents unfunded commitments, redemption frequency and notice period for investments that have been valued using NAV as a practical expedient as of June 30, 2019 (\$ in thousands):

	NAV	Unfunded commitments	Redemption terms	Notice period	Redemption restrictions
<b>Alternative investments</b>					
Multi-strategy hedge funds					
Equity	\$ 95,244	\$ -	Daily to quarterly	01–60 days	No lock-up restrictions
Long/short	87,152	10,000	Quarterly to annual	45–80 days	Lock-up provisions range from none to 1 year
Fixed income	39,278	-	Quarterly to annual	30–90 days	Lock-up provisions range from none to 2 years
Absolute return	27,789	-	Daily to annual	45–65 days	No lock-up restrictions
Real assets	8,174	-	Annual	90 days	No lock-up restrictions
Private equity	24,511	19,640	Closed end funds	(1)	Not redeemable
Private debt	18,869	22,177	Closed end funds	(1)	Not redeemable
Private real estate	9,967	3,879	Closed end funds	(1)	Not redeemable
<b>Total</b>	<b>\$ 310,984</b>	<b>\$ 55,696</b>			

(1) UMF has made commitments to various private equity, private debt and private real estate partnerships. UMF expects these funds to be called over the next 1–5 years. Liquidity is expected to be received in the next 1–9 years.

## 19. Subsequent Events

For purposes of determining the effects of subsequent events on these financial statements, management has evaluated events subsequent to June 30, 2019 and through December 18, 2019, the date on which the financial statements were available to be issued, and determined that there were no matters requiring recognition or disclosure in the accompanying financial statements.



# Required Supplementary Information (unaudited)

For the last ten years<sup>1</sup> (\$ in thousands)

## SCHEDULE OF THE UNIVERSITY'S PROPORTIONATE SHARE OF THE NET PENSION LIABILITY MASSACHUSETTS STATE EMPLOYEES' RETIREMENT SYSTEM

	Based on the measurement date				
	6/30/18	6/30/17	6/30/16	6/30/15	6/30/14
University's proportion of the net pension liability	3.09%	3.28%	3.12%	3.59%	3.49%
University's proportionate share of the net pension liability	\$ 409,319	\$ 420,234	\$ 429,871	\$ 408,418	\$ 237,134
University's covered-employee payroll	\$1,242,525	\$1,168,661	\$1,156,082	\$1,139,719	\$1,061,132
University's proportionate share of the net pension liability as a percentage of its covered-employee payroll	32.94%	35.96%	37.18%	35.83%	22.35%
Plan fiduciary net position as a percentage of total pension liability	67.91%	67.21%	63.48%	67.87%	76.32%

## SCHEDULE OF THE UNIVERSITY'S CONTRIBUTIONS MASSACHUSETTS STATE EMPLOYEES' RETIREMENT SYSTEM

	For the fiscal year ended June 30				
	6/30/19	6/30/18	6/30/17	6/30/16	6/30/15
Contractually required contribution	\$35,843	\$28,292	\$25,618	\$22,386	\$22,463
Contributions in relation to the contractually required contribution	(35,843)	(28,292)	(25,618)	(22,386)	(22,463)
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -
University's covered-employee payroll	\$1,247,098	\$1,242,525	\$1,168,661	\$1,156,082	\$1,139,719
Contributions as a percentage of covered-employee payroll	2.87%	2.28%	2.19%	1.94%	1.96%

<sup>1</sup> Until a full ten year trend is compiled, the University is presenting only information for the years for which information is available. See accompanying independent auditor's report.

**SCHEDULE OF THE UNIVERSITY'S PROPORTIONATE SHARE OF THE NET OTHER POSTEMPLOYMENT BENEFITS (OPEB) LIABILITY STATE RETIREES' BENEFIT TRUST**

	Based on the measurement date	
	6/30/18	6/30/17
University's proportion of the net OPEB	4.82%	4.67%
University's proportionate share of the net OPEB	\$ 718,955	\$ 817,357
University's covered-employee payroll	\$ 1,242,525	\$ 1,168,661
University's proportionate share of the net OPEB as a percentage of its covered-employee payroll	57.86%	69.94%
Plan fiduciary net position as a percentage of total OPEB liability	7.38%	4.80%

**SCHEDULE OF THE UNIVERSITY'S CONTRIBUTIONS STATE RETIREES' BENEFIT TRUST**

	For the fiscal year ended June 30	
	6/30/19	6/30/18
Contractually required contribution	\$ 26,137	\$ 21,421
Contributions in relation to the contractually required contribution	(26,137)	(21,421)
Contribution deficiency (excess)	\$ -	\$ -
University's covered-employee payroll	\$ 1,247,098	\$ 1,242,525
Contributions as a percentage of covered-employee payroll	2.10%	1.72%

<sup>1</sup> Until a full ten year trend is compiled, the University is presenting only information for the years for which information is available. See accompanying independent auditor's report.



**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
<b>Research and Development Cluster:</b>					
<b>Agency for International Development:</b>					
National Academy of Sciences	98.001	SB: 2000009509	USAID Foreign Assistance for Programs Overseas	\$ —	425,105
University of California Berkeley	98.001	UCBerkeley/00009687	USAID Foreign Assistance for Programs Overseas	—	62,048
USAID Foreign Assistance for Programs Overseas Total				—	487,153
<b>Education Development Center, Inc.</b>					
Fhi 360	98.U01	GS-10F-0406P	United States Agency for International Development	—	172,370
Tetra Tech, Inc.	98.U03	#4576-01-UMASS Amend #1 1072-1601	United States Agency for International Development United States Agency for International Development	154,848	3,584,410
Agency for International Development Total				—	5,330
				<u>154,848</u>	<u>4,249,263</u>
<b>Department of Agriculture:</b>					
<b>Agricultural Research Service</b>					
Animal and Plant Health Inspection Serv	10.001	Direct	Agricultural Research-Basic and Applied Research	—	231,780
	10.025	Direct	Plant and Animal Disease, Pest Control, and Animal Care	—	475,668
<b>Center for Produce Safety</b>					
MA Dept of Agricultural Resources	10.170	2019CPS13	Specialty Crop Block Grant Program – Farm Bill	—	20,465
MA Dept of Agricultural Resources	10.170	118-1541	Specialty Crop Block Grant Program – Farm Bill	—	8,909
MA Dept of Agricultural Resources	10.170	AMI70IOOXXXXGO54	Specialty Crop Block Grant Program – Farm Bill	—	5,749
MA Dept of Agricultural Resources	10.170	F15SCBGFMA	Specialty Crop Block Grant Program – Farm Bill	—	3,700
MA Dept of Agricultural Resources	10.170	116-1923	Specialty Crop Block Grant Program – Farm Bill	—	4,674
Specialty Crop Block Grant Program – Farm Bill Total				—	43,497
<b>Rutgers University</b>					
Rutgers University	10.200	2017-34383-27261	Grants for Agricultural Research, Special Research Grants	—	5,998
Rutgers University	10.200	6173-NER17F-SANDLER	Grants for Agricultural Research, Special Research Grants	—	1
Rutgers University	10.200	6184-NER1700H-MADEIRAS	Grants for Agricultural Research, Special Research Grants	—	1,026
Rutgers University	10.200	6185-NER1700H-BRAZEE	Grants for Agricultural Research, Special Research Grants	—	1,494
Grants for Agricultural Research, Special Research Grants Total				—	8,519
<b>National Institute of Food and Agriculture</b>					
National Institute of Food and Agriculture	10.202	Direct	Cooperative Forestry Research	—	330,140
National Institute of Food and Agriculture	10.203	Direct	Payments to Agricultural Experiment Stations Under the Hatch Act	—	2,992,999
National Institute of Food and Agriculture	10.207	Direct	Animal Health and Disease Research	—	11,777
Applied Geosolutions	10.212	2163361025687	Small Business Innovation Research	—	45,055
<b>University of Connecticut</b>					
University of Connecticut	10.215	2017-38640-26915	Sustainable Agriculture Research and Education	—	604
University of Maryland	10.215	60314-QI 643204	Sustainable Agriculture Research and Education	—	9,095
University of Vermont	10.215	2017-38640-26915	Sustainable Agriculture Research and Education	—	16,226
University of Vermont	10.215	2018-38640-28415	Sustainable Agriculture Research and Education	—	4,047
University of Vermont	10.215	LNE15-340-29994	Sustainable Agriculture Research and Education	4,490	40,795
University of Vermont	10.215	LNE18-365-32231	Sustainable Agriculture Research and Education	18,379	34,965
University of Vermont	10.215	LNE19-393R-b-33243	Sustainable Agriculture Research and Education	—	2,828
University of Vermont	10.215	SARE SNE17-04-31064	Sustainable Agriculture Research and Education	—	7,724
Sustainable Agriculture Research and Education Total				22,869	116,284
<b>U.S. Department of Agriculture</b>					
U.S. Department of Agriculture	10.217	Direct	Higher Education – Institution Challenge Grants Program	—	3,754
Cornell University	10.304	80289-10778	Homeland Security-Agricultural	—	29,570
Rutgers University	10.309	2018-51181-28383	Specialty Crop Research Initiative	—	52,175
<b>National Institute of Food and Agriculture</b>					
National Institute of Food and Agriculture	10.310	Direct	Agriculture and Food Research Initiative (AFRI)	243,535	2,216,240
Cornell University	10.310	2018-67017-27827	Agriculture and Food Research Initiative (AFRI)	—	44,101
Cornell University	10.310	79943-I 0841	Agriculture and Food Research Initiative (AFRI)	—	78,708
Cornell University	10.310	80019-10850	Agriculture and Food Research Initiative (AFRI)	—	55,700
Louisiana State University	10.310	LSU PO 0000019947	Agriculture and Food Research Initiative (AFRI)	—	38,404
North Carolina State University	10.310	2015-68004-23179	Agriculture and Food Research Initiative (AFRI)	—	63,896
University of Illinois	10.310	2015-07319-01	Agriculture and Food Research Initiative (AFRI)	—	42,569
University of Wisconsin	10.310	649K950	Agriculture and Food Research Initiative (AFRI)	—	2,279
World Farmers	10.310	World Farmers NIFA	Agriculture and Food Research Initiative (AFRI)	—	10,563
Agriculture and Food Research Initiative (AFRI) Total				243,535	2,552,460
<b>National Institute of Food and Agriculture</b>					
National Institute of Food and Agriculture	10.328	Direct	National Food Safety Training, Education, Extension, Outreach, and Technical Assistance Competitive Grants Program	54,271	168,309
<b>National Institute of Food and Agriculture</b>					
National Institute of Food and Agriculture	10.329	Direct	Crop Protection and Pest Management Competitive Grants Program	—	160,487
Cornell University	10.329	73984-11014	Crop Protection and Pest Management Competitive Grants Program	—	16,813
Cornell University	10.329	73984-0394	Crop Protection and Pest Management Competitive Grants Program	—	12,848
CT Agricultural Experiment Station	10.329	CAES-2016-34947-1	Crop Protection and Pest Management Competitive Grants Program	—	12,580
CT Agricultural Experiment Station	10.329	CAES-PP-2015-10	Crop Protection and Pest Management Competitive Grants Program	—	(71)
University of Maryland	10.329	30430-25750002	Crop Protection and Pest Management Competitive Grants Program	—	7,881
Crop Protection and Pest Management Competitive Grants Program Total				—	210,538

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
MA Dept of Transitional Assistance	10.331	WEL 4400 3081 UMS 16A	Food Insecurity Nutrition Incentive Grants Program	\$ —	(21,815)
U.S. Department of Agriculture	10.458	Direct	Crop Insurance Education in Targeted States	42,925	168,594
U.S. Forest Service	10.652	Direct	Forestry Research	—	340,615
MA Dept of Conservation and Recreation	10.664	118-0349	Cooperative Forestry Assistance	—	(21)
MA Dept of Conservation and Recreation	10.664	118-0447	Cooperative Forestry Assistance	—	4,735
MA Dept of Conservation and Recreation	10.664	4CTDCR3760CUMASSUNIV	Cooperative Forestry Assistance	36,367	92,466
Cooperative Forestry Assistance Total				<u>36,367</u>	<u>97,180</u>
U.S. Forest Service	10.680	Direct	Forest Health Protection	10,000	87,414
U.S. Forest Service	10.693	Direct	Watershed Restoration and Enhancement Agreement Authority	—	(930)
U.S. Forest Service	10.699	Direct	Partnership Agreements	—	194,698
Natural Resources Conserv Services	10.902	Direct	Soil and Water Conservation	—	54,293
University of Rhode Island	10.902	68-3A75-17-480	Soil and Water Conservation	—	3,854
Soil and Water Conservation Total				<u>—</u>	<u>58,147</u>
Agricultural Research Service	10.U01	Direct – ARS-NAA-1931-01	Department of Agriculture	—	2,500
Agricultural Research Service	10.U02	Direct – ARS 913067	Department of Agriculture	—	2,500
U.S. Department of Agriculture	10.U03	Direct – 14-JV-11242306-117	Department of Agriculture	—	4,504
U.S. Forest Service	10.U04	Direct – FS 16-JV-11330140-050	Department of Agriculture	—	12,409
U.S. Forest Service	10.U05	Direct – FS 18-JV-11242307-083 MOD 003	Department of Agriculture	—	30,719
U.S. Forest Service	10.U06	Direct – FS 15-JV-11242307-097	Department of Agriculture	—	49,620
World Farmers	10.U07	2015-05075	Department of Agriculture	—	9,809
Department of Agriculture Total				<u>409,967</u>	<u>8,308,489</u>
Department of Commerce:					
National Oceanic and Atmospheric Admin	11.011	Direct	Ocean Exploration	—	33,737
University of Washington	11.011	UWSC9353	Ocean Exploration	—	30,597
Ocean Exploration Total				<u>—</u>	<u>64,334</u>
NE Reg Assoc of Coastal Ocean Observ Sys	11.012	A008-005	Integrated Ocean Observing System (IOOS)	—	111,145
NE Reg Assoc of Coastal Ocean Observ Sys	11.012	A009-005	Integrated Ocean Observing System (IOOS)	—	35,202
Rutgers University	11.012	5931	Integrated Ocean Observing System (IOOS)	—	67,990
Rutgers University	11.012	6170	Integrated Ocean Observing System (IOOS)	—	84,434
Integrated Ocean Observing System (IOOS) Total				<u>—</u>	<u>298,771</u>
Massachusetts Institute of Technology	11.417	5710003903	Sea Grant Support	—	339
Massachusetts Institute of Technology	11.417	5710004070	Sea Grant Support	—	(62)
Massachusetts Institute of Technology	11.417	5710004254	Sea Grant Support	—	11,954
Massachusetts Institute of Technology	11.417	85496	Sea Grant Support	—	28,232
Massachusetts Institute of Technology	11.417	NA180AR4170105	Sea Grant Support	—	1,451
Massachusetts Institute of Technology	11.417	S447 / PO 150170	Sea Grant Support	—	87,887
Massachusetts Institute of Technology	11.417	S4699	Sea Grant Support	—	66,710
Massachusetts Institute of Technology	11.417	S4647/ PO 204805	Sea Grant Support	—	27,508
Woods Hole Oceanographic Institution	11.417	A101312	Sea Grant Support	—	39,775
Woods Hole Oceanographic Institution	11.417	A101382	Sea Grant Support	—	19,080
Sea Grant Support Total				<u>—</u>	<u>282,874</u>
Woods Hole Oceanographic Institution	11.419	WHOI A101336	Coastal Zone Management Administration Awards	—	137,378
National Oceanic and Atmospheric Admin	11.427	Direct	Fisheries Development and Utilization Research and Development Grants and Cooperative Agreements Program	20,281	151,251
MA Division of Marine Fisheries	11.427	26181	Fisheries Development and Utilization Research and Development Grants and Cooperative Agreements Program	—	3,972
Nature Conservancy	11.427	MA041117G	Fisheries Development and Utilization Research and Development Grants and Cooperative Agreements Program	—	33,977
Fisheries Development and Utilization Research and Development Grants and Cooperative Agreements Program Total				<u>20,281</u>	<u>189,200</u>
National Oceanic and Atmospheric Admin	11.431	Direct	Climate and Atmospheric Research	16,288	65,310
Columbia University	11.431	4GG012355	Climate and Atmospheric Research	—	47,005
Gulf of Maine Research Institute	11.431	10-COCAMS-17 UMassD	Climate and Atmospheric Research	—	159,438
Woods Hole Oceanographic Institution	11.431	A101376	Climate and Atmospheric Research	—	63,992
Climate and Atmospheric Research Total				<u>16,288</u>	<u>335,745</u>

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
Global Science and Technology, Inc.	11.432	SA16-UMB01	National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes	\$ —	1,397
Woods Hole Oceanographic Institution	11.432	A101176	National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes	—	76,980
Woods Hole Oceanographic Institution	11.432	A101257	National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes	—	89,900
National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes Total				—	168,277
National Oceanic and Atmospheric Admin	11.454	Direct	Unallied Management Projects	—	2,878
University of California Los Angeles	11.459	NA18OAR4590396	Weather and Air Quality Research	—	18,862
National Oceanic and Atmospheric Admin	11.463	Direct	Habitat Conservation	—	90,405
National Oceanic and Atmospheric Admin	11.472	Direct	Unallied Science Program	10,202	87,066
Gulf of Maine Research Institute	11.472	10BFTMSE17SMASST	Unallied Science Program	—	51,332
MA Division of Marine Fisheries	11.472	26882	Unallied Science Program	—	32,024
Unallied Science Program Total				10,202	170,422
NE Reg Assoc of Coastal Ocean Observ Sys	11.478	A010-005	Center for Sponsored Coastal Ocean Research-Coastal Ocean Program	—	5,889
National Oceanic and Atmospheric Admin	11.482	Direct	Coral Reef Conservation Program	—	(175)
National Institute of Standards and Technology	11.609	Direct	Measurement and Engineering Research and Standards	—	108,973
University of Texas at San Antonio	11.609	1000002047	Measurement and Engineering Research and Standards	—	89,063
Measurement and Engineering Research and Standards Total				—	198,036
National Institute of Standards and Technology	11.619	Direct	Arrangements for Interdisciplinary Research Infrastructure	—	(2,411)
University of Delaware	11.619	PAA 12/12/2018	Arrangements for Interdisciplinary Research Infrastructure	—	62,529
University of Delaware	11.619	PAA effective 8/1/2018	Arrangements for Interdisciplinary Research Infrastructure	—	95,321
University of Delaware	11.619	SB: PC.1-0-12	Arrangements for Interdisciplinary Research Infrastructure	—	167,361
Arrangements for Interdisciplinary Research Infrastructure Total				—	322,800
American Institute For Research	11.U01	GS-10F-0112J/DOC44PAPT1511328	Department of Commerce & NOAA	—	40,000
Earth Networks, Inc.	11.U02	1181135	Department of Commerce & NOAA	—	16,566
Earth Networks, Inc.	11.U03	EA-133W-16-CQ-0054	Department of Commerce & NOAA	—	77,850
Global Science and Technology, Inc.	11.U04	SA15-UOM01	Department of Commerce & NOAA	—	136
Global Science and Technology, Inc.	11.U05	ST-1330-17-CQ-0050	Department of Commerce & NOAA	—	285,086
National Institute of Standards and Technology	11.U06	Direct – NIST 70NANB18H258	Department of Commerce & NOAA	—	80,193
National Oceanic and Atmospheric Admin	11.U07	Direct – EE-133F-15-SE-1587	Department of Commerce & NOAA	—	4,120
Department of Commerce Total				46,771	2,789,647
<b>Department of Defense:</b>					
Defense Logistics Agency	12.002	Direct	Procurement Technical Assistance For Business Firms	—	296,805
Solid State Scientific Corporation	12.116	W911NF-14-P-0024	Department of Defense Appropriation Act of 2003	—	(539)
Air Force Civil Engineer Center	12.130	Direct	Estuary Habitat Restoration Program	—	39,390
Air Force Research Laboratory	12.300	Direct	Basic and Applied Scientific Research	875,180	1,676,525
Naval Research Laboratory	12.300	Direct	Basic and Applied Scientific Research	—	(2,458)
Office of Naval Research	12.300	Direct	Basic and Applied Scientific Research	1,062,685	4,301,170
U.S. Army Corps of Engineers	12.300	Direct	Basic and Applied Scientific Research	—	(26)
Arizona State University	12.300	Subaward 16-971	Basic and Applied Scientific Research	—	39,978
Boston University	12.300	450002614	Basic and Applied Scientific Research	—	163,321
Carnegie Mellon University	12.300	1140207-403544	Basic and Applied Scientific Research	—	171,892
Carnegie Mellon University	12.300	1150139-354945	Basic and Applied Scientific Research	—	171,337
Hypres, Inc.	12.300	N00014-16-1-2291	Basic and Applied Scientific Research	—	32,793
Basic and Applied Scientific Research Total				1,937,865	6,554,532
U.S. Army CCDC Soldier Center	12.340	Direct	Naval Medical Research and Development	—	51,082
Defense Threat Reduction Agency	12.351	Direct	Scientific Research – Combating Weapons of Mass Destruction	45,925	137,927
Lawrence Livermore National Lab-U-California	12.351	Direct	Scientific Research – Combating Weapons of Mass Destruction	—	20,909
Scientific Research – Combating Weapons of Mass Destruction Total				45,925	158,836
U.S. Department of the Army	12.420	Direct	Military Medical Research and Development	891,223	3,359,096
U.S. Department of Defense	12.420	Direct	Military Medical Research and Development	68,193	2,195,209
Charles River Analytics	12.420	W81XWH-17-C-0205	Military Medical Research and Development	—	48,057
Harvard School of Public Health	12.420	W81XWH-17-0692	Military Medical Research and Development	—	326,891
Henry M. Jackson Foundation	12.420	SB: 857395 PO: 3170	Military Medical Research and Development	—	322,048
Massachusetts General Hospital	12.420	W81XWH-17-1-0212	Military Medical Research and Development	—	28,266

