

Financial Statements and Uniform Guidance  
Supplementary Information Together with  
Reports of Independent Certified Public Accountants

**UNIVERSITY OF MASSACHUSETTS**

June 30, 2018 and 2017

# UNIVERSITY OF MASSACHUSETTS

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**PART I**  
**FINANCIAL STATEMENTS**



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## **REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS**

Board of Trustees of  
**University of Massachusetts**

### **Report on the financial statements**

We have audited the accompanying financial statements of the business-type activities and the 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 years ended June 30, 2018 and 2017, and the related notes to the financial statements, which collectively comprise the University’s basic financial statements as listed in the table of contents.

#### Management’s responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditor’s responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We 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.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the University'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 University'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, 2018 and 2017, and the respective changes in financial position and, where applicable, cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

#### Other matters

#### **Required supplementary information**

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 6 through 15 and the Schedule of the University's Proportionate Share of the Net Pension Liability and the Schedule of the University's Contribution of the Massachusetts State Employees' Retirement System on page 47 be presented to supplement the basic financial statements. Such information, although not a required 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. This required supplementary information is the responsibility of management. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America. These limited procedures consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

### **Supplementary information**

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the University's basic financial statements. The schedule of expenditures of federal awards for the year ended June 30, 2018, as required by *Title 2 U.S. Code of Federal Regulations (CFR) Part 200*, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such supplementary information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures. These additional procedures included comparing and reconciling the information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

### **Emphasis of Matter**

The financial statements of the University are intended to present the financial position, the changes in financial position and cash flows that are attributable to the transactions of the University. They do not purpose to, and do not present fairly the position of the Commonwealth of Massachusetts as of June 30, 2018 and 2017, the changes in its financial position, or where applicable, its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

As discussed in Note 1 of the financial statements, the University adopted new accounting guidance effective July 1, 2017 related to postemployment benefits other than pensions. Our opinion is not modified with respect to this matter.

### **Other reporting required by *Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report, dated January 8, 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 an opinion on the effectiveness of the University's 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.

*Grant Thornton LLP*

Boston, Massachusetts  
January 8, 2019

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# Management's Discussion and Analysis (unaudited)

June 30, 2018

## 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, 2018 and 2017, 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 at 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**, founded in 1863, is the flagship of the five-campus UMass system. 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 26th among the nation's top public universities by *U.S. News & World Report* in 2018.

**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, and has 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 ranks in the top 1 percent nationwide on the President's National Community Service Honor Roll and among Washington Monthly's national Top 25 in contribution to the public good. UMass Dartmouth offers students high-quality academic programs through majors and professional and doctoral programs, including the state's only public law school.

**UMass Lowell**, a nationally recognized doctoral university, is the 10th fastest growing university in the country, according to the Chronicle of Higher Education. National recognition of the campus is on the rise. *U.S. News & World Report* ranks UMass Lowell No. 157 in the National Universities Rankings, with programs support workforce and economic development through innovation, entrepreneurship and public-private partnerships. The university 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, UMMS has remained true to its founding mission while also becoming globally recognized in biomedical research. UMMS has three graduate schools—School of Medicine, Graduate School of Biomedical Sciences and 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 67,000 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 income before other revenues, expenses, gains, and losses was \$2.8 million for fiscal year 2018. 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, the University's income before other revenues, expenses, gains, and losses was \$78.7 million.