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
Ocean State Research Institute, Inc.	12.420	W81XWH-16-2-0065	Military Medical Research and Development	\$ —	193,444
The J. David Gladstone Institute	12.420	SB:R2498-A	Military Medical Research and Development	—	71,995
Vivonics, Inc.	12.420	Pr:W81XWH-17-C-0006 \ SB: 212-S003	Military Medical Research and Development	—	2,961
Military Medical Research and Development Total				<u>959,416</u>	<u>6,547,967</u>
U.S. Department of the Army	12.431	Direct	Basic Scientific Research	751,648	6,113,327
Office of Naval Research	12.431	Direct	Basic Scientific Research	30,000	120,674
Brown University	12.431	00000822	Basic Scientific Research	—	26,811
Colorado School of Mines	12.431	401300-5801 PO# 180471	Basic Scientific Research	—	74,224
Cornell University	12.431	66220-9902	Basic Scientific Research	—	12,352
Duke University	12.431	313-0589	Basic Scientific Research	—	526,021
H F Webster Engineering Services, Inc.	12.431	W911NF-15-2-0034	Basic Scientific Research	—	48,745
Montana State University	12.431	G 167-1 7-W623 3	Basic Scientific Research	—	75,170
National Inst of Aerospace	12.431	8503-UMASS	Basic Scientific Research	—	63,261
Northeastern University	12.431	504081-78050B	Basic Scientific Research	—	16,792
Northeastern University	12.431	504108-78056	Basic Scientific Research	—	52,385
Northeastern University	12.431	504109-78055	Basic Scientific Research	—	571,546
Northeastern University	12.431	W911NF-15-2-0026	Basic Scientific Research	—	492,390
Raytheon BBN Technologies Corp	12.431	13765021	Basic Scientific Research	—	245,504
University of Liverpool	12.431	Collaboration Agreement dated 10/3/17	Basic Scientific Research	—	103,906
University of Maryland	12.431	W911NF1810146	Basic Scientific Research	—	171,185
University of Missouri	12.431	Sub# C00045065-1	Basic Scientific Research	—	167,674
University of Southern California	12.431	SB: 112635750	Basic Scientific Research	—	804
Worcester Polytechnic Institute	12.431	16-TMP-00-215461	Basic Scientific Research	—	476,116
Worcester Polytechnic Institute	12.431	215464	Basic Scientific Research	—	86
Yale University	12.431	CON80000152 C17J12516 (J00255)	Basic Scientific Research	—	21,142
Basic Scientific Research Total				<u>781,648</u>	<u>9,380,115</u>
Air Force Research Laboratory	12.630	Direct	Basic, Applied, and Advanced Research in Science and Engineering	—	(3,999)
Office of Naval Research	12.630	Direct	Basic, Applied, and Advanced Research in Science and Engineering	—	103,463
U.S. Army CCDC Soldier Center	12.630	Direct	Basic, Applied, and Advanced Research in Science and Engineering	26,478	830,775
Advanced Functional Fabrics of America	12.630	Exhibit 1-B Task Order 001	Basic, Applied, and Advanced Research in Science and Engineering	—	41,946
Advanced Functional Fabrics of America	12.630	Exhibit 1-E Task Order 004	Basic, Applied, and Advanced Research in Science and Engineering	—	75,666
Advanced Functional Fabrics of America	12.630	Exhibit 1-D Task Order 003	Basic, Applied, and Advanced Research in Science and Engineering	—	249,603
Advanced Functional Fabrics of America	12.630	W15QKN-16-3-0001	Basic, Applied, and Advanced Research in Science and Engineering	—	61,228
IBM Corporation	12.630	PO 5005129637	Basic, Applied, and Advanced Research in Science and Engineering	—	328,521
University of Illinois	12.630	088831-16647	Basic, Applied, and Advanced Research in Science and Engineering	—	431,281
Basic, Applied, and Advanced Research in Science and Engineering Total				<u>26,478</u>	<u>2,118,484</u>
U.S. Department of the Air Force	12.800	Direct	Air Force Defense Research Sciences Program	90,257	1,064,939
Brown University	12.800	FA95501810214	Air Force Defense Research Sciences Program	—	187,965
Massachusetts Institute of Technology	12.800	5710003633	Air Force Defense Research Sciences Program	—	88,161
Massachusetts Institute of Technology	12.800	5710004252	Air Force Defense Research Sciences Program	—	32,658
MIT Lincoln Laboratory	12.800	FA8702-15-D-0001	Air Force Defense Research Sciences Program	—	7,043
University of Rhode Island	12.800	SB: 0005427/102316	Air Force Defense Research Sciences Program	—	172,209
Air Force Defense Research Sciences Program Total				<u>90,257</u>	<u>1,552,975</u>
Solid State Scientific Corporation	12.810	SB: 1805-01	Air Force Medical Research and Development	—	26,250
National Security Agency	12.905	Direct	CyberSecurity Core Curriculum	87,637	87,637
Defense Adv Research Projects Agency	12.910	Direct	Research and Technology Development	—	795,640
Spawar Systems Center Pacific	12.910	Direct	Research and Technology Development	365,621	671,197
U.S. Department of Interior	12.910	Direct	Research and Technology Development	—	254,180
U.S. Department of the Army	12.910	Direct	Research and Technology Development	—	172,377
California Institute of Technology	12.910	75-1097879	Research and Technology Development	—	214,791
Lowell Digisonde International, LLC	12.910	LDI20181212-1	Research and Technology Development	—	25,994
Massachusetts Institute of Technology	12.910	Sub# 26991	Research and Technology Development	—	199,628
Research and Technology Development Total				<u>365,621</u>	<u>2,333,807</u>
Air Force Research Laboratory	12.U01	Direct – FA9453-18-C-0056	Department of Defense	—	318,448
Aptima Inc	12.U02	N89335-18-C-0334	Department of Defense	—	37,500
Azimuth Corporation	12.U03	117-0365	Department of Defense	—	10,169
BAE Systems	12.U04	990090	Department of Defense	—	39,156
BAE Systems	12.U05	PO# 961574	Department of Defense	—	(4,194)
Boston Engineering	12.U06	N00024-16-P-4097	Department of Defense	—	15,279
Boston Engineering	12.U07	27791	Department of Defense	—	25,300
Charles River Analytics	12.U08	SC1623301	Department of Defense	—	399,059

UNIVERSITY OF MASSACHUSETTS  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
DCS Corp	12.U09	PO 161511	Department of Defense	\$ —	7,448
Defense Adv Research Projects Agency	12.U10	Direct – N65236-16-C-8002	Department of Defense	—	163,512
Defense Adv Research Projects Agency	12.U11	Direct – IPA #237	Department of Defense	—	305,569
Dynetics, Inc.	12.U12	CM002014	Department of Defense	—	31,224
Energy Research Consultants	12.U13	FA865 0-1 6-C-2723	Department of Defense	—	75,250
Engility Corporation	12.U14	14463-PETTT	Department of Defense	—	3,031
First RF Corporation	12.U15	FA8650-18-P-1716	Department of Defense	—	19,926
FTL Labs Corporation	12.U16	D16PC00092	Department of Defense	—	19,070
FTL Labs Corporation	12.U17	W81XWH18C0324	Department of Defense	—	63,233
H F Webster Engineering Services, Inc.	12.U18	W911QX16C0024	Department of Defense	—	51,399
Karagozian & Case	12.U20	Subcontract# UML2360.000	Department of Defense	—	91,789
Lowell Digisonde International, LLC	12.U21	LDI20151027-1	Department of Defense	—	138,324
Lowell Digisonde International, LLC	12.U22	LDI20170613-1	Department of Defense	—	31,328
MA Development Finance Agency	12.U23	MOU Dated 10/16/2017	Department of Defense	—	353,086
National Security Information Associates	12.U24	Subcontract Agreement N4000001	Department of Defense	—	183,858
Nextflex	12.U25	Development Agreement dated 10/3/16	Department of Defense	—	(1,814)
Nextflex	12.U26	Development Agreement dated 2/1/2017	Department of Defense	21,070	147,125
Nextflex	12.U27	FA8650-15-2-5401	Department of Defense	141,168	450,885
Novateur Research Solutions LLC	12.U28	FA8651-18-P-0058	Department of Defense	—	44,452
Photon Spot, Inc	12.U29	702-1	Department of Defense	—	(228)
Prosensing Inc	12.U30	FA8750-18-C-0118	Department of Defense	—	34,306
Raytheon BBN Technologies Corp	12.U31	14720 POF 9500013529	Department of Defense	—	138,568
Raytheon BBN Technologies Corp	12.U32	14775	Department of Defense	—	265,253
Raytheon Company	12.U33	PO 4201645039	Department of Defense	—	16,501
Raytheon Company	12.U34	PO 4201472189	Department of Defense	—	19,362
Raytheon Company	12.U35	PO# 4201267819 / Contract 20150270	Department of Defense	—	(6,060)
Raywatch	12.U36	FA8051-17-C-0003	Department of Defense	—	71,567
SI2 Technologies, Inc.	12.U37	S12-2017-3041-001	Department of Defense	—	(7,432)
SI2 Technologies, Inc.	12.U38	SI2-2016-2068-001	Department of Defense	—	(319)
SI2 Technologies, Inc.	12.U39	SI2-2017-2084-002	Department of Defense	—	86,236
SI2 Technologies, Inc.	12.U40	SI2-2016-2081-001	Department of Defense	—	12,433
SI2 Technologies, Inc.	12.U41	N68335-16-C-0045/2068-500 (option 2)	Department of Defense	—	19,286
SI2 Technologies, Inc.	12.U42	N68335-16-C-0045/2068-300 (Option 1)	Department of Defense	—	58,552
Silicon Space Technology	12.U43	FA9453-09-C0029	Department of Defense	—	5,720
Spero Devices, Inc.	12.U44	D17PC00304	Department of Defense	—	239,549
SRI International	12.U45	N6600118C4044	Department of Defense	—	179,338
State University of NY at Binghamton	12.U46	82004/1148148-3	Department of Defense	—	66,918
Stevens Institute of Technology	12.U47	W15QKN18D0040	Department of Defense	—	112,395
Stevens Institute of Technology	12.U48	2102662-03	Department of Defense	—	31,048
Systems & Technology Research	12.U49	2014-1047	Department of Defense	—	67,206
Technology Assessment and Transfer, Inc.	12.U50	7001-01	Department of Defense	—	30,744
Teqnovations LLC	12.U51	702-1	Department of Defense	—	1,616
Teqnovations LLC	12.U52	N68335-17-C-0058	Department of Defense	—	130,122
Triton Systems, Inc.	12.U53	TSI-2505-17-106772	Department of Defense	—	(1,804)
Triton Systems, Inc.	12.U54	TSI-2522-17-106658	Department of Defense	—	15,521
Triton Systems, Inc.	12.U55	TSI-2527-17-106660	Department of Defense	—	8,518
Triton Systems, Inc.	12.U56	TSI-2538-17-107125	Department of Defense	—	(10,695)
Triton Systems, Inc.	12.U57	TSI-2544-18-107350	Department of Defense	—	34,310
Triton Systems, Inc.	12.U58	TSI-2580-19-108911	Department of Defense	—	8,052
Triton Systems, Inc.	12.U59	TSI-2559-18-107931	Department of Defense	—	18,667
U.S. Army Corps of Engineers	12.U60	Direct – W912HQ-14-C-0035 P00006	Department of Defense	13,101	78,889
U.S. Army Corps of Engineers	12.U61	Direct – W912HQ-12-C-0035	Department of Defense	(511)	(511)
U.S. Army Corps of Engineers	12.U62	Direct – W912HQ-15-C-0052	Department of Defense	213,003	363,104
U.S. Department of the Army	12.U64	Direct – W911W5-16-C-0006	Department of Defense	—	3,631,529
University of California San Francisco	12.U65	SC-2017-SABER-013-0002	Department of Defense	—	3,121
University of Memphis	12.U66	A17-090-S002	Department of Defense	—	70,812
University of Southern California	12.U67	89341790	Department of Defense	—	133,765
University of Southern California	12.U68	94671240	Department of Defense	—	199,638
U.S. Army CCDC Soldier Center	12.U69	Direct – RSA	Department of Defense	—	2,418
U.S. Army CCDC Soldier Center	12.U70	Direct – W911QY-16-P-0235	Department of Defense	—	5,809
U.S. Army CCDC Soldier Center	12.U71	Direct – W911QY-18-P-0029	Department of Defense	—	24,944
<b>Department of Defense Total</b>				<b>4,682,678</b>	<b>38,325,521</b>

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
Department of Education:					
U.S. Department of Education	84.021	Direct	Overseas Program – Group Projects Abroad	\$ 42,444	117,124
U.S. Department of Education	84.022	Direct	Overseas Programs – Doctoral Dissertation Research Abroad	—	28,740
Association on Higher Ed and Disability	84.116	P116D150005	Fund for the Improvement of Postsecondary Education	—	57,247
U.S. Department of Education	84.200	Direct	Graduate Assistance in Areas of National Need	—	256,961
City of Lowell, Public Schools	84.215	PO# 18003767	Innovative Approaches to Literacy, Full-service Community Schools; and Promise Neighborhoods	—	5,786
City of Lowell, Public Schools	84.215	PO# 19003834-00	Innovative Approaches to Literacy, Full-service Community Schools; and Promise Neighborhoods	—	16,945
Innovative Approaches to Literacy, Full-service Community Schools; and Promise Neighborhoods Total				—	22,731
U.S. Department of Education	84.229	Direct	Language Resource Centers	—	79,879
Nebraska Department of Education	84.235	1745132	Rehabilitation Services Demonstration and Training Programs	—	19,994
Nebraska Department of Education	84.235	H235N15004	Rehabilitation Services Demonstration and Training Programs	—	61,663
Rehabilitation Services Demonstration and Training Programs Total				—	81,657
MA Charter Public School Association	84.282	115-0299	Charter Schools	—	2,999
U.S. Department of Education	84.305	Direct	Education Research, Development and Dissemination	—	215
University of Southern California	84.305	104806502	Education Research, Development and Dissemination	—	48,765
Education Research, Development and Dissemination Total				—	48,980
U.S. Department of Education	84.324	Direct	Research in Special Education	66,374	242,130
U.S. Department of Education	84.325	Direct	Special Education – Personnel Development to Improve Services and Results for Children with Disabilities	—	1,309,728
Jackson State University	84.325	Sub No. 2017-631554UMB	Special Education – Personnel Development to Improve Services and Results for Children with Disabilities	—	8,091
Salus University	84.325	H325H140002	Special Education – Personnel Development to Improve Services and Results for Children with Disabilities	—	12,225
Salus University	84.325	H325H140002-18	Special Education – Personnel Development to Improve Services and Results for Children with Disabilities	—	15,825
Special Education – Personnel Development to Improve Services and Results for Children with Disabilities Total				—	1,345,869
U.S. Department of Education	84.335	Direct	Child Care Access Means Parents in School	—	99,922
Boston Plan for Excellence	84.336	U336S14088	Teacher Quality Partnership Grants	—	(53,830)
MA Dept of Elementary & Secondary Ed	84.366	150-009-7-1261-R	Mathematics and Science Partnerships	—	6
MA Dept of Elementary & Secondary Ed	84.366	150-162119-2018-1261	Mathematics and Science Partnerships	90,261	181,275
Mathematics and Science Partnerships Total				90,261	181,281
National Writing Project	84.367	92-MA01-SEED2017-ILI	Supporting Effective Instruction State Grants (formerly Improving Teacher Quality State Grants)	—	3,465
National Writing Project	84.367	94-MA02-SEED2017-PSC	Supporting Effective Instruction State Grants (formerly Improving Teacher Quality State Grants)	—	11,325
National Writing Project	84.367	94-MA02-SEED2018-C3WPPD	Supporting Effective Instruction State Grants (formerly Improving Teacher Quality State Grants)	—	18,155
National Writing Project	84.367	U367D150004	Supporting Effective Instruction State Grants (formerly Improving Teacher Quality State Grants)	—	4,234
Supporting Effective Instruction State Grants (formerly Improving Teacher Quality State Grants) Total				—	37,179
U.S. Department of Education	84.407	Direct	Transition Programs for Students with Intellectual Disabilities into Higher Education	317,880	2,330,315
U.S. Department of Education	84.411	Direct	Education Innovation and Research (formerly Investing in Innovation (i3) Fund)	65,782	327,065
Department of Education Total				582,741	5,206,249
Department of Energy:					
Argonne National Labs	81.036	Direct	Inventions and Innovations	—	10,424
U.S. Department of Energy	81.049	Direct	Office of Science Financial Assistance Program	624,642	5,129,073
Innosense LLC	81.049	DE-SC0017166	Office of Science Financial Assistance Program	—	265,919
Marine Biological Laboratory	81.049	DE-SC0019142	Office of Science Financial Assistance Program	—	43,688
Marine Biological Laboratory	81.049	MBL: 47812	Office of Science Financial Assistance Program	—	(5,671)
Product Innovation and Engineering	81.049	08012017	Office of Science Financial Assistance Program	—	68,254
Stanford University	81.049	61322281-123421	Office of Science Financial Assistance Program	—	71,725
University of Delaware	81.049	37776	Office of Science Financial Assistance Program	—	26,633
University of Delaware	81.049	48467	Office of Science Financial Assistance Program	—	36,682
University of Delaware	81.049	DE-SC0001004	Office of Science Financial Assistance Program	—	37,146
University of Nevada	81.049	117GC000056	Office of Science Financial Assistance Program	—	50,177
University of North Carolina	81.049	DE-SC0015376-002	Office of Science Financial Assistance Program	—	813
Office of Science Financial Assistance Program Total				624,642	5,724,439