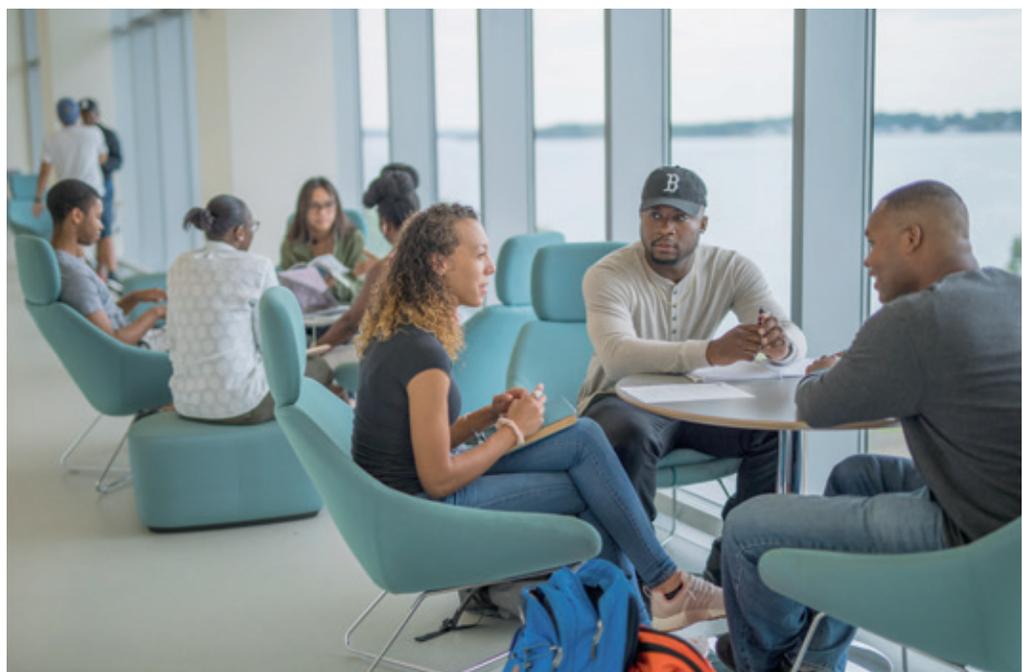
From fiscal year 2017 to fiscal year 2018, the University's operating revenues increased by \$28.2 million driven by an increase in tuition & fees and auxiliary revenue from both a rate increase and enrollment increases. Grant revenues increased due to new government and private grant activity. Operating expenses increased by \$141.0 million primarily driven by the impact of recording postemployment benefit expenses in connection with the adoption of GASB 75, a collective bargaining rate increase, a state fringe rate increase and depreciation associated with the University's capital plan. Non-operating revenues increased \$25.7 million primarily attributed to an increase in state appropriations and strong investment performance.

The University's combined net position decreased \$665.4 million from \$3.1 billion in fiscal year 2017 to \$2.4 billion in fiscal year 2018. This decrease is primarily a result of the University's implementation of GASB 75. In addition to the expenses recorded in 2018 related to OPEB, the implementation of this standard resulted in a reduction of \$743.0 million to the beginning net position in the 2018 Statement of Revenues, Expenses, and Changes in Net Position as of July 1, 2017. The application of GASB 75 was recorded at the beginning of fiscal year 2018 because this was the earliest date for which recognition was practical, based on available information.

## 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, 2018 and 2017. The University's net position (the difference between assets 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. Note 15 to the accompanying financial statements depicts the designations of unrestricted net position at June 30, 2018.

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, endowment 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 analysis 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 (WCCC) and Subsidiary, 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, 2018, 2017, and 2016, respectively, are presented on page 9.

As of June 30, 2018, total net position was \$2.4 billion. The University's largest asset continues to be its capital assets, net of accumulated depreciation, of \$5.1 billion at June 30, 2018, \$4.9 billion at June 30, 2017 and \$4.6 billion at June 30, 2016.

Liabilities totaled \$5.1 billion at June 30, 2018, an increase of \$1.0 billion over fiscal year 2017. Long-term liabilities represent 82% of total liabilities at June 30, 2018, primarily consisting of \$2.6 billion of long-term debt and \$1.2 billion of pension and other postemployment benefit (OPEB) liabilities. With the adoption of GASB 75, the University was required to recognize \$817.4 million related to OPEB obligations.

The University's current assets as of June 30, 2018 of \$918.7 million were less than current liabilities of \$934.5 million, and as a result the current ratio was \$0.98 in assets to every one dollar in liabilities. This is due to an increase of the current portion of long-term liabilities. As of June 30, 2017, current assets of \$742.5 million were greater than current liabilities of \$622.1 million, resulting in a current ratio of \$1.19. As of June 30, 2016, current assets of \$677.9 million were less than current liabilities of \$774.8 million, resulting in a current ratio of \$0.86.

## Revenues, Expenses, and Changes in Net Position

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

**CONDENSED STATEMENTS OF NET POSITION**

As of June 30, 2018, 2017, and 2016 (\$ in thousands)	2018	2017	2016
<b>Assets</b>			
Current assets	\$ 918,685	\$ 742,482	\$ 677,927
Noncurrent assets			
Capital assets, net	5,075,476	4,854,110	4,615,776
All other noncurrent assets	1,291,309	1,404,203	1,294,028
Total assets	7,285,470	7,000,795	6,587,731
<b>Deferred Outflows of Resources</b>	341,335	275,725	293,432
<b>Liabilities</b>			
Current liabilities	934,525	622,084	774,837
Noncurrent liabilities	4,161,911	3,562,485	3,294,183
Total liabilities	5,096,436	4,184,569	4,069,020
<b>Deferred Inflows of Resources</b>	141,485	37,671	12,050
<b>Net Position</b>			
Net investment in capital assets	2,288,599	2,208,370	2,013,966
Restricted:			
Nonexpendable	28,022	27,443	18,384
Expendable	222,343	201,710	218,272
Unrestricted	(150,080)	616,757	549,471
<b>Total Net Position</b>	<b>\$ 2,388,884</b>	<b>\$ 3,054,280</b>	<b>\$ 2,800,093</b>

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

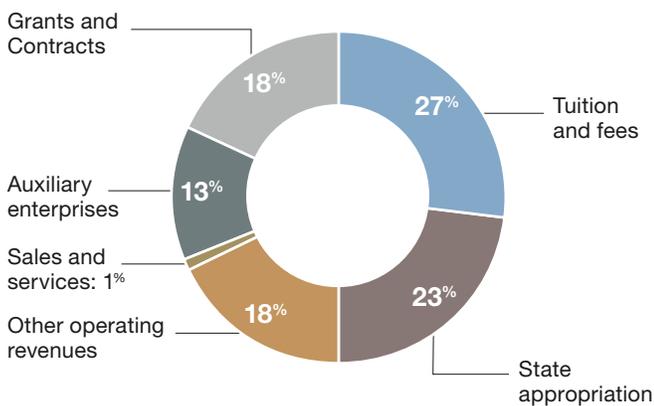
As of June 30, 2018, 2017, 2016 (\$ in thousands)	2018	2017	2016
<b>Operating Revenues</b>			
Tuition and fees, net of scholarships	\$ 874,826	\$ 847,832	\$ 826,815
Grants and contracts	560,990	560,081	528,352
Auxiliary enterprises	416,733	400,822	383,281
Other operating revenues	616,265	631,854	665,048
Total operating revenues	2,468,814	2,440,589	2,403,496
<b>Operating Expenses</b>	3,300,392	3,158,953	3,140,753
<b>Operating Loss</b>	(831,578)	(718,364)	(737,257)
<b>Nonoperating Revenues (Expenses)</b>			
Federal appropriations	6,688	6,602	6,827
State appropriations	751,894	720,817	669,748
Interest on indebtedness	(115,851)	(110,069)	(105,276)
Nonoperating federal grants	81,590	74,050	75,743
Other nonoperating income	110,062	117,248	90,443
Total nonoperating revenues (expenses)	834,383	808,648	737,485
<b>Income Before Other Revenues, Expenses, Gains and Losses</b>	2,805	90,284	228
<b>Other Revenues, Expenses, Gains And Losses</b>			
Capital appropriations, grants and other sources	76,169	150,460	172,557
Disposal of plant facilities	(6,695)	(4,274)	(10,462)
Other additions (deductions)	5,307	17,717	(29,578)
Total other revenues, expenses, gains, and losses	74,781	163,903	132,517
<b>Total Increase In Net Position</b>	77,586	254,187	132,745
<b>Net Position</b>			
Net position at the beginning of the year	3,054,280	2,800,093	2,667,348
Cumulative effect of adopting GASB 75*	(742,982)	-	-
Net position at the beginning of the year, restated	2,311,298	2,800,093	2,667,348
<b>Net position at the end of the year</b>	<b>\$ 2,388,884</b>	<b>\$ 3,054,280</b>	<b>\$ 2,800,093</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 appropriation 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 for fiscal year 2018, including state appropriations, increased \$59.3 million (1.9%) from \$3.2 billion in fiscal year 2017. Total operating revenues in fiscal year 2017, including state appropriations, increased \$88.2 million (2.9%) from \$3.1 billion in fiscal year 2016.