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
U.S. Department of Energy	81.057	Direct	University Coal Research	\$ —	40,785
Michigan Technological University	81.086	1502062Z1	Conservation Research and Development	—	69,989
University of Tennessee	81.086	PA16-0349-4.6-01	Conservation Research and Development	—	74,228
Conservation Research and Development Total				—	144,217
U.S. Department of Energy	81.087	Direct	Renewable Energy Research and Development	297	84,743
Enorasy LLC	81.087	DE-EE008388	Renewable Energy Research and Development	—	35,471
Littoral Power Systems, Inc	81.087	LPS-001	Renewable Energy Research and Development	—	2,001
Renewable Energy Research and Development Total				297	122,215
U.S. Department of Energy	81.104	Direct	Environmental Remediation and Waste Processing and Disposal	275,000	424,385
U.S. Department of Energy	81.112	Direct	Stewardship Science Grant Program	—	132,364
U.S. Department of Energy	81.117	Direct	Energy Efficiency and Renewable Energy Information Dissemination, Outreach, Training and Technical Analysis/Assistance	—	297,834
Pace University	81.117	DE-EE0008277	Energy Efficiency and Renewable Energy Information Dissemination, Outreach, Training and Technical Analysis/Assistance	—	165,811
Energy Efficiency and Renewable Energy Information Dissemination, Outreach, Training and Technical Analysis/Assistance Total				—	463,645
U.S. Department of Energy	81.121	Direct	Nuclear Energy Research, Development and Demonstration	219,018	297,370
Battelle Energy Alliance, LLC	81.121	202080	Nuclear Energy Research, Development and Demonstration	—	61,219
Nuclear Energy Research, Development and Demonstration Total				219,018	358,589
Massachusetts Institute of Technology	81.135	571000-4079	Advanced Research Projects Agency – Energy	—	34,172
UHV Technologies, Inc.	81.135	Subaward dated 8/30/2017	Advanced Research Projects Agency – Energy	—	56,148
Advanced Research Projects Agency – Energy Total				—	90,320
Alliance for Sustainability, LLC	81.U01	XEJ-8-70303-01	Department of Energy	—	7,609
Argonne National Labs	81.U02	Direct – 7F-30047	Department of Energy	—	13,074
Argonne National Labs	81.U03	Direct – 8F-30061	Department of Energy	—	9,812
Bechtel Marine Propulsion Corp	81.U04	PO# 7013868	Department of Energy	—	9,136
Brookhaven National Laboratory	81.U05	Direct – 357998	Department of Energy	—	21,457
Brookhaven National Laboratory	81.U06	Direct – 118-1215	Department of Energy	—	77,894
Brookhaven National Laboratory	81.U07	Direct – 359408	Department of Energy	—	20,453
Brookhaven National Laboratory	81.U08	Direct – 330349	Department of Energy	—	(1)
Brookhaven National Laboratory	81.U09	Direct – 233969	Department of Energy	—	251,672
Brookhaven National Laboratory	81.U10	Direct – 361472	Department of Energy	—	4,511
Brookhaven National Laboratory	81.U11	Direct – 349004	Department of Energy	—	60,291
Honeywell Aerospace	81.U12	N000295938	Department of Energy	—	9,979
Honeywell Aerospace	81.U13	N000295388	Department of Energy	—	67,671
Honeywell International Inc	81.U14	N000242948	Department of Energy	—	9,041
Honeywell International Inc	81.U15	N000295388	Department of Energy	—	43,730
Honeywell International Inc	81.U16	N000266033	Department of Energy	—	17,622
Lawrence Berkeley National Lab U-California	81.U17	Direct – 7457694	Department of Energy	—	56,290
Lawrence Livermore National Lab U-California	81.U18	Direct – B635267	Department of Energy	—	1,431
National Renewable Energy Lab	81.U19	Direct -XAT-6-62163-01	Department of Energy	—	77,138
Oak Ridge National Laboratory	81.U20	Direct – 4000135366	Department of Energy	—	13,299
Oak Ridge National Laboratory	81.U21	Direct – 4000136881	Department of Energy	—	(19,909)
Pacific Northwest National Laboratory	81.U22	Direct – 325324	Department of Energy	—	28,364
Sandia National Labs	81.U23	Direct – 1868840	Department of Energy	—	78,296
Sandia National Labs	81.U24	Direct – 1666643-REV 3	Department of Energy	—	92,719
Sandia National Labs	81.U25	Direct – 1770246	Department of Energy	—	23,947
U.S. Atlas	81.U26	336326	Department of Energy	—	8,790
UT-Battelle LLC	81.U27	4000158644	Department of Energy	—	11,419
Department of Energy Total				1,118,957	8,507,118
Department of Health and Human Services:					
U.S. Dept of Health and Human Services	93.048	Direct	Special Programs for the Aging-Title IV-and Title II-Discretionary Projects	—	288,616
Centers for Disease Control & Prevention	93.065	Direct	Laboratory Leadership, Workforce Training and Management Development, Improving Public Health Laboratory Infrastructure	—	278,628
Centers for Disease Control & Prevention	93.068	Direct	Chronic Diseases: Research, Control, and Prevention	—	650,374
MA Dept of Developmental Services	93.072	HHS-2010-AQA-LR-1018	Lifespan Respite Care Program	—	148,524

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
American Thrombosis & Hemostasis Network	93.080	ATHN2015001-1-2	Blood Disorder Program: Prevention, Surveillance, and Research	\$ —	13,579
Boston Children's Hospital	93.080	SB:GENFD0001454367	Blood Disorder Program: Prevention, Surveillance, and Research	—	21,677
Blood Disorder Program: Prevention, Surveillance, and Research Total				—	35,256
Harvard Pilgrim Health Care, Inc.	93.084	U54CK000484	Prevention of Disease, Disability, and Death by Infectious Diseases	—	17,710
U.S. Dept of Health and Human Services	93.103	Direct	Food and Drug Administration-Research	—	57,426
U.S. Food and Drug Administration	93.103	Direct	Food and Drug Administration-Research	—	(4,748)
MA Dept of Agricultural Resources	93.103	U18FD005904	Food and Drug Administration-Research	—	34,762
University of Vermont	93.103	FD005686	Food and Drug Administration-Research	—	10,609
Food and Drug Administration-Research Total				—	98,049
Health Resources Service Administration	93.107	Direct	Area Health Education Centers	497,176	711,973
Health Resources Service Administration	93.110	Direct	Maternal and Child Health Federal Consolidated Programs	388,607	1,040,810
Boston Children's Hospital	93.110	6 T73MC000202402 / PO# 0001204102	Maternal and Child Health Federal Consolidated Programs	—	9,407
Boston Children's Hospital	93.110	6T73MC00020-26-01	Maternal and Child Health Federal Consolidated Programs	—	126,320
Icahn School of Medicine at Mount Sinai	93.110	SB: 0253-6546-4609	Maternal and Child Health Federal Consolidated Programs	—	31,748
Langston University	93.110	Sub# LU 5-17047-1 / PO# P0078505	Maternal and Child Health Federal Consolidated Programs	—	8,223
Maternal and Child Health Federal Consolidated Programs Total				388,607	1,216,508
National Institutes of Health	93.113	Direct	Environmental Health	164,688	3,103,402
Harvard Pilgrim Health Care, Inc.	93.113	Sub No. PH000552B	Environmental Health	—	31,689
University of Vermont	93.113	3 1292SUB52223	Environmental Health	—	21,754
Environmental Health Total				164,688	3,156,845
National Institutes of Health	93.121	Direct	Oral Diseases and Disorders Research	—	697,529
Brigham and Women's Hospital	93.121	114810	Oral Diseases and Disorders Research	—	(1,253)
George Washington University	93.121	18-M45	Oral Diseases and Disorders Research	—	26,230
Ohio State University	93.121	RD1DE025447	Oral Diseases and Disorders Research	—	15,734
University of California	93.121	SB: 8871sc	Oral Diseases and Disorders Research	—	(1,304)
University of California San Francisco	93.121	SB: 9502SC	Oral Diseases and Disorders Research	—	210
University of Rochester	93.121	416663-G	Oral Diseases and Disorders Research	—	111
Oral Diseases and Disorders Research Total				—	737,257
Centers for Disease Control & Prevention	93.135	Direct	Centers for Research and Demonstration for Health Promotion and Disease Prevention	—	864,739
Dartmouth College	93.135	SB: 1614	Centers for Research and Demonstration for Health Promotion and Disease Prevention	—	(582)
Centers for Research and Demonstration for Health Promotion and Disease Prevention Total				—	864,157
MA Department of Public Health	93.136	INTF3401M03700115043	Injury Prevention and Control Research and State and Community Based Programs	—	(205)
MA Department of Public Health	93.136	INTF3401M03181228065	Injury Prevention and Control Research and State and Community Based Programs	—	89,643
Injury Prevention and Control Research and State and Community Based Programs Total				—	89,438
National Inst of Envir Health Sciences	93.142	Direct	NIEHS Hazardous Waste Worker Health and Safety Training	590,874	1,329,809
Health Resources Service Administration	93.145	Direct	HIV-Related Training and Technical Assistance	1,690,729	2,231,003
Rutgers University	93.145	6 U1O HA 28686-03-04	HIV-Related Training and Technical Assistance	58,439	73,393
HIV-Related Training and Technical Assistance Total				1,749,168	2,304,396
Lawrence Berkeley National Lab U-California	93.172	Direct	Human Genome Research	—	59,839
National Institutes of Health	93.172	Direct	Human Genome Research	—	423,083
National Human Genome Research Institute	93.172	Direct	Human Genome Research	1,316,798	3,384,097
BioSpyder Technologies, Inc	93.172	2 R44HG008917	Human Genome Research	—	109,603
The Broad Institute	93.172	SB: 500530-550000908	Human Genome Research	—	29,213
Human Genome Research Total				1,316,798	4,005,835
National Institutes of Health	93.173	Direct	Research Related to Deafness and Communication Disorders	97,832	1,268,819
National Inst on Deafness & Oth Com Dis	93.173	Direct	Research Related to Deafness and Communication Disorders	469	59,109
University of Utah	93.173	PR: 1U01DC014706 / SB: 10041913-030	Research Related to Deafness and Communication Disorders	—	189
Research Related to Deafness and Communication Disorders Total				98,301	1,328,117
Health Resources Service Administration	93.178	Direct	Nursing Workforce Diversity	—	8,012
Capital Consulting Corporation	93.186	CCC/HRSA Prize Phase 1	National Research Service Award in Primary Care Medicine	—	4,089

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
National Institutes of Health	93.213	Direct	Research and Training in Complementary and Integrative Health	\$ —	102,737
National Ctr for Complement & Int Health	93.213	Direct	Research and Training in Complementary and Integrative Health	237,996	897,853
Brown University	93.213	1 UH2 AT008145-02	Research and Training in Complementary and Integrative Health	—	142,257
University of California San Francisco	93.213	SB: 9560sc	Research and Training in Complementary and Integrative Health	—	28,087
Yale University	93.213	5 UG3 AT009767	Research and Training in Complementary and Integrative Health	—	36,076
Yale University	93.213	SB: GR101638 (CON-80001057)	Research and Training in Complementary and Integrative Health	—	18,865
<b>Research and Training in Complementary and Integrative Health Total</b>				<b>237,996</b>	<b>1,225,875</b>
Agency for Healthcare Research & Quality	93.226	Direct	Research on Healthcare Costs, Quality and Outcomes	294,669	1,352,170
Boston University	93.226	1R01HS026485-01	Research on Healthcare Costs, Quality and Outcomes	—	17,278
Harvard Pilgrim Health Care, Inc.	93.226	R18HS021424	Research on Healthcare Costs, Quality and Outcomes	—	(133)
Ohio State University	93.226	1 R01 HS022694	Research on Healthcare Costs, Quality and Outcomes	—	22,008
University of California Irvine	93.226	SB: 2015-3033	Research on Healthcare Costs, Quality and Outcomes	—	11,331
University of Utah	93.226	SB: 10045701-02	Research on Healthcare Costs, Quality and Outcomes	—	46,305
Yale University	93.226	2U18HS016978	Research on Healthcare Costs, Quality and Outcomes	—	291,837
Yale University	93.226	5U18HS016978-12	Research on Healthcare Costs, Quality and Outcomes	—	113,963
Yale University	93.226	Sub# GR101546 (CON-80001090)	Research on Healthcare Costs, Quality and Outcomes	—	41,574
<b>Research on Healthcare Costs, Quality and Outcomes Total</b>				<b>294,669</b>	<b>1,896,333</b>
National Institutes of Health	93.233	Direct	National Center on Sleep Disorders Research	90,483	935,494
Lawrence Berkeley National Lab U-California	93.242	Direct	Mental Health Research Grants	—	79,776
National Institutes of Health	93.242	Direct	Mental Health Research Grants	484,978	1,938,852
National Institute of Mental Health	93.242	Direct	Mental Health Research Grants	927,382	6,348,603
U.S. Dept of Health and Human Services	93.242	Direct	Mental Health Research Grants	271,792	717,337
Boston Children's Hospital	93.242	1R03MH113966-01A1	Mental Health Research Grants	—	16,091
Icahn School of Medicine at Mount Sinai	93.242	SB: 0255-0091-4809	Mental Health Research Grants	—	(449)
Massachusetts General Hospital	93.242	SB: 228314	Mental Health Research Grants	—	83,048
McLean Hospital	93.242	SB: 401122	Mental Health Research Grants	—	24,783
Michigan State University	93.242	SB: RC108066UMASS	Mental Health Research Grants	—	23,068
Praxis, Inc.	93.242	1R41MH116534-01A1	Mental Health Research Grants	21,502	54,530
Praxis, Inc.	93.242	PR: R41 MH113381-01	Mental Health Research Grants	—	11,619
Rand Corporation	93.242	Sub# 9920170094	Mental Health Research Grants	—	5,948
University of Alaska	93.242	UAF 18-0030	Mental Health Research Grants	—	125,211
University of Maryland	93.242	1R01MH113650-01	Mental Health Research Grants	—	30,216
University of North Carolina	93.242	5 U01 MH110925-03	Mental Health Research Grants	—	49,566
University of North Carolina	93.242	SB: 516171	Mental Health Research Grants	—	10,039
University of Southern California	93.242	SB: 91991408	Mental Health Research Grants	—	(51)
Yale University	93.242	5 R01 MH110926-03	Mental Health Research Grants	—	66,678
<b>Mental Health Research Grants Total</b>				<b>1,705,654</b>	<b>9,584,865</b>
Substance Abuse and Mental Health Service Administration	93.243	Direct	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	300,446	1,259,216
Administrative Office of the Trial Court	93.243	SAMSHA Project	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	28,212
Baystate Medical Center, Inc.	93.243	U79 SM063204	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	39,520
Colorado Seminary	93.243	H791U026380/1H79SM060845	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	21,239
Franklin County Sheriff's office	93.243	FCSO 118-1929	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	43,055
MA Department of Public Health	93.243	INTF2330MMSW16007103	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	2,143
MA Department of Public Health	93.243	INTF2400H78500224280	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	71,490
MA Department of Public Health	93.243	INTF4107H78500224088	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	96,509
MA Department of Public Health	93.243	SCDMH822018084030000	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	83,102
University of California Regents	93.243	1647 G UA158	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	189,247
Washington State Dept of Soc & Hlth Svcs	93.243	1765-16812	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	8,355
Washington State Health Care Authority	93.243	H79SM061705	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	14,112
<b>Substance Abuse and Mental Health Services-Projects of Regional and National Significance Total</b>				<b>300,446</b>	<b>1,856,200</b>
Health Resources Service Administration	93.247	Direct	Advanced Nursing Education Workforce Grant Program	347,595	721,061
Centers for Disease Control & Prevention	93.262	Direct	Occupational Safety and Health Program	297,936	974,633
National Inst for Occupational Safety&Health	93.262	Direct	Occupational Safety and Health Program	283,197	1,321,459
Harvard School of Public Health	93.262	2017-2018 ERC Pilot Project	Occupational Safety and Health Program	—	1,685
Johns Hopkins University	93.262	2 U54 OH007542	Occupational Safety and Health Program	—	37,419
The Ctr for Construction Resear & Train	93.262	3001-607-01	Occupational Safety and Health Program	—	210,412
The Mary Imogene Bassett Hospital	93.262	2 U54 OH007542-17	Occupational Safety and Health Program	—	43,171
The Mary Imogene Bassett Hospital	93.262	5U54OH007542-18 UML3	Occupational Safety and Health Program	—	118,700
<b>Occupational Safety and Health Program Total</b>				<b>581,133</b>	<b>2,707,479</b>

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
Boston Children's Hospital	93.266	GENFD0001358193	Health Systems Strengthening and HIV/AIDS Prevention, Care and Treatment under the President's Emergency Plan for AIDS Relief	\$ —	20,670
National Institutes of Health	93.273	Direct	Alcohol Research Programs	68,609	1,195,492
National Inst on Alco Abuse & Alcoholism	93.273	Direct	Alcohol Research Programs	61,541	3,948,610
Brown University	93.273	Sub# 00000856	Alcohol Research Programs	—	13,823
Cleveland Clinic Foundation	93.273	U01 AA021893-05	Alcohol Research Programs	—	(5,460)
Praxis, Inc.	93.273	1 R41 AA026751-01A1	Alcohol Research Programs	—	70,460
Signablok, Inc.	93.273	1R34AA024355-01A1	Alcohol Research Programs	—	(3,407)
Tridium, Inc.	93.273	5 R42 AA022035-05	Alcohol Research Programs	6,723	287,608
University of Wisconsin Madison	93.273	SB:848K186	Alcohol Research Programs	—	30,341
Alcohol Research Programs Total				<u>136,873</u>	<u>5,537,467</u>
National Institutes of Health	93.279	Direct	Drug Abuse and Addiction Research Programs	—	728,963
National Institute on Drug Abuse	93.279	Direct	Drug Abuse and Addiction Research Programs	300,311	3,797,487
Baystate Medical Center, Inc.	93.279	BayState 18-207	Drug Abuse and Addiction Research Programs	—	51,801
Brigham and Women's Hospital	93.279	SB: 119349	Drug Abuse and Addiction Research Programs	—	25,980
Brown University	93.279	Sub# 00001061	Drug Abuse and Addiction Research Programs	—	31,170
Hennepin Healthcare Research Institute	93.279	115184-1	Drug Abuse and Addiction Research Programs	—	141,455
Kaiser Foundation Research Institute	93.279	SB: RMC200340-MPCI-01	Drug Abuse and Addiction Research Programs	—	5,240
Kaiser Foundation Research Institute	93.279	Sub:RNG209779-MPCI-01	Drug Abuse and Addiction Research Programs	—	96,391
Miriam Hospital	93.279	SB: 7109993EP	Drug Abuse and Addiction Research Programs	—	6,085
National Develop and Research Institutes	93.279	Project #6420	Drug Abuse and Addiction Research Programs	—	(135)
Oregon Social Learning Center, Inc.	93.279	1 R01 DA041425-01	Drug Abuse and Addiction Research Programs	—	383,706
University of California Regents	93.279	5 U24 DA041123-02	Drug Abuse and Addiction Research Programs	—	40,083
University of Colorado at Denver	93.279	Subaward: FY18.893.001	Drug Abuse and Addiction Research Programs	—	32,517
University of Wisconsin Madison	93.279	7R01DA041641-02	Drug Abuse and Addiction Research Programs	—	24,835
Virginia Polytechnic Inst and State Univ	93.279	432096-19340	Drug Abuse and Addiction Research Programs	—	31,185
Virginia Polytechnic Inst and State Univ	93.279	5R01 DA036017-05	Drug Abuse and Addiction Research Programs	—	809
Drug Abuse and Addiction Research Programs Total				<u>300,311</u>	<u>5,397,572</u>
University of South Carolina	93.283	SB: 17-3249	Centers for Disease Control and Prevention-Investigations and Technical Assistance	—	(14,702)
National Institutes of Health	93.286	Direct	Discovery and Applied Research for Technological Innovations to Improve Human Health	373,429	1,655,594
National Heart, Lung & Blood Institute	93.286	Direct	Discovery and Applied Research for Technological Innovations to Improve Human Health	—	384,232
National Inst of Biomed Imag & Bioengrng	93.286	Direct	Discovery and Applied Research for Technological Innovations to Improve Human Health	1,474,577	2,911,637
Montana State University	93.286	G173-15-W5173	Discovery and Applied Research for Technological Innovations to Improve Human Health	—	99,384
Stanford University	93.286	Subaward No. 60812904-108947 (Amendment 3)	Discovery and Applied Research for Technological Innovations to Improve Human Health	—	12,007
University of Memphis	93.286	5-40312	Discovery and Applied Research for Technological Innovations to Improve Human Health	—	119,451
Worcester Polytechnic Institute	93.286	SB: 18-211110-01	Discovery and Applied Research for Technological Innovations to Improve Human Health	—	103,567
Discovery and Applied Research for Technological Innovations to Improve Human Health Total				<u>1,848,006</u>	<u>5,285,872</u>
National Institutes of Health	93.307	Direct	Minority Health and Health Disparities Research	162,616	661,676
National Inst on Minority & Health Disparities	93.307	Direct	Minority Health and Health Disparities Research	99,363	737,874
New York University School of Medicine	93.307	R01 MD013769-01	Minority Health and Health Disparities Research	—	15,799
Minority Health and Health Disparities Research Total				<u>261,979</u>	<u>1,415,349</u>
National Institutes of Health	93.310	Direct	Trans-NIH Research Support	788,799	3,774,003
National Ctr Advancing Translational Science	93.310	Direct	Trans-NIH Research Support	224,980	1,292,009
National Heart, Lung & Blood Institute	93.310	Direct	Trans-NIH Research Support	65,648	574,921
National Inst of Envir Health Sciences	93.310	Direct	Trans-NIH Research Support	—	864,269
National Inst of General Medical Science	93.310	Direct	Trans-NIH Research Support	—	38,961
National Institute on Drug Abuse	93.310	Direct	Trans-NIH Research Support	96,998	451,371
NIH-Office of the Director	93.310	Direct	Trans-NIH Research Support	—	117,385
Harvard Pilgrim Health Care, Inc.	93.310	PH000615E	Trans-NIH Research Support	—	10,846
Henry Ford Health System	93.310	SB: B11170UMMS	Trans-NIH Research Support	1,191,169	1,469,981
University of California Irvine	93.310	SB: 2015-3290	Trans-NIH Research Support	—	26,024
University of Delaware	93.310	47942	Trans-NIH Research Support	—	42,851
University of North Carolina	93.310	5 UG3 OD023348	Trans-NIH Research Support	—	328,269
University of Southern California	93.310	109717882	Trans-NIH Research Support	—	67,283
Trans-NIH Research Support Total				<u>2,367,594</u>	<u>9,058,173</u>
Centers for Disease Control & Prevention	93.318	Direct	Protecting and Improving Health Globally: Building and Strengthening Public Health Impact, Systems, Capacity and Security	1,226,363	2,921,200
National Institutes of Health	93.350	Direct	National Center for Advancing Translational Sciences	—	438,620
National Ctr Advancing Translational Sci	93.350	Direct	National Center for Advancing Translational Sciences	561,139	4,140,591

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
Boston Medical Center	93.350	1 U01 TR002070-03	National Center for Advancing Translational Sciences	\$ —	69,167
Rithim Biologics, Inc.	93.350	SB: UMASS-01	National Center for Advancing Translational Sciences	—	24,265
University of Alabama	93.350	SB: 000508606-014	National Center for Advancing Translational Sciences	—	52,732
University of Pittsburgh	93.350	PR: SUL1TR001857 / SB:005533 (130910-46)	National Center for Advancing Translational Sciences	—	116,708
National Center for Advancing Translational Sciences Total				<u>561,139</u>	<u>4,842,083</u>
National Institutes of Health	93.351	Direct	Research Infrastructure Programs	—	278,023
NIH-Office of the Director	93.351	Direct	Research Infrastructure Programs	24,735	845,826
Jackson Laboratory	93.351	Research Infrastructure Programs	Research Infrastructure Programs	—	24,009
The Broad Institute	93.351	540000054	Research Infrastructure Programs	—	1,496
Research Infrastructure Programs Total				<u>24,735</u>	<u>1,149,354</u>
Geisinger Medical Center	93.353	SB:646018UOM02	21st Century Cures Act – Beau Biden Cancer Moonshot	—	22,870
Health Resources Service Administration	93.358	Direct	Advanced Education Nursing Traineeships	—	15,613
University of Florida	93.360	SB: UFDSPP0011615	Biomedical Advanced Research and Development Authority (BARDA), Biodefense Medical Countermeasure Development	—	43,751
National Institutes of Health	93.361	Direct	Nursing Research	56,421	674,121
National Institute of Nursing Research	93.361	Direct	Nursing Research	422	293,601
Brigham and Women's Hospital	93.361	SB: 117914	Nursing Research	—	81,817
Brigham and Women's Hospital	93.361	SB:119958	Nursing Research	—	22,331
Rhode Island Hospital	93.361	5 R01 NR014782-05	Nursing Research	—	29,021
Rush University Medical Center	93.361	SB: 12101001-Sub01	Nursing Research	—	16,470
Temple University	93.361	259909-UMASS	Nursing Research	—	9,594
Nursing Research Total				<u>56,843</u>	<u>1,126,955</u>
National Institutes of Health	93.393	Direct	Cancer Cause and Prevention Research	777,747	1,597,250
National Cancer Institute	93.393	Direct	Cancer Cause and Prevention Research	183,744	2,333,584
Boston University	93.393	4500001969	Cancer Cause and Prevention Research	—	15,634
Boston University	93.393	R01 CA181392-02	Cancer Cause and Prevention Research	—	260,880
Harvard School of Public Health	93.393	111170-5081524	Cancer Cause and Prevention Research	—	44,472
Tridium, Inc.	93.393	SB: SBC Project	Cancer Cause and Prevention Research	—	122,908
University of Pennsylvania	93.393	565706 PO#4237153	Cancer Cause and Prevention Research	—	31,244
University of Wisconsin	93.393	173405330	Cancer Cause and Prevention Research	—	97,290
Wake Forest University	93.393	SB: WFUNHS114040	Cancer Cause and Prevention Research	—	108,750
Cancer Cause and Prevention Research Total				<u>961,491</u>	<u>4,612,012</u>
National Institutes of Health	93.394	Direct	Cancer Detection and Diagnosis Research	—	97,244
National Cancer Institute	93.394	Direct	Cancer Detection and Diagnosis Research	174,114	479,313
University of Arkansas System	93.394	U24 CA215109	Cancer Detection and Diagnosis Research	—	123,980
Worcester Polytechnic Institute	93.394	SB: 14-210730-02	Cancer Detection and Diagnosis Research	—	4,931
Cancer Detection and Diagnosis Research Total				<u>174,114</u>	<u>705,468</u>
National Institutes of Health	93.395	Direct	Cancer Treatment Research	—	271,734
National Cancer Institute	93.395	Direct	Cancer Treatment Research	419,887	1,573,271
American College of Radiology	93.395	1 U24 CA180803	Cancer Treatment Research	—	445,527
American College of Radiology	93.395	1 U24 CA18083-04	Cancer Treatment Research	—	426,935
American College of Radiology	93.395	1612	Cancer Treatment Research	—	597,096
Children's Hospital of Philadelphia	93.395	SB: AALL1131	Cancer Treatment Research	—	20,029
Children's Hospital of Philadelphia	93.395	U10CA0180886	Cancer Treatment Research	—	25,349
Ernest Pharmaceuticals LLC	93.395	118-0998	Cancer Treatment Research	—	7,717
Massachusetts General Hospital	93.395	SB: 234120	Cancer Treatment Research	—	53,442
Northwestern University	93.395	5 R01 CA219013	Cancer Treatment Research	—	6,330
Purdue University	93.395	Sub No. 4102-74345	Cancer Treatment Research	—	31,168
University of Virginia	93.395	Cancer Treatment Rsch Project	Cancer Treatment Research	—	85,921
Cancer Treatment Research Total				<u>419,887</u>	<u>3,544,519</u>
National Institutes of Health	93.396	Direct	Cancer Biology Research	399,672	1,110,337
National Cancer Institute	93.396	Direct	Cancer Biology Research	18,504	2,205,931
Beckman Research Institute City of Hope	93.396	1 R21 CA205106-01	Cancer Biology Research	—	28,972
Beckman Research Institute City of Hope	93.396	R21CA205106	Cancer Biology Research	—	17,495
Massachusetts General Hospital	93.396	SB: Z29519	Cancer Biology Research	—	91,025
Mayo Clinic Rochester	93.396	5 R01 CA136526-08	Cancer Biology Research	—	7,952
Sage Bionetworks	93.396	CSBCUMAZ017	Cancer Biology Research	—	5,337
Cancer Biology Research Total				<u>418,176</u>	<u>3,467,049</u>

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
National Institutes of Health	93.397	Direct	Cancer Centers Support Grants	\$ —	2,132,001
Indiana University	93.397	IN4687560UMAS	Cancer Centers Support Grants	—	20,661
Indiana University	93.397	IN4687567UMASS	Cancer Centers Support Grants	—	24,548
Indiana University	93.397	IN4687577UMASS	Cancer Centers Support Grants	—	19,037
Northwestern University	93.397	SB: 6003974 UM	Cancer Centers Support Grants	—	104,452
Cancer Centers Support Grants Total				—	2,300,699
National Institutes of Health	93.398	Direct	Cancer Research Manpower	—	61,768
National Cancer Institute	93.398	Direct	Cancer Research Manpower	—	913,194
Dana Farber Cancer Institute	93.398	Sub# 1156001	Cancer Research Manpower	—	62,922
Cancer Research Manpower Total				—	1,037,884
National Assoc of Chronic Disease Directors	93.421	NU38OT000286	Strengthening Public Health Systems and Services through National Partnerships to Improve and Protect the Nation's Health	—	58,683
Assoc of Maternal & Child Health Program	93.424	1-U38-OT000140-03	NON-ACA/PPHF-Building Capacity of the Public Health System to Improve Population Health through National Nonprofit Organizations	—	8,899
National Institute on Disability & Rehab Res	93.433	Direct	ACL National Institute on Disability, Independent Living, and Rehabilitation Research	—	955
U.S. Dept of Health and Human Services	93.433	Direct	ACL National Institute on Disability, Independent Living, and Rehabilitation Research	291,623	2,520,537
Brandeis University	93.433	90DPGE0001-01-03-00	ACL National Institute on Disability, Independent Living, and Rehabilitation Research	—	15,583
FTL Labs Corporation	93.433	90BISB0007-01-00	ACL National Institute on Disability, Independent Living, and Rehabilitation Research	—	15,469
Langston University	93.433	90ARST0001	ACL National Institute on Disability, Independent Living, and Rehabilitation Research	—	3,581
Langston University	93.433	90RTST0001-01-00	ACL National Institute on Disability, Independent Living, and Rehabilitation Research	—	122,055
TransCen, Inc.	93.433	90RT5034-02-00	ACL National Institute on Disability, Independent Living, and Rehabilitation Research	—	101,191
University of Medicine & Dentistry of NJ	93.433	SB: 8094	ACL National Institute on Disability, Independent Living, and Rehabilitation Research	—	(40,214)
University of Minnesota	93.433	90RTCP0003-01	ACL National Institute on Disability, Independent Living, and Rehabilitation Research	—	53,356
ACL National Institute on Disability, Independent Living, and Rehabilitation Research Total				291,623	2,792,513
MA Rehabilitation Commission	93.464	ISAMRCMASSMTCHUMS19A	ACL Assistive Technology	—	46,729
Boston University	93.516	4500001666	Public Health Training Centers Program	—	42,091
Boston University	93.516	4500002782	Public Health Training Centers Program	—	26,099
Public Health Training Centers Program Total				—	68,190
Children's Friend and Service	93.600	EHSCCP-Eval-001	Head Start	—	(820)
MA Developmental Disabilities Council	93.630	ADD010019G18CS221ACSNF	Developmental Disabilities Basic Support and Advocacy Grants	—	15,918
Texas Council Developmental Disabilities	93.630	SB: 19113-Rochford	Developmental Disabilities Basic Support and Advocacy Grants	3,848	8,362
Developmental Disabilities Basic Support and Advocacy Grants Total				3,848	24,280
U.S. Dept of Health and Human Services	93.632	Direct	University Centers for Excellence in Developmental Disabilities Education, Research, and Service	20,000	512,447
Boston Children's Hospital	93.632	90DD00013-04-00, PO# 0000704943	University Centers for Excellence in Developmental Disabilities Education, Research, and Service	5,000	36,009
Boston Children's Hospital	93.632	90DDUC0059-01-00	University Centers for Excellence in Developmental Disabilities Education, Research, and Service	10,000	328,169
Boston Children's Hospital	93.632	90DDUC0059-01-01	University Centers for Excellence in Developmental Disabilities Education, Research, and Service	—	21,303
Georgetown University	93.632	412687_GR412564-UMB	University Centers for Excellence in Developmental Disabilities Education, Research, and Service	—	7,219
University Centers for Excellence in Developmental Disabilities Education, Research, and Service Total				35,000	905,147
Centers for Medicare & Medicaid Services	93.638	Direct	ACA-Transforming Clinical Practice Initiative: Practice Transformation Networks (PTNs)	1,871,197	7,672,649
MA Executive Office of Hlth & Human Svc	93.644	1 F1 CM331436-01-00	Adult Medicaid Quality: Improving Maternal and Infant Health Outcomes in Medicaid and CHIP	—	34,813
Community Mental Health Assoc Michigan	93.788	/Project MI-REP-STR	Opioid STR	—	16,888
MA Dept of Public Health, BSAS	93.788	H79TI081717	Opioid STR	—	2,643
MA Dept of Public Health, BSAS	93.788	INTF2400H78500224399	Opioid STR	—	2,643
Opioid STR Total				—	22,174
Massachusetts General Hospital	93.817	SB: 233381	Hospital Preparedness Program (HPP) Ebola Preparedness and Response Activities	—	48,602
National Institutes of Health	93.837	Direct	Cardiovascular Diseases Research	329,610	744,253
National Heart, Lung & Blood Institute	93.837	Direct	Cardiovascular Diseases Research	2,032,671	10,010,045
Augusta University	93.837	32623-1	Cardiovascular Diseases Research	—	192,054
Boston University	93.837	SB: 4500003030	Cardiovascular Diseases Research	—	8,672
Boston University	93.837	SB: 4500002987	Cardiovascular Diseases Research	—	15,621
Boston University	93.837	SB: 4500002295	Cardiovascular Diseases Research	—	133,093
Brigham and Women's Hospital	93.837	113892	Cardiovascular Diseases Research	—	35,871
FocalCool LLC	93.837	R43-NS095573-01A1	Cardiovascular Diseases Research	—	28,284
Harvard Medical School	93.837	1R01HL126896-01A1	Cardiovascular Diseases Research	—	189,821

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
Illinois Institute of Technology	93.837	SB: SA557-0614-8907	Cardiovascular Diseases Research	\$ —	322,831
Massachusetts General Hospital	93.837	SB: 226216	Cardiovascular Diseases Research	—	25,698
Massachusetts General Hospital	93.837	SB: 230189	Cardiovascular Diseases Research	—	175,451
Massachusetts Institute of Technology	93.837	PR: 1R01HL140471 SB: S4581 PO 164251	Cardiovascular Diseases Research	—	255,264
Mobile Sense Technologies, Inc.	93.837	SB: 1R43HI135961-01A1-MST01	Cardiovascular Diseases Research	—	17,968
New England Research Institute, Inc.	93.837	SB: CT1500024	Cardiovascular Diseases Research	—	14,918
Texas Tech University	93.837	SB: 21F128-02	Cardiovascular Diseases Research	—	10,215
The General Hospital Corporation	93.837	R01HL143070	Cardiovascular Diseases Research	—	71,391
University of Rochester	93.837	SB: 416917-G	Cardiovascular Diseases Research	—	154,721
University of Rochester	93.837	SB: 417046G UR FAO GR500479	Cardiovascular Diseases Research	—	5,129
University of Utah	93.837	SB: 10023730-01	Cardiovascular Diseases Research	—	(2,370)
University of Wisconsin	93.837	PR: 1R01HL139883 SB: 830K513	Cardiovascular Diseases Research	—	217,096
Washington University	93.837	WU-18-434	Cardiovascular Diseases Research	—	57,069
Yale University	93.837	GR100590	Cardiovascular Diseases Research	—	46,829
Cardiovascular Diseases Research Total				<u>2,362,281</u>	<u>12,729,924</u>
National Heart, Lung & Blood Institute	93.838	Direct	Lung Diseases Research	—	2,604,971
Wayne State University	93.838	Lung Disease Project	Lung Diseases Research	—	17,393
Baystate Medical Center, Inc.	93.838	FED705-17120-1	Lung Diseases Research	—	40,327
The University of Texas at Tyler	93.838	U01HL133536	Lung Diseases Research	—	15,885
Lung Diseases Research Total				<u>—</u>	<u>2,678,576</u>
National Institutes of Health	93.839	Direct	Blood Diseases and Resources Research	274,580	549,477
National Heart, Lung & Blood Institute	93.839	Direct	Blood Diseases and Resources Research	359,492	1,237,977
Cleveland Clinic Foundation	93.839	SB: 1097S UB	Blood Diseases and Resources Research	—	99,816
L2 Diagnostics LLC	93.839	1 R41AI134497	Blood Diseases and Resources Research	—	52,470
University of Florida	93.839	SB: UFDSPP0011731	Blood Diseases and Resources Research	—	168,975
Blood Diseases and Resources Research Total				<u>634,072</u>	<u>2,108,715</u>
National Heart, Lung & Blood Institute	93.840	Direct	Translation and Implementation Science Research for Heart, Lung, Blood Diseases, and Sleep Disorders	223,178	434,509
Harvard School of Public Health	93.840	111267-5108404	Translation and Implementation Science Research for Heart, Lung, Blood Diseases, and Sleep Disorders	—	24,207
Health Strategy and Policy Institute	93.840	5 U01 HL138631	Translation and Implementation Science Research for Heart, Lung, Blood Diseases, and Sleep Disorders	—	126,680
Translation and Implementation Science Research for Heart, Lung, Blood Diseases, and Sleep Disorders Total				<u>223,178</u>	<u>585,396</u>
National Institutes of Health	93.846	Direct	Arthritis, Musculoskeletal and Skin Diseases Research	—	990,236
National Inst of Arthritis & Musculoskel	93.846	Direct	Arthritis, Musculoskeletal and Skin Diseases Research	443,284	4,080,153
Brigham and Women's Hospital	93.846	R01AR069557	Arthritis, Musculoskeletal and Skin Diseases Research	—	122,530
Colorado State University	93.846	G-01166-01	Arthritis, Musculoskeletal and Skin Diseases Research	—	40,508
Northwestern University	93.846	5 R01 AR071048	Arthritis, Musculoskeletal and Skin Diseases Research	—	20,775
Purdue University	93.846	Sub No. 4102-85217	Arthritis, Musculoskeletal and Skin Diseases Research	—	59,473
University of Colorado at Denver	93.846	SB: FY15.090.004	Arthritis, Musculoskeletal and Skin Diseases Research	—	19,708
University of Florida	93.846	1 R01AR069660-02	Arthritis, Musculoskeletal and Skin Diseases Research	—	109,686
University of Nevada	93.846	SB: AWD-01-00000392	Arthritis, Musculoskeletal and Skin Diseases Research	—	14,139
University of Pittsburgh	93.846	SB: 0052180 128591-1)	Arthritis, Musculoskeletal and Skin Diseases Research	—	19,291
Weill Cornell Medical College	93.846	SB:191950	Arthritis, Musculoskeletal and Skin Diseases Research	—	137,649
Arthritis, Musculoskeletal and Skin Diseases Research Total				<u>443,284</u>	<u>5,614,148</u>
National Institutes of Health	93.847	Direct	Diabetes, Digestive, and Kidney Diseases Extramural Research	210,479	1,476,748
National Inst of Diab & Digest Kidney Di	93.847	Direct	Diabetes, Digestive, and Kidney Diseases Extramural Research	1,016,910	12,001,473
Benaroya Research Institute at VM	93.847	PR: 5 U01 DK104162 SB: HIRN 2018-5465	Diabetes, Digestive, and Kidney Diseases Extramural Research	—	15,459
Boston Medical Center	93.847	5P30DK046200-25	Diabetes, Digestive, and Kidney Diseases Extramural Research	—	2,996
Boston Children's Hospital	93.847	RSTFD00007000021	Diabetes, Digestive, and Kidney Diseases Extramural Research	—	40,282
George Washington University	93.847	2018-40841	Diabetes, Digestive, and Kidney Diseases Extramural Research	—	83,751
George Washington University	93.847	R01DK100916	Diabetes, Digestive, and Kidney Diseases Extramural Research	—	8,311
Harvard University	93.847	1 DP3 DK111898	Diabetes, Digestive, and Kidney Diseases Extramural Research	—	386,317
Indiana University	93.847	SB#: IN4686892 UMASS	Diabetes, Digestive, and Kidney Diseases Extramural Research	—	76,922
Jackson Laboratory	93.847	210299-0819-02	Diabetes, Digestive, and Kidney Diseases Extramural Research	—	18,465
Joslin Diabetes Center	93.847	SB: PERL Study	Diabetes, Digestive, and Kidney Diseases Extramural Research	—	13,639
Rutgers University	93.847	SB: 5471	Diabetes, Digestive, and Kidney Diseases Extramural Research	—	24,796
Temple University	93.847	Temple 261778-UMass	Diabetes, Digestive, and Kidney Diseases Extramural Research	—	33,438
Tulane University	93.847	5 R01 DK099598-04	Diabetes, Digestive, and Kidney Diseases Extramural Research	—	13,177
University of Alabama	93.847	1U01DK120379	Diabetes, Digestive, and Kidney Diseases Extramural Research	—	27,197
University of Connecticut	93.847	SB: 340439	Diabetes, Digestive, and Kidney Diseases Extramural Research	—	48,749