#### FISCAL YEAR 2018 OPERATING REVENUES (including State Appropriations)



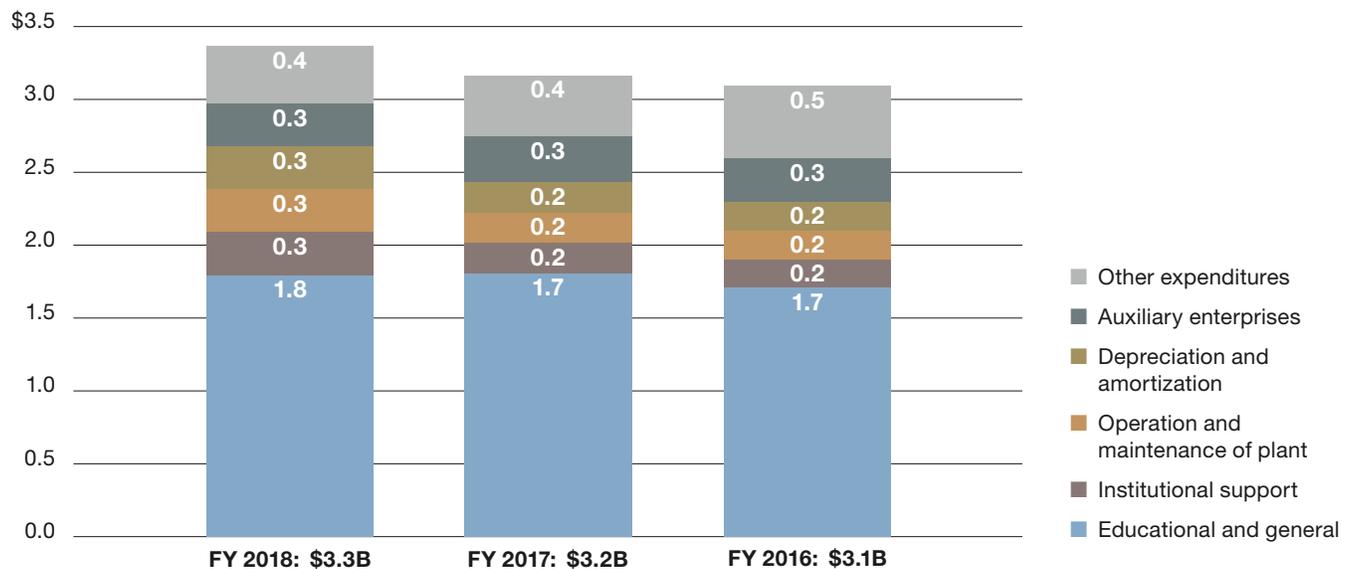
As noted in the fiscal year 2018 operating revenues chart below, the most significant sources of operating revenue for the University in fiscal year 2018 were tuition and fees, grants and contracts, and State appropriations.

Other operating revenues include revenues related to public service activities and consist largely of sales and services provided to third parties by UMMS through its Commonwealth Medicine (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, public service activities also include revenue received 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. Public service activities expenditures also include payments made to the Commonwealth pursuant to requirements of legislation enacted by the State Legislature of Massachusetts.

In fiscal year 2018, operating expenses, including depreciation and amortization, totaled \$3.3 billion, as compared to \$3.2 billion in 2017 and \$3.1 billion in 2016. Of this total, \$1.8 billion or 55% was used to support the academic core activities of the University, including \$471.4 million in research. The education and general portion in 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.