**UNIVERSITY OF MASSACHUSETTS**  
 Schedule of Expenditures of Federal Awards  
 Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
University of North Carolina	93.847	SB: 510150	Diabetes, Digestive, and Kidney Diseases Extramural Research	\$ —	56,434
University of Wisconsin Madison	93.847	5U54DK104310-05	Diabetes, Digestive, and Kidney Diseases Extramural Research	—	143,467
University of Wisconsin Madison	93.847	Sub# 786K870	Diabetes, Digestive, and Kidney Diseases Extramural Research	—	21,260
Diabetes, Digestive, and Kidney Diseases Extramural Research Total				<u>1,227,389</u>	<u>14,492,881</u>
Auburn University	93.852	R01 NS093941	National Syndromic Surveillance Program Community of Practice (NSSP CoP)	—	176,333
National Institutes of Health	93.853	Direct	Extramural Research Programs in the Neurosciences and Neurological Disorders	482,907	1,032,230
National Inst of Neurolo Disord & Stroke	93.853	Direct	Extramural Research Programs in the Neurosciences and Neurological Disorders	523,828	10,642,416
Beth Israel Deaconess Medical Center	93.853	PR:1R21NS106345 / SB:01060613	Extramural Research Programs in the Neurosciences and Neurological Disorders	—	30,783
Beth Israel Deaconess Medical Center	93.853	U01 NS074425-01	Extramural Research Programs in the Neurosciences and Neurological Disorders	—	1,580
Case Western Reserve University	93.853	SB: RES514091	Extramural Research Programs in the Neurosciences and Neurological Disorders	—	10,588
Genuity, LLC	93.853	RNS100163B	Extramural Research Programs in the Neurosciences and Neurological Disorders	—	201,735
Harvard School of Public Health	93.853	114512-5097014	Extramural Research Programs in the Neurosciences and Neurological Disorders	—	3,486
Harvard University	93.853	SB: 138074-5085856	Extramural Research Programs in the Neurosciences and Neurological Disorders	—	183,059
Massachusetts General Hospital	93.853	1 U10 NS086729-04	Extramural Research Programs in the Neurosciences and Neurological Disorders	—	293
Massachusetts General Hospital	93.853	SB: 229293	Extramural Research Programs in the Neurosciences and Neurological Disorders	—	26,873
Massachusetts General Hospital	93.853	SB:233020	Extramural Research Programs in the Neurosciences and Neurological Disorders	—	4,399
New York University	93.853	F1067-02	Extramural Research Programs in the Neurosciences and Neurological Disorders	—	4,360
Omniox, Inc.	93.853	R44NS076272	Extramural Research Programs in the Neurosciences and Neurological Disorders	—	34,286
Research Foundation of SUNY	93.853	SB: 1131404-74506	Extramural Research Programs in the Neurosciences and Neurological Disorders	—	286,096
Rutgers University	93.853	0818	Extramural Research Programs in the Neurosciences and Neurological Disorders	—	6,905
TCG Inc.	93.853	SB: UM-20160927-01-TCG	Extramural Research Programs in the Neurosciences and Neurological Disorders	—	70,723
University of Cincinnati	93.853	PR: 1U01NS05869 / SB: 010785-133390	Extramural Research Programs in the Neurosciences and Neurological Disorders	—	5,213
University of Colorado at Denver	93.853	Research in Neuroscience & Neuro Dis	Extramural Research Programs in the Neurosciences and Neurological Disorders	—	32,805
University of South Florida	93.853	SB: 6125-1076-00B	Extramural Research Programs in the Neurosciences and Neurological Disorders	—	26,830
Extramural Research Programs in the Neurosciences and Neurological Disorders Total				<u>1,006,735</u>	<u>12,604,660</u>
National Institutes of Health	93.855	Direct	Allergy and Infectious Diseases Research	27,462	1,260,298
National Inst of Allergy & Infec Disease	93.855	Direct	Allergy and Infectious Diseases Research	2,660,345	26,469,692
Albert Einstein College of Medicine	93.855	311501	Allergy and Infectious Diseases Research	—	252,417
Benaroya Research Institute at VM	93.855	SB: FY18ITN291	Allergy and Infectious Diseases Research	—	51,340
Beth Israel Deaconess Medical Center	93.855	SB: 01061236	Allergy and Infectious Diseases Research	—	100,220
Beth Israel Deaconess Medical Center	93.855	SB: 1028929	Allergy and Infectious Diseases Research	—	91,859
Brigham and Women's Hospital	93.855	5 P01 A01073748	Allergy and Infectious Diseases Research	—	272,665
Brown University	93.855	SB: 00001168	Allergy and Infectious Diseases Research	—	179,338
Boston Children's Hospital	93.855	RSTFD000678743	Allergy and Infectious Diseases Research	—	211,644
Dana Farber Cancer Institute	93.855	5 R01 AI052014-17	Allergy and Infectious Diseases Research	—	53,933
Epivax, Inc	93.855	Epivax/Research Agreement	Allergy and Infectious Diseases Research	—	59,149
Harvard Medical School	93.855	1 R01AI136789-01	Allergy and Infectious Diseases Research	—	268,252
Harvard School of Public Health	93.855	Sub# 109708-5064861	Allergy and Infectious Diseases Research	—	52,535
Icahn School of Medicine at Mount Sinai	93.855	SB: 0255-A851-4609	Allergy and Infectious Diseases Research	—	196,929
Johns Hopkins University	93.855	2003004918	Allergy and Infectious Diseases Research	—	44,377
Johns Hopkins University	93.855	SB: 2003433533	Allergy and Infectious Diseases Research	—	19,021
Massachusetts General Hospital	93.855	SB: 223544	Allergy and Infectious Diseases Research	—	26,193
NovaSterilis	93.855	2 R44 AI120282 02	Allergy and Infectious Diseases Research	—	54,695
Ohio State University	93.855	R33AI116180	Allergy and Infectious Diseases Research	—	3,366
Planet Biotechnology, Inc.	93.855	SB: R41 FH-Fc UMASSMED	Allergy and Infectious Diseases Research	—	12,404
Purdue University	93.855	Sub No. 4102-72705	Allergy and Infectious Diseases Research	—	675
SIGMOVIR Biosystems, Inc.	93.855	2 R44 AI109926-04A1	Allergy and Infectious Diseases Research	—	98,856
SIGMOVIR Biosystems, Inc.	93.855	2R42-A1109926-02	Allergy and Infectious Diseases Research	—	88,429
Texas A&M University	93.855	SB: M1803703	Allergy and Infectious Diseases Research	—	250,092
Tufts University	93.855	SB: 101315-00001/HH4165	Allergy and Infectious Diseases Research	—	16,952
University of Alabama	93.855	SB: 000503587-001	Allergy and Infectious Diseases Research	—	129,584
University of California Regents	93.855	PR: 5 UM1 AI110498-04 \ SB:10154sc	Allergy and Infectious Diseases Research	—	50
University of California San Diego	93.855	SB:91397157	Allergy and Infectious Diseases Research	—	152,687
University of California San Francisco	93.855	PRE - 119-0200p1	Allergy and Infectious Diseases Research	—	9,849
University of California San Francisco	93.855	SB: 10249sc	Allergy and Infectious Diseases Research	—	12,007
University of California San Francisco	93.855	SB: 10250sc	Allergy and Infectious Diseases Research	—	48,274
University of California San Francisco	93.855	SB: 9617sc	Allergy and Infectious Diseases Research	—	110,374
University of Colorado	93.855	SB: FY19.986.001	Allergy and Infectious Diseases Research	—	93,045
University of Georgia	93.855	1 R56 AI141648-01 SB: SUB00001919	Allergy and Infectious Diseases Research	—	68,420
University of North Carolina	93.855	PR: 1R01AI132547/SB: 5110101	Allergy and Infectious Diseases Research	—	12,241
University of North Carolina	93.855	PR: 5 U19 AI109965	Allergy and Infectious Diseases Research	—	(42,454)
University of North Carolina	93.855	SB: 5103054	Allergy and Infectious Diseases Research	—	46,321
University of North Carolina	93.855	SB: 5109909	Allergy and Infectious Diseases Research	—	104,298

**UNIVERSITY OF MASSACHUSETTS**  
 Schedule of Expenditures of Federal Awards  
 Year ended June 30, 2019

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University of Pennsylvania	93.855	SB: 566489	Allergy and Infectious Diseases Research	\$ —	37,382
University of Rhode Island	93.855	SB: 07142014/4508	Allergy and Infectious Diseases Research	—	3,213
University of Texas at San Antonio	93.855	SB: 100002233	Allergy and Infectious Diseases Research	—	92,781
University of Texas at San Antonio	93.855	SB: 10000753	Allergy and Infectious Diseases Research	—	(4,164)
University of Washington	93.855	SB: UWSC8525	Allergy and Infectious Diseases Research	—	45,143
University of Wisconsin	93.855	R01 AI12135-04	Allergy and Infectious Diseases Research	—	32,238
Veterans Medical Research Foundation	93.855	09473001-318542	Allergy and Infectious Diseases Research	—	60,158
Washington University	93.855	5 R01 AI081803	Allergy and Infectious Diseases Research	—	83,333
Washington University	93.855	SB: WU-14-364-MOD-2	Allergy and Infectious Diseases Research	—	88,225
Washington University	93.855	SB: WU-16-307	Allergy and Infectious Diseases Research	—	314,413
Wistar Institute	93.855	SB: 25133-02-374	Allergy and Infectious Diseases Research	—	332,578
Yale University	93.855	SB: GR106223(CON-80001765)	Allergy and Infectious Diseases Research	—	28,697
Allergy and Infectious Diseases Research Total				<u>2,687,807</u>	<u>31,994,024</u>
Center For Scientific Review	93.859	Direct	Biomedical Research and Research Training	—	227,871
National Institutes of Health	93.859	Direct	Biomedical Research and Research Training	222,308	6,596,695
National Inst of General Medical Science	93.859	Direct	Biomedical Research and Research Training	1,056,567	23,585,495
Albert Einstein College of Medicine	93.859	PO0619340	Biomedical Research and Research Training	—	7,383
Beth Israel Deaconess Medical Center	93.859	2 R01 GM104987	Biomedical Research and Research Training	—	97,693
Boston College	93.859	1 R01GM118431	Biomedical Research and Research Training	—	79,199
Brigham and Women's Hospital	93.859	120184	Biomedical Research and Research Training	—	26,562
Cornell University	93.859	78565-10975	Biomedical Research and Research Training	—	175,839
Emory University	93.859	Sub 1938891	Biomedical Research and Research Training	—	160,883
Kansas State University	93.859	KSUS17166	Biomedical Research and Research Training	—	118,232
QuarryBio LLC	93.859	2R44GM116211-02	Biomedical Research and Research Training	—	115,563
Smith College	93.859	SB: 636070-1	Biomedical Research and Research Training	—	8,788
Texas A&M University	93.859	5 R21 GM126532	Biomedical Research and Research Training	—	155,377
University of California Santa Cruz	93.859	SB: A19-0305-S001_P0703478	Biomedical Research and Research Training	—	22,875
University of California	93.859	5R01 GM117189-02	Biomedical Research and Research Training	—	179,273
University of California Davis	93.859	SB-A18-0909-S001	Biomedical Research and Research Training	—	49,196
University of Maryland	93.859	F218389-1	Biomedical Research and Research Training	—	34,689
University of Michigan	93.859	SB: 30038554238	Biomedical Research and Research Training	—	182,838
University of Wisconsin	93.859	UWI 878K651 – R01GM098885	Biomedical Research and Research Training	—	137,489
Vuronyx Technologies, LLC	93.859	1R43GM123686-01A1	Biomedical Research and Research Training	—	8,062
Biomedical Research and Research Training Total				<u>1,278,875</u>	<u>31,970,002</u>
National Institutes of Health	93.865	Direct	Child Health and Human Development Extramural Research	497,721	2,199,268
National Inst of Child Hlth & Human Devl	93.865	Direct	Child Health and Human Development Extramural Research	2,442,666	9,425,132
Brandeis University	93.865	403519	Child Health and Human Development Extramural Research	—	30,755
Brandeis University	93.865	SB: 403193	Child Health and Human Development Extramural Research	—	11,252
Cincinnati Children's Hospital Medcl Ctr	93.865	Subaward No. 136785	Child Health and Human Development Extramural Research	—	37,661
Columbia University	93.865	SB: 1 (GG010308-23)	Child Health and Human Development Extramural Research	—	17,547
Florida State University	93.865	Sub# R01954	Child Health and Human Development Extramural Research	—	72,343
Harvard Pilgrim Health Care, Inc.	93.865	AI000630	Child Health and Human Development Extramural Research	—	14,614
Harvard University	93.865	Sub# 116353-5087577	Child Health and Human Development Extramural Research	—	26,983
Johns Hopkins University	93.865	2003869888	Child Health and Human Development Extramural Research	—	40,870
Massachusetts General Hospital	93.865	1R01HD091211-01A1	Child Health and Human Development Extramural Research	—	29,420
Tufts Univ Cummings Sch of Vet Med	93.865	SB: 1012913-00001	Child Health and Human Development Extramural Research	—	(2,228)
University of California	93.865	59962754	Child Health and Human Development Extramural Research	—	8,610
University of Maryland	93.865	64583 Z01 11201	Child Health and Human Development Extramural Research	—	1,519
University of Minnesota	93.865	1U54HD093540-01	Child Health and Human Development Extramural Research	—	312,502
University of North Carolina	93.865	SB: 5108779	Child Health and Human Development Extramural Research	—	5,047
University of Tennessee	93.865	A16-1281-S001-A01	Child Health and Human Development Extramural Research	—	192,345
Weill Cornell Medical College	93.865	1R01HD088571-01A1	Child Health and Human Development Extramural Research	—	262,242
Wellesley College	93.865	26390-01	Child Health and Human Development Extramural Research	—	14,509
Child Health and Human Development Extramural Research Total				<u>2,940,387</u>	<u>12,700,391</u>
National Institute of Aging	93.866	Direct	Aging Research	712,007	7,296,372
National Institutes of Health	93.866	Direct	Aging Research	538,232	3,327,179
Albert Einstein College of Medicine	93.866	SB: 311108	Aging Research	—	20,733
Brigham and Women's Hospital	93.866	SB:111014	Aging Research	129,503	205,188
Brown University	93.866	5 R01AG048940-03	Aging Research	—	30,387
George Washington University	93.866	Sub# 17-M25	Aging Research	—	12,911
Hebrew Senior Life	93.866	SB: 90083	Aging Research	—	38,321
Kaiser Foundation Research Institute	93.866	U01 AG034661-04	Aging Research	—	22,291
Massachusetts General Hospital	93.866	SB: 226821	Aging Research	—	108,952
University of Alabama	93.866	SB: 000517881-001	Aging Research	—	3,858

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
University of Connecticut	93.866	SB: USHS6-62703698	Aging Research	\$ —	(8)
University of Michigan	93.866	Sub# 3003486688	Aging Research	—	144,341
University of Pittsburgh	93.866	SB: 0040521 (129823-1)	Aging Research	—	211,609
University of Washington	93.866	5R01AG053221-03	Aging Research	—	81,246
University of Washington	93.866	SB: UWSC10987	Aging Research	—	138,315
Aging Research Total				<u>1,379,742</u>	<u>11,641,695</u>
National Eye Institute	93.867	Direct	Vision Research	36,857	1,338,841
National Institutes of Health	93.867	Direct	Vision Research	—	397,350
Brigham and Women's Hospital	93.867	SB 119243	Vision Research	—	76,710
Vision Research Total				<u>36,857</u>	<u>1,812,901</u>
National Library of Medicine	93.879	Direct	Medical Library Assistance	47,365	2,090,298
Harvard Medical School	93.879	G08 LM012154	Medical Library Assistance	—	3,578
University of Utah	93.879	SB: 10039576-11	Medical Library Assistance	—	16,020
Medical Library Assistance Total				<u>47,365</u>	<u>2,109,896</u>
Harvard University	93.884	6 UH1 HP29962-01-01	Grants for Primary Care Training and Enhancement	—	173,563
University of Pennsylvania	93.884	SB: 574122	Grants for Primary Care Training and Enhancement	—	17,827
Grants for Primary Care Training and Enhancement Total				<u>—</u>	<u>191,390</u>
Health Resources Service Administration	93.918	Direct	Grants to Provide Outpatient Early Intervention Services with Respect to HIV Disease	—	454,550
Johns Hopkins University	93.936	5 R01 HD080474-04	National Institutes of Health Acquired Immunodeficiency Syndrome Research Loan Repayment Program	—	268,903
Purdue University	93.936	Sub No. 4301-80198	National Institutes of Health Acquired Immunodeficiency Syndrome Research Loan Repayment Program	—	1,488
National Institutes of Health Acquired Immunodeficiency Syndrome Research Loan Repayment Program Total				<u>—</u>	<u>270,391</u>
Fogarty International Center	93.989	Direct	International Research and Research Training	281,663	586,881
National Institutes of Health	93.989	Direct	International Research and Research Training	28,847	43,424
Baylor Research Institute	93.989	2 R21 TW010462-02	International Research and Research Training	—	23,866
Mahidol University	93.989	5U01TW010091-03 REVISED	International Research and Research Training	—	1,473
University of Alabama	93.989	SB: 000421737-001	International Research and Research Training	—	24,287
University of California Regents	93.989	SB: 61686358	International Research and Research Training	—	9,732
International Research and Research Training Total				<u>310,510</u>	<u>689,663</u>
Brigham and Women's Hospital	93.U01	109102	Department of Health and Human Services	—	618
Children's Research Institute	93.U02	Site Agmt#: 30004438	Department of Health and Human Services	—	383
Duke University	93.U03	PR: HHSN-275201000003/SB: 226749	Department of Health and Human Services	—	731
Harvard Pilgrim Health Care, Inc.	93.U04	HHSF223201400030I	Department of Health and Human Services	—	124,708
Harvard Pilgrim Health Care, Inc.	93.U05	PR: HHSF22301003T USB: Task Order S03	Department of Health and Human Services	—	10,686
Harvard Pilgrim Health Care, Inc.	93.U06	SB: HHSF22301001T	Department of Health and Human Services	—	23,504
Harvard Pilgrim Health Care, Inc.	93.U07	SB: HHSF22301012T	Department of Health and Human Services	—	122,550
Harvard Pilgrim Health Care, Inc.	93.U08	SB:HHSF22301002T	Department of Health and Human Services	—	42,486
Harvard Pilgrim Health Care, Inc.	93.U09	HHSF22301002TSB	Department of Health and Human Services	14,084	142,873
Harvard Pilgrim Health Care, Inc.	93.U10	HHSF223201400030I	Department of Health and Human Services	—	1,519
Harvard Pilgrim Health Care, Inc.	93.U11	200-2011-42037	Department of Health and Human Services	—	24,606
Harvard Pilgrim Health Care, Inc.	93.U12	PR: HHSF223200910006I/SB: HHSF22301001T-0002	Department of Health and Human Services	—	5,000
Hospice of Henderson County, Inc.	93.U13	1C1CMS331331	Department of Health and Human Services	—	3,893
IMMAD LLC	93.U14	HHSN271201800039C	Department of Health and Human Services	—	37,960
Johns Hopkins University	93.U15	HHSN2882011000081	Department of Health and Human Services	—	23,382
Langston University	93.U17	Sub# LU 5-17044-1	Department of Health and Human Services	—	51,035
MA Department of Mental Health	93.U18	32103559UMASS5	Department of Health and Human Services	—	82,564
Mathematica Policy Research	93.U19	HHSF22337038T	Department of Health and Human Services	—	27,055
National Assoc of Chronic Disease Directors	93.U20	2092019	Department of Health and Human Services	—	12,847
National Assoc of Chronic Disease Directors	93.U21	Contract: 2362019	Department of Health and Human Services	—	4,282
National Assoc of Chronic Disease Directors	93.U22	1712019	Department of Health and Human Services	—	4,129
National Institute of Aging	93.U23	Direct – HHSN311201700307P	Department of Health and Human Services	—	14,663
National Institutes of Health	93.U24	Direct – 7R21 AI137485-02	Department of Health and Human Services	—	107,082
National Institutes of Health	93.U25	Direct – 1 R01 HD083311-01A1	Department of Health and Human Services	194,084	633,100
National Library of Medicine	93.U26	Direct – NLM/HHSN276201700195P	Department of Health and Human Services	—	12,268
National Library of Medicine	93.U27	Direct – HHSN276201800155P	Department of Health and Human Services	—	15,949
National Cancer Institute	93.U28	Direct – HHSN261201500029C-P00006	Department of Health and Human Services	65,862	273,993
National Heart, Lung & Blood Institute	93.U29	Direct – HHSN268201800075P	Department of Health and Human Services	—	16,749
National Inst of Envir Health Sciences	93.U30	Direct – HHSN273201800201P	Department of Health and Human Services	—	9,952
Prism	93.U31	Subcontract No.720201	Department of Health and Human Services	—	41,461
Swedish Medical Center	93.U32	SMC: 223004 B.01	Department of Health and Human Services	—	460,702

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
U.S. Food and Drug Administration	93.U33	Direct – HHFSF223201710131P	Department of Health and Human Services	\$ —	19,046
U.S. Food and Drug Administration	93.U34	Direct – HHFSF223201710435P	Department of Health and Human Services	—	59,263
University of Alabama	93.U35	Direct – HHSN268201800005I/HHSN26800001	Department of Health and Human Services	—	48,114
University of Alabama	93.U36	SB: 000501394-02	Department of Health and Human Services	—	(1,612)
University of Minnesota	93.U37	A003856705	Department of Health and Human Services	—	13,124
University of Mississippi	93.U38	SB: 66102700414-04UMASS	Department of Health and Human Services	—	14,432
University of Mississippi Medical Center	93.U39	66102690414-04UML	Department of Health and Human Services	—	21,357
VentureWell	93.U40	SB: 17RWSK002	Department of Health and Human Services	—	6,697
Verlyx Pharma, Inc.	93.U41	VLX103-ASH-16-01/CT1600075	Department of Health and Human Services	—	(25)
Department of Health and Human Services Total				<u>34,175,279</u>	<u>247,711,279</u>
Department of Housing and Urban Development:					
MA Dept. of Housing & Community Develop	14.228	B-17-DC-25-0001	Community Development Block Grants/State's program and Non-Entitlement Grants in Hawaii	34,320	70,042
Pioneer Valley Planning Commission	14.228	00775	Community Development Block Grants/State's program and Non-Entitlement Grants in Hawaii	—	29
Pioneer Valley Planning Commission	14.228	118-1284	Community Development Block Grants/State's program and Non-Entitlement Grants in Hawaii	—	38,851
Pioneer Valley Planning Commission	14.228	FY2017 00806	Community Development Block Grants/State's program and Non-Entitlement Grants in Hawaii	—	42,119
Community Development Block Grants/State's program and Non-Entitlement Grants in Hawaii Total				<u>34,320</u>	<u>151,041</u>
U.S. Dept of Housing & Urban Development	14.906	Direct	Healthy Homes Technical Studies Grants	<u>52,278</u>	<u>241,226</u>
Department of Housing and Urban Development Total				<u>86,598</u>	<u>392,267</u>
Department of the Interior:					
MA Div of Ecological Restoration (DER)	15.153	ISAFWE6008FILMUMA16A 155428	Hurricane Sandy Disaster Relief – Coastal Resiliency Grants.	—	(415)
Portland State University	15.232	204JET449	Wildland Fire Research and Studies	—	(27,806)
University of California Davis	15.232	201501679-02	Wildland Fire Research and Studies	—	30,413
Wildland Fire Research and Studies Total				<u>—</u>	<u>2,607</u>
Bureau of Ocean Energy Management	15.424	Direct	Marine Minerals Activities	—	(1,927)
MA Division of Fisheries and Wildlife	15.608	1434-HQ-11-RU-01575	Fish and Wildlife Management Assistance	1,400	1,386
MA Department of Fish & Game	15.634	118-1857p1	State Wildlife Grants	—	162,299
MA Department of Fish & Game	15.634	UM18COOP	State Wildlife Grants	—	2,952
State Wildlife Grants Total				<u>—</u>	<u>165,251</u>
U.S. Fish and Wildlife Service	15.655	Direct	Migratory Bird Monitoring, Assessment and Conservation	—	9,427
Wildlife Management Institute	15.664	NALCC 2015-06	Fish and Wildlife Coordination and Assistance	—	15,608
U.S. Fish and Wildlife Service	15.669	Direct	Cooperative Landscape Conservation	—	28,517
Wildlife Management Institute	15.670	SA 2019-01	Adaptive Science	—	171,189
U.S. Fish and Wildlife Service	15.678	Direct	Cooperative Ecosystem Studies Units	—	2,260
U.S. Geological Survey	15.805	Direct	Assistance to State Water Resources Research Institutes	38,995	92,311
U.S. Geological Survey	15.808	Direct	U.S. Geological Survey – Research and Data Collection	—	3,525
U.S. Geological Survey	15.810	Direct	National Cooperative Geologic Mapping	43,816	114,085
U.S. Geological Survey	15.812	Direct	Cooperative Research Units	—	70,676
U.S. Geological Survey	15.820	Direct	National and Regional Climate Adaptation Science Centers	455,228	1,895,610
National Park Service	15.945	Direct	Cooperative Research and Training Programs Resources of the National Park System	—	132,224
U.S. Department of Interior	15.954	Direct	National Park Service Conservation, Protection, Outreach, and Education	—	98,029
National Writing Project	15.954	P14AC01415	National Park Service Conservation, Protection, Outreach, and Education	—	3,500
National Park Service Conservation, Protection, Outreach, and Education Total				<u>—</u>	<u>101,529</u>
Bureau of Safety and Environ Enforcement	15.U01	Direct – E16PC00008	Department of the Interior	6,271	20,086
MA Division of Fisheries and Wildlife	15.U02	ISAFWE6008FILMUMA16A	Department of the Interior	—	99,097
U.S. Department of Interior	15.U03	Direct – Challenge Specific Agrmnt dated 1/19/2017	Department of the Interior	—	6,576
Department of the Interior Total				<u>545,710</u>	<u>2,929,622</u>
Department of Justice:					
U.S. Department of Justice	16.540	Direct	Juvenile Justice and Delinquency Prevention	—	127,842
U.S. Department of Justice	16.543	Direct	Missing Children's Assistance	—	79,528
National Institute of Justice	16.560	Direct	National Institute of Justice Research, Evaluation, and Development Project Grants	29,639	48,747
U.S. Department of Justice	16.560	Direct	National Institute of Justice Research, Evaluation, and Development Project Grants	88,011	402,079
CUNY City College	16.560	2017-VT-BX-0002	National Institute of Justice Research, Evaluation, and Development Project Grants	—	72,042
Northeastern University	16.560	2016-V3-GX-001	National Institute of Justice Research, Evaluation, and Development Project Grants	—	88,461
Wellesley College	16.560	26316-01	National Institute of Justice Research, Evaluation, and Development Project Grants	—	2,134
National Institute of Justice Research, Evaluation, and Development Project Grants Total				<u>117,650</u>	<u>613,463</u>

**UNIVERSITY OF MASSACHUSETTS**  
 Schedule of Expenditures of Federal Awards  
 Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
U.S. Department of Justice	16.562	Direct	Criminal Justice Research and Development-Graduate Research Fellowships	\$ —	15,568
MA Office for Victim Assistance	16.575	2015-VAGX-0034, 2016-VA-GX-0031, 2017-VA-GX-0021	Crime Victim Assistance	—	154,504
MA Office for Victim Assistance	16.575	ISAVWAVOCAEVWCUMA1 8A	Crime Victim Assistance	—	243
MA Office for Victim Assistance	16.575	FY2019VOCAVWA	Crime Victim Assistance	—	320,628
Crime Victim Assistance Total				—	475,375
Partners Healthcare	16.582	120708	Crime Victim Assistance/Discretionary Grants	—	12,513
Town of Amherst	16.590	2017-WE-AX-0009	Grants to Encourage Arrest Policies and Enforcement of Protection Orders Program	—	65,368
Town of Belchertown	16.590	2017-WE-AX-00 12	Grants to Encourage Arrest Policies and Enforcement of Protection Orders Program	—	58,281
Grants to Encourage Arrest Policies and Enforcement of Protection Orders Program Total				—	123,649
City of Chelsea	16.610	2018-181	Regional Information Sharing Systems	—	50,598
U.S. Department of Justice	16.726	Direct	Juvenile Mentoring Program	233,563	431,555
National 4-H Council	16.726	2017-JU-FX-0016	Juvenile Mentoring Program	—	43,270
Juvenile Mentoring Program Total				233,563	474,825
City of Lowell	16.738	PO # 18000093-00	Edward Byrne Memorial Justice Assistance Grant Program	—	26,815
City of Boston	16.745	MOA_PO BOSTN-0000679639	Criminal and Juvenile Justice and Mental Health Collaboration Program	—	10,631
Fox Valley Technical College	16.751	D2016010051	Edward Byrne Memorial Competitive Grant Program	—	15,129
City of Lowell	16.754	PO # 18000212-00	Harold Rogers Prescription Drug Monitoring Program	—	16,083
Federal Bureau of Investigation	16.U01	Direct – 15F06719F0001497	Department of Justice	—	439,146
Department of Justice Total				351,213	2,481,165
Department of Labor:					
National Lab for Ed Transformation (NLET)	17.282	2017-DL002	Trade Adjustment Assistance Community College and Career Training (TAACCCT) Grants	—	(148)
U.S. Department of Labor	17.791	Direct	Department of Labor Chief Evaluation office	18,228	75,787
Department of Labor Total				18,228	75,639
Department of State:					
U.S. Department of State	19.040	Direct	Public Diplomacy Programs	—	25,571
Harvard University	19.345	108846-5 102725	International Programs to Support Democracy, Human Rights and Labor	—	108,986
Mitre Corporation	19.U01	Subcontract Agmt No. 114866	Department of State	—	77,455
Department of State Total				—	212,012
Department of Transportation:					
Federal Aviation Administration	20.108	Direct	Aviation Research Grants	—	101,209
University of Wisconsin	20.200	737K634	Highway Research and Development Program	—	16,668
Federal Highway Administration	20.215	Direct	Highway Training and Education	—	41,954
MA Dept of State Police	20.218	FM-MCG-0415-18-01-00	Motor Carrier Safety Assistance	—	1,683
MA Dept of State Police	20.218	ISAPOL81002010UMS17A	Motor Carrier Safety Assistance	—	35,758
Motor Carrier Safety Assistance Total				—	37,441
Federal Motor Carrier Safety Admin	20.232	Direct	Commercial Driver's License Program Implementation Grant	—	102,496
Federal Motor Carrier Safety Admin	20.237	Direct	Motor Carrier Safety Assistance High Priority Activities Grants and Cooperative Agreements	—	123,504
MA Exec Ofc of Public Safety & Security	20.614	113-1636	National Highway Traffic Safety Administration (NHTSA) Discretionary Safety Grants and Cooperative Agreements	—	57,293
MA Exec Ofc of Public Safety & Security	20.614	CTEPSFY19UMASSICRRXX	National Highway Traffic Safety Administration (NHTSA) Discretionary Safety Grants and Cooperative Agreements	—	24,200
National Highway Traffic Safety Administration (NHTSA) Discretionary Safety Grants and Cooperative Agreements Total				—	81,493
Massachusetts Institute of Technology	20.701	5710003604	University Transportation Centers Program	—	322,147
Massachusetts Institute of Technology	20.701	5710003798	University Transportation Centers Program	—	(2,356)
Massachusetts Institute of Technology	20.701	5710003801	University Transportation Centers Program	—	745
Massachusetts Institute of Technology	20.701	5710003802	University Transportation Centers Program	—	(2,275)
University of Iowa Health Care	20.701	69A3551747131	University Transportation Centers Program	—	164,039
University of Iowa Health Care	20.701	W000546107	University Transportation Centers Program	—	(49)
University of Maine	20.701	UMS-1183	University Transportation Centers Program	—	57,829
University Transportation Centers Program Total				—	540,080

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
Earth Science Systems, LLC	20.U01	117-0607	Department of Transportation	\$ —	4,998
Federal Railroad Administration	20.U02	Direct – RAILROAD DOT DTFR5316C00020	Department of Transportation	7,328	60,343
MA Department of Transportation	20.U03	102534	Department of Transportation	—	66,117
Pennsylvania State University	20.U04	5519-UM-FRA-0023	Department of Transportation	—	19,339
Department of Transportation Total				7,328	1,195,642
Department of Veterans Affairs:					
Department of Veterans Affairs	64.028	Direct	Post-9/11 Veterans Educational Assistance	—	35,564
Providence VA Medical Center	64.015	Direct	Veterans State Nursing Home Care	—	29,619
Veteran Affairs Boston Healthcare Sys	64.U02	Direct – VA Boston/ Task Order 2	Department of Veterans Affairs	—	8,032
Veteran Affairs Boston Healthcare Sys	64.U03	Direct – VA Boston/ Contract : 36C24118D0106	Department of Veterans Affairs	—	48,873
Veteran Affairs Boston Healthcare Sys	64.U04	Direct – VA Boston/Contract: VA241-17-D-0073/ Task Order 3	Department of Veterans Affairs	—	37,895
Department of Veterans Affairs Total				—	159,983
Environmental Protection Agency:					
U.S. Environmental Protection Agency	66.129	Direct	Southeast New England Coastal Watershed Restoration	22,225	164,623
University of Connecticut	66.437	116033	Long Island Sound Program	—	2,825
U.S. Environmental Protection Agency	66.461	Direct	Regional Wetland Program Development Grants	—	166,297
MA Dept of Environmental Protection	66.461	EQE22309702UMS17A	Regional Wetland Program Development Grants	—	71,707
Regional Wetland Program Development Grants Total				—	238,004
U.S. Environmental Protection Agency	66.509	Direct	Science To Achieve Results (STAR) Research Program	310,089	329,904
Dartmouth College	66.509	Subaward# R953	Science To Achieve Results (STAR) Research Program	—	10,646
Science To Achieve Results (STAR) Research Program Total				310,089	340,550
U.S. Environmental Protection Agency	66.514	Direct	Science To Achieve Results (STAR) Fellowship Program	—	17,647
U.S. Environmental Protection Agency	66.516	Direct	P3 Award: National Student Design Competition for Sustainability	—	38,509
MA Dept of Environmental Protection	66.605	CTEQF5014UMASSAMHERST01609319	Performance Partnership Grants	—	2,420
MN Pollution Control Agency	66.605	Grant agreement dated 3/12/19	Performance Partnership Grants	—	7,067
Performance Partnership Grants Total				—	9,487
MA Dept of Agricultural Resources	66.700	119-0027	Consolidated Pesticide Enforcement Cooperative Agreements	—	4,304
U.S. Environmental Protection Agency	66.708	Direct	Pollution Prevention Grants Program	13,901	55,272
Extension Foundation	66.716	83698001	Research, Development, Monitoring, Public Education, Outreach, Training, Demonstrations, and Studies	—	22,703
2W iTech LLC	66.U01	Subcontract dated 5/21/19	Environmental Protection Agency	—	5
Extension Foundation	66.U02	836980001	Environmental Protection Agency	—	767
MA Dept of Agricultural Resources	66.U03	118-1467	Environmental Protection Agency	—	50,764
Environmental Protection Agency Total				346,215	945,460
Executive Office of the President:					
Tufts University	95.007	G1799ONDPC06B	Research and Data Analysis	—	35,636
Executive Office of the President Total				—	35,636
Institute of Museum and Library Services:					
Institute of Museum & Library Services	45.312	Direct	National Leadership Grants	—	23,037
Institute of Museum and Library Services Total				—	23,037
National Aeronautics and Space Administration:					
NASA Goddard Space Flight Center	43.001	Direct	Science	243,478	1,386,582
National Aero and Space Administration	43.001	Direct	Science	317,746	2,152,590
Bermuda Institute of Ocean Sciences	43.001	154444UMB	Science	—	179,225
California Institute of Technology	43.001	1597294	Science	—	24,498
California Institute of Technology	43.001	80NM0018D0004	Science	—	384
California Institute of Technology	43.001	JPL Subcontract No. 1560781	Science	—	46,249
California Institute of Technology	43.001	NNN12AA01C	Science	—	76,000
California Institute of Technology	43.001	RSA 1579247	Science	—	2
Hampton University	43.001	HU-180001	Science	—	179,701
Mount Holyoke College	43.001	GD8861	Science	—	246
Ohio State University	43.001	60050055	Science	—	74,264
Purdue University	43.001	12000289-06	Science	—	3,174
SETI Institute	43.001	SC3139	Science	—	29,074
Smithsonian Astrophysical Observatory	43.001	G06-17024X	Science	—	28,135
Space Telescope Science Institute	43.001	HST-AR-14299.001-A	Science	—	18,296
Space Telescope Science Institute	43.001	HST-AR-14589.001-A	Science	—	16,404
Space Telescope Science Institute	43.001	HST-GO-13342.002-A	Science	—	4,803

**UNIVERSITY OF MASSACHUSETTS**  
 Schedule of Expenditures of Federal Awards  
 Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
Space Telescope Science Institute	43.001	HST-GO-14066.004-A	Science	\$ —	(537)
Space Telescope Science Institute	43.001	HST-GO-14602.003-A	Science	—	380
Space Telescope Science Institute	43.001	HST-GO-14653.004-A	Science	—	23,569
Space Telescope Science Institute	43.001	HST-GO-14684.005-A	Science	—	12,931
Space Telescope Science Institute	43.001	HST-GO-15330.001-A	Science	—	11,733
Space Telescope Science Institute	43.001	HST-HF2-51392.001-A	Science	—	90,788
Space Telescope Science Institute	43.001	NASS-26555	Science	—	158,055
Space Telescope Science Institute	43.001	STSI: HST-AR-14285.001-A	Science	—	455
Space Telescope Science Institute	43.001	STSI: HST-GO-14095.003-A	Science	—	13,585
University of California Irvine	43.001	U of California Irvine 2017-3522	Science	—	37,905
University of California Los Angeles	43.001	1295 G VA072	Science	—	76,439
University of Colorado	43.001	1551866	Science	—	161
University of Michigan	43.001	3003766302	Science	—	33,305
University of New Hampshire	43.001	17-025	Science	—	37,587
Science Total				<u>561,224</u>	<u>4,715,985</u>
National Aero and Space Administration	43.003	Direct	Exploration	—	106,243
National Aero and Space Administration	43.007	Direct	Space Operations	—	384,310
NASA Goddard Space Flight Center	43.008	Direct	Education	—	55,268
Delaware State University	43.008	Subaward No. 17-014HEH	Education	—	143,882
National Inst of Aerospace	43.008	C17-201018-UMASSD	Education	—	661
Education Total				<u>—</u>	<u>199,811</u>
National Aero and Space Administration	43.009	Direct	Cross Agency Support	—	48,776
NASA Goddard Space Flight Center	43.012	Direct	Space Technology	—	77,894
BAE Systems	43.001	NNX14AG86G	National Aeronautics and Space Administration	—	3,883
California Institute of Technology	43.002	Sub# 1561247	National Aeronautics and Space Administration	—	31,680
California Institute of Technology	43.003	[JPL]: 1486198	National Aeronautics and Space Administration	—	41,662
Massachusetts Institute of Technology	43.004	7000387885	National Aeronautics and Space Administration	—	85,662
Nextgen Materials & Processing LLC	43.005	NG18-001	National Aeronautics and Space Administration	—	36,751
Ohio Aerospace Institute	43.006	OAI-NSSC1-19384	National Aeronautics and Space Administration	—	13,299
Space Telescope Science Institute	43.007	HST-GO-13743.004-A	National Aeronautics and Space Administration	—	298
Space Telescope Science Institute	43.008	STSI: HST-GO-13846.001-A	National Aeronautics and Space Administration	—	1,556
National Aeronautics and Space Administration Total				<u>561,224</u>	<u>5,747,810</u>
National Endowment for the Humanities:					
National Endowment For the Humanities	45.149	Direct	Promotion of the Humanities-Division of Preservation and Access	7,864	162,546
National Endowment For the Humanities	45.160	Direct	Promotion of the Humanities-Fellowships and Stipends	—	49,623
National Endowment For the Humanities	45.161	Direct	Promotion of the Humanities-Research	—	170,144
National Endowment For the Humanities	45.163	Direct	Promotion of the Humanities-Professional Development	—	274,441
National Endowment for the Humanities Total				<u>7,864</u>	<u>656,754</u>
National Science Foundation:					
National Science Foundation	47.041	Direct	Engineering Grants	184,347	6,097,290
Automated Controversy Detection LLC	47.041	TIP - 1819477	Engineering Grants	—	68,659
Ernest Pharmaceuticals LLC	47.041	118-0278	Engineering Grants	—	90
Georgia Institute of Technology	47.041	RJ378-GI	Engineering Grants	—	99,787
Glauconix Bioscience Inc	47.041	1660131	Engineering Grants	—	62,287
Leonine Technologies, Inc.	47.041	SBIR 4-20-2019	Engineering Grants	—	115
OledCures LLC	47.041	1843101	Engineering Grants	—	4,817
Smart Material Solutions	47.041	IIP-1738387	Engineering Grants	—	13,366
Tufts University	47.041	118-1746p1	Engineering Grants	—	6,940
University of California	47.041	#00008613-02	Engineering Grants	—	108,404
University of Illinois	47.041	20 15-04326-0200	Engineering Grants	—	38,033
Washington State University	47.041	120239 G003229-2	Engineering Grants	—	(3,896)
Engineering Grants Total				<u>184,347</u>	<u>6,495,892</u>
National Science Foundation	47.049	Direct	Mathematical and Physical Sciences	1,274,911	7,934,069
Brandeis University	47.049	DMR- 1420382	Mathematical and Physical Sciences	—	153,802
Brandeis University	47.049	402430-1	Mathematical and Physical Sciences	—	76,124
Brandeis University	47.049	402430B-1	Mathematical and Physical Sciences	—	96,757
National Radio Astronomy Observatory	47.049	1519126	Mathematical and Physical Sciences	—	33,022
Smithsonian Astrophysical Observatory	47.049	SAO SV5-85007 AMEND 2	Mathematical and Physical Sciences	—	52,478
Suffolk University	47.049	1807480	Mathematical and Physical Sciences	—	38,075

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
University of California Davis	47.049	A19-1887-S002	Mathematical and Physical Sciences	\$ —	64,553
University of Pittsburgh	47.049	005794 1 (012021-3)	Mathematical and Physical Sciences	—	146,014
University of Texas at Austin	47.049	1812747	Mathematical and Physical Sciences	—	15,470
Mathematical and Physical Sciences Total				<u>1,274,911</u>	<u>8,610,364</u>
National Science Foundation	47.050	Direct	Geosciences	346,996	5,287,976
Columbia University	47.050	111-1227	Geosciences	—	995
Columbia University	47.050	1450528	Geosciences	—	72,479
Cornell University	47.050	1660923	Geosciences	—	43,488
Marine Biological Laboratory	47.050	OCE-1637630 / 52682	Geosciences	—	64,143
Pennsylvania State University	47.050	1360761	Geosciences	—	14,204
Southern California Earthquake Center	47.050	SCEC 91268180	Geosciences	—	20,236
University of Arizona	47.050	125160.Mod 5	Geosciences	—	11,353
University of Texas at Austin	47.050	17-000314	Geosciences	—	54,929
Woods Hole Oceanographic Institution	47.050	1856048	Geosciences	—	35,091
Woods Hole Oceanographic Institution	47.050	OCE-1655886	Geosciences	—	38,198
Woods Hole Oceanographic Institution	47.050	Project# 85850300/ Sub# A101282	Geosciences	—	60,245
Geosciences Total				<u>346,996</u>	<u>5,703,337</u>
National Science Foundation	47.070	Direct	Computer and Information Science and Engineering	325,074	12,664,970
Brown University	47.070	#0000685 amend #3	Computer and Information Science and Engineering	—	1,539
Cornell University	47.070	72954-10599-01	Computer and Information Science and Engineering	—	11,408
University of North Carolina	47.070	1826997	Computer and Information Science and Engineering	—	38,274
University of Texas at Arlington	47.070	I 26100536620-003	Computer and Information Science and Engineering	—	65,754
University of Utah	47.070	10045119-UMAmherst	Computer and Information Science and Engineering	—	112,339
University of Utah	47.070	I 0034358-AMHRS-001	Computer and Information Science and Engineering	—	26
Computer and Information Science and Engineering Total				<u>325,074</u>	<u>12,894,310</u>
National Science Foundation	47.074	Direct	Biological Sciences	75,551	5,336,876
Arizona State University	47.074	ASU 17-139-01	Biological Sciences	—	22,426
Arizona State University	47.074	ASUB00000219	Biological Sciences	—	14,332
BioXFEL	47.074	BioXFEL/6224- 2 Mod #1	Biological Sciences	—	44,998
Cold Spring Harbor Laboratory	47.074	525 70115-1	Biological Sciences	—	193,441
Dartmouth College	47.074	R1052	Biological Sciences	—	19,576
Georgia State University	47.074	1455527	Biological Sciences	—	67,631
Harvard Forest	47.074	31716-5097576-02	Biological Sciences	—	39,794
New York Botanical Garden	47.074	NYBG 1802034-01-UMASS	Biological Sciences	—	534
University of Cincinnati	47.074	0 10754-002	Biological Sciences	—	10,462
University of Georgia	47.074	RC3 71-289/S001134 -2	Biological Sciences	—	111,652
University of Tennessee	47.074	1814520	Biological Sciences	—	51,475
Yale University	47.074	1840243	Biological Sciences	—	51,264
Biological Sciences Total				<u>75,551</u>	<u>5,964,461</u>
National Science Foundation	47.075	Direct	Social, Behavioral, and Economic Sciences	80,512	2,193,450
Harvard University	47.075	136375-5096339	Social, Behavioral, and Economic Sciences	—	(551)
University of Florida	47.075	UFDSP00010946	Social, Behavioral, and Economic Sciences	—	28,078
University of Houston	47.075	1823815	Social, Behavioral, and Economic Sciences	—	76,368
University of Minnesota	47.075	PO# A005162201	Social, Behavioral, and Economic Sciences	—	7,714
Social, Behavioral, and Economic Sciences Total				<u>80,512</u>	<u>2,305,059</u>
National Science Foundation	47.076	Direct	Education and Human Resources	1,052,157	8,507,838
American Chemical Society	47.076	SB-NSF-1806607-UMMS	Education and Human Resources	—	11,705
Black Hills State University	47.076	BP1100005	Education and Human Resources	—	(305)
CAST Inc.	47.076	UMASS091516-20	Education and Human Resources	—	128,549
Council for Opportunity in Education	47.076	1759163-4	Education and Human Resources	—	16,216
Education Development Center, Inc.	47.076	72954-10599-01	Education and Human Resources	—	2,602
Education Development Center, Inc.	47.076	CNS-1339300	Education and Human Resources	—	13,734
Springfield Technical Community College	47.076	1801090	Education and Human Resources	—	7,145
State University of NY Cortland	47.076	Sub# 1141641-79013	Education and Human Resources	—	19,709
Tufts University	47.076	Sub# NS7218	Education and Human Resources	—	78,651
University of Connecticut	47.076	116-0727	Education and Human Resources	—	39,710
University of Connecticut	47.076	135339	Education and Human Resources	—	48,879
University of Maryland	47.076	29983-Z4602002-B	Education and Human Resources	—	5,706
University of Nebraska	47.076	1904102	Education and Human Resources	—	9,249
University of Southern California	47.076	109190808	Education and Human Resources	—	16,458
Education and Human Resources Total				<u>1,052,157</u>	<u>8,905,846</u>

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
National Science Foundation	47.079	Direct	Office of International Science and Engineering	\$ —	10,786
Civilian Research & Development Fdn	47.079	OISE	Office of International Science and Engineering	—	68,295
Civilian Research & Development Fdn	47.079	OISE-9531011	Office of International Science and Engineering	—	31,365
Civilian Research & Development Fdn	47.079	OISE-15-61731-1	Office of International Science and Engineering	—	18,700
Office of International Science and Engineering Total				—	129,146
Association of Public & Land-Grant Univ	47.U01	115-0977	National Science Foundation	—	122,191
National Science Foundation	47.U02	Direct – AST-1517503	National Science Foundation	—	23,210
National Science Foundation	47.U03	Direct – CNS- 1740558	National Science Foundation	—	266,681
National Science Foundation	47.U04	Direct – IOS-1539803-001 & IOS-1848856	National Science Foundation	—	(186)
National Science Foundation	47.U05	Direct – ITR CSE 1842609	National Science Foundation	—	401,365
National Science Foundation	47.U06	Direct – CBET-1619792-003	National Science Foundation	—	327,441
National Science Foundation Total				3,339,548	52,149,117
Nuclear Regulatory Commission:					
U.S. Nuclear Regulatory Commission	77.008	Direct	U.S. Nuclear Regulatory Commission Scholarship and Fellowship Program	—	325,209
Nuclear Regulatory Commission Total				—	325,209
Small Business Administration:					
Small Business Administration	59.037	Direct	Small Business Development Centers	—	613,484
Small Business Administration Total				—	613,484
Social Security Administration:					
Mathematica Policy Research	96.007	MPR/SSA DRC12000001-01-00	Social Security-Research and Demonstration	—	49,305
U.S. Social Security Administration	96.008	Direct	Social Security – Work Incentives Planning and Assistance Program	—	299,206
Social Security Administration Total				—	348,511
Research and Development Cluster Total				46,435,169	383,388,914
Student Financial Assistance Cluster:					
Department of Education:					
U.S. Department of Education	84.038	Direct	Federal Perkins Loan Program	—	38,383,242
U.S. Department of Education	84.268	Direct	Federal Direct Student Loans	—	342,027,617
U.S. Department of Education	84.007	Direct	Federal Supplemental Educational Opportunity Grants	—	3,393,394
U.S. Department of Education	84.033	Direct	Federal Work-Study Program	—	5,324,380
U.S. Department of Education	84.063	Direct	Federal Pell Grant Program	—	81,818,521
U.S. Department of Education	84.379	Direct	Teacher Education Assistance for College and Higher Education Grants (TEACH Grants)	—	166,648
Department of Education Total				—	471,113,802
Department of Health and Human Services:					
U.S. Department of Health and Human Services	93.264	Direct	Nurse Faculty Loan Program (NFLP)	—	5,622,289
U.S. Department of Health and Human Services	93.264	Direct	Nurse Faculty Loan Program – ARRA	—	45,671
U.S. Department of Health and Human Services	93.342	Direct	Health Professional Primary Care Loans	—	1,233,345
U.S. Department of Health and Human Services	93.342	Direct	Loans for Disadvantaged Students	—	322,215
U.S. Department of Health and Human Services	93.364	Direct	Nursing Student Loans	—	21,049
Department of Health and Human Services Total				—	7,244,569
Student Financial Assistance Cluster Total				—	478,358,371
Other Clustered Programs:					
Department of Agriculture:					
U.S. Department of Agriculture	10.561	Direct	State Administrative Matching Grants for the Supplemental Nutrition Assistance Program	—	11,896
MA Dept of Transitional Assistance	10.561	44003064-UMS	State Administrative Matching Grants for the Supplemental Nutrition Assistance Program	15,157	2,658,608
MA Dept of Transitional Assistance	10.561	CT ISA 44003064 UMS18A	State Administrative Matching Grants for the Supplemental Nutrition Assistance Program	—	40,992
MA Dept of Transitional Assistance	10.561	CTISAWEL44003064UMS13A	State Administrative Matching Grants for the Supplemental Nutrition Assistance Program	18,960	1,133,146
MA Dept of Transitional Assistance	10.561	MA DTA/SNAP-ED / CT ISA WEL 44003064 UMS18A	State Administrative Matching Grants for the Supplemental Nutrition Assistance Program	—	34,048
SNAP Cluster Total				34,117	3,878,690
Department of Commerce:					
Economic Development Administration	11.307	Direct	Economic Adjustment Assistance	7,542	121,470
Economic Development Cluster Total				7,542	121,470

**UNIVERSITY OF MASSACHUSETTS**  
 Schedule of Expenditures of Federal Awards  
 Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
Department of Education:					
U.S. Department of Education	84.042	Direct	TRIO-Student Support Services	\$ —	850,809
U.S. Department of Education	84.044	Direct	TRIO-Talent Search	—	709,440
U.S. Department of Education	84.047	Direct	TRIO-Upward Bound	140,484	1,544,410
U.S. Department of Education	84.217	Direct	TRIO-McNair Post-Baccalaureate Achievement	—	302,429
TRIO Cluster Total				<u>140,484</u>	<u>3,407,088</u>
Department of Health and Human Services:					
MA Department of Early Education & Care	93.596	RFR 2016 EEC RESEARCH 003	Child Care Mandatory and Matching Funds of the Child Care and Development Fund	—	72,700
CCDF Cluster Total				<u>—</u>	<u>72,700</u>
NH Dept of Health & Human Services	93.778	CMMS 0905NH5028	Medical Assistance Program	—	3,426
Medicaid Cluster Total				<u>—</u>	<u>3,426</u>
Department of Housing and Urban Development:					
City of Springfield	14.218	20180242	Community Development Block Grants/Entitlement Grants	—	(708)
City of Springfield	14.218	20190241	Community Development Block Grants/Entitlement Grants	—	7,346
CDBG – Entitlement Grant Cluster Total				<u>—</u>	<u>6,638</u>
Department of the Interior:					
VT Department of Fish and Wildlife	15.611	F18AF00812	Wildlife Restoration and Basic Hunter Education	—	19,036
Fish and Wildlife Cluster Total				<u>—</u>	<u>19,036</u>
Department of Labor:					
MassHire Brockton Workforce Board	17.207	10SCC10	Employment Service/Wagner-Peyser Funded Activities	—	288,853
MassHire Brockton Workforce Board	17.801	FY 19 MassHireGBWB DVOP	Jobs for Veterans State Grants	—	10,115
MassHire Brockton Workforce Board	17.801	FY19 MHGBWB LVER MOD 2	Jobs for Veterans State Grants	—	6,614
Employment Service Cluster Total				<u>—</u>	<u>305,582</u>
MassHire Brockton Workforce Board	17.258	Contract Number 1027	WIOA Adult Program	—	345,237
MassHire Brockton Workforce Board	17.258	FY 15 BAWIB ADULT	WIOA Adult Program	—	(40)
MassHire Brockton Workforce Board	17.258	10SCC10	WIOA Adult Program	—	125,935
MassHire Brockton Workforce Board	17.278	Contract Number 1027	WIOA Dislocated Worker Formula Grants	—	329,248
MassHire Brockton Workforce Board	17.278	FY 17 BAWIB DISLOCATED WORKER	WIOA Dislocated Worker Formula Grants	—	978
MassHire Brockton Workforce Board	17.278	FY 19 MHGBWB DUA	WIOA Dislocated Worker Formula Grants	—	15,000
MassHire Brockton Workforce Board	17.278	FY 19 MassHireGBWB Rapid Response	WIOA Dislocated Worker Formula Grants	—	8,500
MassHire Brockton Workforce Board	17.278	FY19 MHGBWB MassHire	WIOA Dislocated Worker Formula Grants	—	10,239
MassHire Brockton Workforce Board	17.278	10SCC10	WIOA Dislocated Worker Formula Grants	—	85,743
Regional Employ. Board of Hampden County	17.258	30268	WIOA Adult Program	—	944
Regional Employ. Board of Hampden County	17.258	28,814	WIOA Adult Program	—	42,369
WIOA Cluster Total				<u>—</u>	<u>964,153</u>
Department of Transportation:					
MA Department of Transportation	20.205	INTF00X02019A0106907	Highway Planning and Construction	—	41,962
MA Department of Transportation	20.205	INTF00X02019A0106343	Highway Planning and Construction	—	21,784
MA Department of Transportation	20.205	INTF00X02015A0081923	Highway Planning and Construction	—	55,372
MA Department of Transportation	20.205	INTF00X02019A00107678	Highway Planning and Construction	—	4,579
MA Department of Transportation	20.205	INTF00X02018A91905	Highway Planning and Construction	—	331,655
MA Department of Transportation	20.205	INTF00X02018H0100519	Highway Planning and Construction	—	83,810
MA Department of Transportation	20.205	INTF00X02018A0103206	Highway Planning and Construction	63,919	248,632
MA Department of Transportation	20.205	INTF00X02018A0104038	Highway Planning and Construction	20,834	93,631
MA Department of Transportation	20.205	SB: 83190	Highway Planning and Construction	—	19,024
MA Department of Transportation	20.205	SPR-SPR-A-018-X00	Highway Planning and Construction	—	108,522
Maine Department of Transportation	20.205	2343018	Highway Planning and Construction	—	2,544
Highway Planning and Construction Cluster Total				<u>84,753</u>	<u>1,011,515</u>
Highway Safety Cluster:					
MA Department of Transportation	20.616	TR-18-08MAP21-405C	National Priority Safety Programs	—	66,546
MA Exec Ofc of Public Safety & Security	20.616	CTEPSUMASS18SBSURVY	National Priority Safety Programs	—	427
MA Exec Ofc of Public Safety & Security	20.616	CTUMASSD2018SBSURVEY	National Priority Safety Programs	—	113,083
MA Exec Ofc of Public Safety & Security	20.616	ISACT2016UMASSCRDATA	National Priority Safety Programs	—	4,136
Highway Safety Cluster Total				<u>—</u>	<u>184,192</u>

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
Other Programs:					
Agency for International Development:					
U.S. Agency International Development	98.001	Direct	USAID Foreign Assistance for Programs Overseas	\$ —	372,377
Agency for International Development Total				<u>101,852</u>	<u>372,377</u>
Corporation for National and Community Service:					
Boston Foundation	94.019	Fed Grant #14SIHMA002	Social Innovation Fund	—	(793)
Corporation for National and Community Service Total				<u>—</u>	<u>(793)</u>
Department of Agriculture:					
Kansas State University	10.500	KANSAS S18089	Cooperative Extension Service	—	(2,581)
Kansas State University	10.500	S19101	Cooperative Extension Service	—	11,855
National Institute of Food and Agriculture	10.500	Direct	Cooperative Extension Service	—	69,400
U.S. Department of Agriculture	10.500	Direct	Cooperative Extension Service	79,800	3,625,104
USDA-Farm Service Agency	10.U08	Direct – FY19 MA AG AMP USDA	Department of Agriculture	—	22,576
VentureWell	10.001	SB: DAA3-19-65152-1	Agricultural Research-Basic and Applied Research	—	10,137
Department of Agriculture Total				<u>79,800</u>	<u>3,736,491</u>
Department of Defense:					
U.S. Department of Defense	12.617	Direct	Economic Adjustment Assistance for State Governments	—	624,520
Department of Defense Total				<u>—</u>	<u>624,520</u>
Department of Education:					
Boston Plan for Excellence	84.336	U336S140088	Teacher Quality Partnership Grants	—	610,397
MA Dept of Elementary & Secondary Ed	84.002	CTDOE-1678UMASSAMHERSTMAPT	Adult Education – Basic Grants to States	—	346,915
MA Dept of Elementary & Secondary Ed	84.002	FY 18 ABE	Adult Education – Basic Grants to States	—	(1,090)
MA Dept of Elementary & Secondary Ed	84.366	CTDOE 1247UMASSDONAHUE0293	Mathematics and Science Partnerships	—	71,438
Maine Department of Labor	84.421	PO# CT12A 2017022100000002436	Disability Innovation Fund (DIF)	—	243,818
San Diego State University	84.264	H26AG150005	Rehabilitation Training Technical Assistance Centers	—	230,921
Special Olympics, Inc.	84.128	Project Unify	Rehabilitation Services-Service Projects	—	453,984
U.S. Department of Education	84.031	Direct	Higher Education-Institutional Aid	—	285,247
U.S. Department of Education	84.129	Direct	Rehabilitation Long-Term Training	—	518,266
U.S. Department of Education	84.264	Direct	Rehabilitation Training Technical Assistance Centers	509,045	1,051,094
U.S. Department of Education	84.299	Direct	Indian Education – Special Programs for Indian Children	—	27,504
U.S. Department of Education	84.327	Direct	Special Education Educational Technology Media, and Materials for Individuals with Disabilities	88,079	312,134
U.S. Department of Education	84.382	Direct	Strengthening Minority-Serving Institutions	—	360,088
Department of Education Total				<u>597,124</u>	<u>4,510,716</u>
Department of Energy:					
Brookhaven National Laboratory	81.U28	Direct – 348951	Department of Energy	—	13,149
Department of Energy Total				<u>—</u>	<u>13,149</u>
Department of Health and Human Services:					
Administrative Office of the Trial Court	93.243	1 H79 TI080277	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	60,732
Administrative Office of the Trial Court	93.243	1-TI026677-01	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	62,250
Administrative Office of the Trial Court	93.243	201810011117UMASS1	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	233,063
Administrative Office of the Trial Court	93.243	201810011117UMASS2	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	6,486
Administrative Office of the Trial Court	93.243	H79-TI080277	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	2,099
Boston Medical Center	93.136	PO1607645-S	Injury Prevention and Control Research and State and Community Based Programs	—	45,474
City of Worcester	93.U42	CONTRACT NO. 33-1406W	Department of Health and Human Services	—	24,255
Community Development Institute	93.600	SUB 001	Head Start	83,549	889,508
Community Development Institute	93.600	SUB 002	Head Start	—	232,147
Community Transportation Assn of America	93.631	90DN0001-01-00	Developmental Disabilities Projects of National Significance	—	90,206
Florida Development Disabilities Council	93.630	1003EM17F	Developmental Disabilities Basic Support and Advocacy Grants	8,000	31,489
Florida Development Disabilities Council	93.630	1012EM18G	Developmental Disabilities Basic Support and Advocacy Grants	—	81,560
Florida Development Disabilities Council	93.630	1701FLBSDD, 1801FLBSDD	Developmental Disabilities Basic Support and Advocacy Grants	—	82,219
Florida Development Disabilities Council	93.630	983EM16E	Developmental Disabilities Basic Support and Advocacy Grants	—	(719)
Health Resources Service Administration	93.178	Direct	Nursing Workforce Diversity	66,238	434,574
Holyoke Health Center Inc	93.289	Lets Move Holyoke Conrt Svc 2/1/15	President's Council on Fitness, Sports, and Nutrition	—	6,146
MA Association of Councils On Aging	93.763	90ALGG0018	Alzheimers Disease Initiative: Specialized Supportive Services Project (ADI-SSS) thru Prevention and Public Health Funds (PPHF)	—	24,991
MA Department of Mental Health	93.104	821014080220000	Comprehensive Community Mental Health Services for Children with Serious Emotional Disturbances (SED)	—	(282)
MA Department of Mental Health	93.104	SCDMH8210180H6990	Comprehensive Community Mental Health Services for Children with Serious Emotional Disturbances (SED)	—	121,760
MA Department of Mental Health	93.243	1 H79 SM061663	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	243,815
MA Department of Mental Health	93.243	SCDMH822015081490000	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	622
MA Department of Public Health	93.184	CDC 6 NU27DD000002-02-01	Disabilities Prevention	—	36,044

**UNIVERSITY OF MASSACHUSETTS**  
 Schedule of Expenditures of Federal Awards  
 Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
MA Department of Public Health	93.243	#4512-9086	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	\$ —	22,042
MA Department of Public Health	93.283	INTF5229HH4300522036	Centers for Disease Control and Prevention-Investigations and Technical Assistance	—	57,065
MA Department of Public Health	93.426	INTF4122HH2500224041	Improving the Health of Americans through Prevention and Management of Diabetes and Heart Disease and Stroke	—	50,601
MA Department of Public Health	93.918	INTF4944MM3181926039	Grants to Provide Outpatient Early Intervention Services with Respect to HIV Disease	—	716,850
MA Department of Public Health	93.994	INTF3054M03182122021	Maternal and Child Health Services Block Grant to the States	—	861
MA Department of Public Health	93.994	INTF3054M03300819017	Maternal and Child Health Services Block Grant to the States	—	39,669
MA Department of Public Health	93.994	INTF7900M03180627598	Maternal and Child Health Services Block Grant to the States	—	96,985
MA Department of Public Health	93.143	INTF5291HH4300522027	Department of Health and Human Services	—	31,895
MA Dept of Developmental Services	93.631	17UMSICIGRANTEMPLOY1	Developmental Disabilities Projects of National Significance	—	154,575
MA Dept of Public Health, BSAS	93.184	INTF3042HH2500224047	Disabilities Prevention	—	11,700
MA Dept of Public Health, BSAS	93.243	1 H79 T1025347	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	13,372
MA Dept. of Housing & Community Develop	93.569	Reference Account# 70060	Community Services Block Grant	—	37,098
MA Developmental Disabilities Council	93.630	1100-1702	Developmental Disabilities Basic Support and Advocacy Grants	—	2,446
MA Developmental Disabilities Council	93.630	18.QA.1.4.1.A	Developmental Disabilities Basic Support and Advocacy Grants	—	22,878
MA Executive Office of Elder Affairs	93.051	MA EOE/AoA/Alzheimers/Cragin	Alzheimer's Disease Demonstration Grants to States	—	9,632
Plymouth State University	93.732	PSU2017162B	Mental and Behavioral Health Education and Training Grants	—	150,000
Seven Hills Foundation	93.243	Contract for Services dated 9/30/15	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	—	48,890
State of Arizona	93.630	ADES18-206114	Developmental Disabilities Basic Support and Advocacy Grants	—	55,129
U.S. Dept of Health and Human Services	93.297	Direct	Teenage Pregnancy Prevention Program	—	(430)
U.S. Dept of Health and Human Services	93.360	Direct	Biomedical Advanced Research and Development Authority (BARDA), Biodefense Medical Countermeasure Development	—	15,621
U.S. Dept of Health and Human Services	93.464	Direct	ACL Assistive Technology	143,404	302,047
U.S. Dept of Health and Human Services	93.600	Direct	Head Start	1,050,613	6,207,853
U.S. Dept of Health and Human Services	93.631	Direct	Developmental Disabilities Projects of National Significance	19,992	371,020
U.S. Dept of Health and Human Services	93.144	Direct – HHSP233201500006C	Department of Health and Human Services	—	2,952,582
Department of Health and Human Services Total				<u>1,371,796</u>	<u>14,078,820</u>
Department of Homeland Security:					
MA Exec Ofc of Public Safety & Security	97.067	UMASSPRSUASISHP2016	Homeland Security Grant Program	—	63,155
Protect the Force	97.067	Subaward dated 10/22/18	Homeland Security Grant Program	—	105,499
Department of Homeland Security Total				<u>—</u>	<u>168,654</u>
Department of the Interior:					
National Park Service	15.945	Direct	Cooperative Research and Training Programs Resources of the National Park System	—	30,745
U.S. Department of Interior	15.954	Direct	National Park Service Conservation, Protection, Outreach, and Education	—	362,801
Department of the Interior Total				<u>—</u>	<u>393,546</u>
Department of Justice:					
Administrative Office of the Trial Court	16.812	20180311ACBJAUMASS1	Second Chance Act Reentry Initiative	—	10,265
Administrative Office of the Trial Court	16.812	20189100120417UMJDC	Second Chance Act Reentry Initiative	—	10,614
Administrative Office of the Trial Court	16.812	2019-RW-BX-0006	Second Chance Act Reentry Initiative	—	47,243
Administrative Office of the Trial Court	16.812	MA TRC/DQJuv Drug Ct-FY19	Second Chance Act Reentry Initiative	—	(1,877)
Harvard School of Public Health	16.560	2016-ZA-BX-K001	National Institute of Justice Research, Evaluation, and Development Project Grants	—	17,818
MA Department of Mental Health	16.812	2019-RW-BX-0006	Second Chance Act Reentry Initiative	—	44,601
MA Department of Mental Health	16.812	SC DMH 822016083280000	Second Chance Act Reentry Initiative	—	(547)
MA Office for Victim Assistance	16.575	MOVA-VOCA/FY2018	Crime Victim Assistance	—	4,977
Michigan State University	16.550	RC109112	State Justice Statistics Program for Statistical Analysis Centers	—	10,959
Department of Justice Total				<u>—</u>	<u>144,053</u>
Department of Labor:					
MA Exec Office of Labor & Workforce Dev	17.283	CT EOL 3250 17ICIDEIVII000000000	Workforce Innovation Fund	—	97,344
MA Exec Office of Labor & Workforce Dev	17.283	CT EOL 325017WWLDEIVII000000000	Workforce Innovation Fund	—	126,182
Massachusetts Div of Career Services	17.245	93512	Trade Adjustment Assistance	—	30,912
MassHire Brockton Workforce Board	17.225	10SCC10	Unemployment Insurance	—	236,895
MassHire Brockton Workforce Board	17.245	10SCC10	Trade Adjustment Assistance	—	55,768
MassHire Brockton Workforce Board	17.245	PR: TA-30489-17-55-A-25 / SB: 10SSC10	Trade Adjustment Assistance	—	78,937
MassHire Brockton Workforce Board	17.277	BAWIB NDWG: Garber	WIOA National Dislocated Worker Grants / WIA National Emergency Grants	—	285,541
MassHire Brockton Workforce Board	17.277	10SCC10	WIOA National Dislocated Worker Grants / WIA National Emergency Grants	—	75,422
MassHire Brockton Workforce Board	17.285	MHGBWB MOU	Apprenticeship USA Grants	—	3,554
Department of Labor Total				<u>—</u>	<u>990,555</u>

**UNIVERSITY OF MASSACHUSETTS**  
Schedule of Expenditures of Federal Awards  
Year ended June 30, 2019

Federal grantor/pass through grantor/cluster title	Federal CFDA #	Federal agency or pass-through number	Program title	Amounts passed through to subrecipients	Total expenses
Department of State:					
Assoc of Univ Centers on Disabilities	19.415	S-ECAGD-18-CA-0016	Professional and Cultural Exchange Programs – Citizen Exchanges	\$ —	44,255
Assoc of Univ Centers on Disabilities	19.415	Sub# 21-16-8100	Professional and Cultural Exchange Programs – Citizen Exchanges	—	31,987
Assoc of Univ Centers on Disabilities	19.415	Sub# 32-17-8150	Professional and Cultural Exchange Programs – Citizen Exchanges	—	97,845
FHI 360	19.421	S-ECAGD-15-CA-1130	Academic Exchange Programs – English Language Programs	—	105,423
Fulbright Commission Argentina	19.402	ARG 2019	Professional and Cultural Exchange Programs – International Visitor Leadership Program	—	52,359
Fulbright Commission Argentina	19.402	Argentina 2018	Professional and Cultural Exchange Programs – International Visitor Leadership Program	—	84,495
Intl Research and Exchanges Board	19.408	FY19-FTEA-UML-01	Academic Exchange Programs – Teachers	—	257,897
Meridian International Center	19.009	021-0007-1117-01	Academic Exchange Programs – Undergraduate Programs	—	50,543
Meridian International Center	19.021	SB: IYELP2016	Investing in People in The Middle East and North Africa	—	(1)
U.S. Department of State	19.009	Direct	Academic Exchange Programs – Undergraduate Programs	—	667,029
U.S. Department of State	19.401	Direct	Academic Exchange Programs – Scholars	—	287,198
U.S. Department of State	19.501	Direct	Public Diplomacy Programs for Afghanistan and Pakistan	—	564,112
Department of State Total				—	2,243,142
General Services Administration:					
BCT Partners, LLC	39.U01	GS-02F-0251X	General Services Administration	—	81,607
General Services Administration Total				—	81,607
National Endowment for the Humanities:					
National Endowment for the Humanities	45.162	Direct	Promotion of the Humanities-Teaching and Learning Resources and Curriculum Development	—	24,346
National Endowment for the Humanities	45.163	Direct	Promotion of the Humanities-Professional Development	15,500	43,578
National Endowment for the Humanities Total				15,500	67,924
Small Business Administration:					
Small Business Administration	59.037	Direct	Small Business Development Centers	618,264	1,237,398
Small Business Administration Total				618,264	1,237,398
Expenditures of Federal Awards Total				\$ 49,486,401	900,383,934

See accompanying notes to schedule of expenditures of federal awards.

**UNIVERSITY OF MASSACHUSETTS**

Notes to the Schedule of Expenditures of Federal Awards

June 30, 2019

**(1) Basis of Presentation**

The accompanying schedule of expenditures of federal awards (the Schedule) includes the federal award activity of the University of Massachusetts (the University) under programs of the federal government for the year ended June 30, 2019. Federal award activity, if any, of the University of Massachusetts Amherst Foundation, the Worcester City Campus Corporation, the University of Massachusetts Foundation, Inc. and the University of Massachusetts Dartmouth Foundation, Inc., is not included. The information in the Schedule is presented in accordance with the requirements of Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance). Because the Schedule presents only a selected portion of the operations of the University, it is not intended to and does not present the net position, changes in net position, or cash flows of the University.

**(2) Summary of Significant Accounting Policies**

Expenditures reported on the Schedule are reported on the accrual basis of accounting. Such expenditures are recognized following the cost principles contained in the Uniform Guidance, wherein certain types of expenditures are not allowable or are limited as to reimbursement. Negative amounts shown on the Schedule represent adjustments or credits made in the normal course of business to amounts reported as expenditures in prior years.

The University applies its predetermined approved facilities and administrative costs to federal awards rather than the 10% de minimus cost rate as described in Section 200.414 of the Uniform Guidance. Rates are negotiated with and approved by the University's cognizant audit agency, the U.S. Department of Health and Human Services.

**(3) Federal Student Financial Assistance**

**(a) Student Loan Programs**

The Perkins Loans, Primary Care Loans, Loans for Disadvantaged Students, Nurse Faculty Loan Program and the Nursing Student Loans are administered directly by the University and balances and transactions are included in the University's financial statements. Loan activities and balances consist of the following:

	<b>Federal CFDA number</b>	<b>Balance as of July 1, 2018</b>	<b>Loans issued</b>	<b>Payments received</b>	<b>Balance as of June 30, 2019</b>
Perkins Loan Program	84.038	\$ 38,383,242	—	(6,491,239)	31,892,003
Health Professions Student Loans	93.342	1,045,607	187,738	(194,779)	1,038,566
Loans for Disadvantaged Students	93.342	222,215	100,000	57,594	379,809
Nursing Faculty Loans	93.264	4,867,127	800,833	(697,138)	4,970,822
Nursing Student Loans	93.264	16,501	4,548	(640)	20,409
		<u>\$ 44,534,692</u>	<u>1,093,119</u>	<u>(7,326,202)</u>	<u>38,301,609</u>

**UNIVERSITY OF MASSACHUSETTS**

Notes to the Schedule of Expenditures of Federal Awards

June 30, 2019

**(b) Federal Direct Student Loans**

The University is responsible only for the performance of certain administrative duties relating to Federal Direct Student Loans and, accordingly, these loans are not included in the University's financial statements. Federally guaranteed loans distributed to students of the University through the Federal Direct Student Loans Program during the year ended June 30, 2019 are summarized as follows:

	<b>Federal CFDA number</b>	<b>Loans distributed</b>
Federal Direct Student Loans (FDL)	84.268	\$ 290,316,166
FDL Parent Loans for Undergraduate Students (PLUS)	84.268	<u>51,711,451</u>
Total Federal Direct Student Loans		<u>\$ 342,027,617</u>



KPMG LLP  
Two Financial Center  
60 South Street  
Boston, MA 02111

**Independent Auditors' Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With *Government Auditing Standards***

Board of Trustees of the  
University of Massachusetts:

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 the aggregate discretely presented component units of the University of Massachusetts (the University), as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise the University's basic financial statements, and have issued our report thereon dated December 18, 2019.

The financial statements of the University of Massachusetts Foundation Inc., and the University of Massachusetts Dartmouth Foundation, Inc. were not audited in accordance with *Government Auditing Standards*, and accordingly, this report does not include reporting on internal control over financial reporting or instances of reportable noncompliance associated with these entities.

*Internal Control Over Financial Reporting*

In planning and performing our audit of the financial statements, we considered the University's internal control over financial reporting (internal control) 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 the University's internal control. Accordingly, we do not express an opinion on the effectiveness of University's internal control.

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 was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control 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 the University's financial statements are free from 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 no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

*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 University's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the University's internal control and compliance. Accordingly, this communication is not suitable for any other purpose

KPMG LLP

Boston, Massachusetts  
December 18, 2019



KPMG LLP  
Two Financial Center  
60 South Street  
Boston, MA 02111

**Independent Auditors' Report on Compliance for Each Major Federal Program; Report on Internal Control Over Compliance Required by the Uniform Guidance; and Report on Schedule of Expenditures of Federal Awards Required by the Uniform Guidance**

Board of Trustees of the  
University of Massachusetts

*Report on Compliance for Each Major Federal Program*

We have audited the University of Massachusetts' (the University) compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of the University's major federal programs for the year ended June 30, 2019. The University's major federal programs are identified in the summary of auditors' results section of the accompanying schedule of findings and questioned costs.

*Management's Responsibility*

Management is responsible for compliance with federal statutes, regulations, and the terms and conditions of its federal awards applicable to its federal programs.

*Auditors' Responsibility*

Our responsibility is to express an opinion on compliance for each of the University's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the University's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the University's compliance.

*Opinion on Each Major Federal Program*

In our opinion, the University complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2019.

*Report on Internal Control Over Compliance*

Management of the University is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the University's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance



for each major federal program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the University's internal control over compliance.

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

Our consideration of internal control over compliance 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 compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

*Report on Schedule of Expenditures of Federal Awards Required by the Uniform Guidance*

We have audited the financial statements of the business-type activities and the aggregate discretely presented component units of the University of Massachusetts (the University), as of and for the year ended June 30, 2019, and have issued our report thereon dated December 18, 2019, which contained unmodified opinions on those financial statements. Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis as required by the Uniform Guidance and is not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards is fairly stated in all material respects in relation to the financial statements as a whole.

*KPMG LLP*

Boston, Massachusetts  
December 18, 2019

**UNIVERSITY OF MASSACHUSETTS**  
 Schedule of Findings and Questioned Costs  
 June 30, 2019

**(1) Summary of Auditors' Results**

***Financial Statements***

Type of auditors' report issued on whether financial Statements were prepared in accordance with U.S. generally accepted accounting principles: Unmodified

Internal control over financial reporting:

- Material weakness(es) identified? \_\_\_\_\_ Yes   X   No
- Significant deficiency(ies) identified not considered to be material weaknesses? \_\_\_\_\_ Yes   X   None reported

Noncompliance material to the financial statements noted? \_\_\_\_\_ Yes   X   No

***Federal Awards***

Internal control deficiencies over major programs disclosed by the audit:

- Material weakness(es) identified? \_\_\_\_\_ Yes   X   No
- Significant deficiency(ies) identified not considered to be material weaknesses? \_\_\_\_\_ Yes   X   None reported

Type of auditors' report issued on compliance for major programs: Unmodified

Any audit findings disclosed that are required to be reported in accordance with 2 CFR? \_\_\_\_\_ Yes   X   No

***Identification of Major Programs***

<u>Name of federal program or cluster</u>	<u>CFDA numbers</u>
Research and Development Cluster	Various
SNAP Cluster	Various
Small Business Development Center	59.037

Dollar threshold used to distinguish between type A and type B programs: \$3,000,000

Auditee qualified as low-risk auditee?   X   Yes \_\_\_\_\_ No

**(2) Findings Relating to the Financial Statements Reported in Accordance with *Government Auditing Standards***

None.

**(3) Findings and Questioned Costs Related to Federal Awards**

None.