#### THREE YEAR OPERATING EXPENSES

(\$ in billions)



## State Appropriations

In fiscal year 2018, 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 appropriation is unrestricted revenue, nearly 100% of the state appropriation supports 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 the 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 Change in Net Position. The University pays the Commonwealth for the fringe benefit cost of the employees paid from funding sources other than Commonwealth operating appropriations (details of the payment are referenced in Note 11 to the accompanying financial statements). These amounts are not included in the State appropriations.

The University's State appropriation including fringe benefits increased in fiscal year 2018 by \$31.1 million from fiscal year 2017, due to a slightly higher level of state appropriation support and an increase in related fringe benefit support. The difference between 2017 and 2016 is mainly based on a change in the accounting treatment of mandatory waivers and tuition remitted as a result of full tuition retention implemented in fiscal year 2017. The passage of this legislation allowed for



100% of tuition to be retained by the University. Beginning in fiscal year 2017, the State appropriation decreased to reflect the reduction in appropriation to offset the tuition that previously was remitted to the State. These changes served to have a net zero impact on both the State funding and the University's operating budget.

The table below details the State appropriations for the fiscal years ended June 30, 2018, 2017, and 2016 and highlights the change as a result of full tuition retention in 2017. The State appropriations are primarily utilized by the University to fund payroll.

### STATE APPROPRIATIONS— Change as a Result of Full Tuition Retention

(\$ in thousands)	FY 2018	FY 2017	FY 2016
State appropriations	\$ 528,868	\$ 512,900	\$ 546,952
Plus: fringe benefits	223,026	207,917	178,032
	751,894	720,817	724,984
Less: mandatory waivers	-	-	(24,653)
Less: tuition remitted	-	-	(30,583)
<b>Commonwealth support, net</b>	<b>\$ 751,894</b>	<b>\$ 720,817</b>	<b>\$ 669,748</b>

## Capital Appropriations

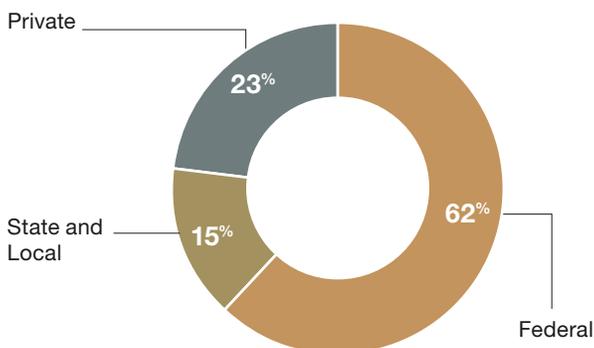
The University faces a financial challenge to maintain and upgrade its capital assets including its infrastructure, buildings and grounds. In order to have a successful capital program, the University must rely on a combination of revenue sources to fund its capital investment. In fiscal year 2018, 2017 and 2016, the capital support provided to the University through appropriations and grants from the Commonwealth was \$67.4 million, \$121.4 million and \$121.3 million, respectively. Beginning in fiscal year 2008, this funding was attributed to the Commonwealth's Division of Capital Asset Management ("DCAM") which funded several large capital projects through the State's Higher Education Bond Bill and Life Sciences Bond Bill, and funds projects on each of the campuses. More recently, state funding has significantly decreased as a result of the implementation of a new capital planning process coordinated by the Executive Office of Education. Funding for this new process is focused on deferred maintenance and as a result the University has changed its funding model for capital investments in new projects, including debt financing and exploring public private partnerships.

## Grant and Contract Revenue

Among Massachusetts colleges and universities, the University ranks third in research and development expenditures, behind only MIT and Harvard. 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.

Collectively, UMass Amherst and UMass Medical School account for approximately 75% of the total research enterprise. The chart below details the University's grant and contract revenues by source for the year ended June 30, 2018.

### GRANT AND CONTRACT REVENUE



## 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 Note 1 to the accompanying financial statements. Additionally, the individual financial statements of each foundation can be obtained by contacting the foundations directly: [jmurphy@umassp.edu](mailto:jmurphy@umassp.edu) for UMF and [giving@umassd.edu](mailto: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 as of June 30, 2018, 2017 and 2016 was \$871.9 million, \$819.7 million and \$734.2 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, 2018, 2017 and 2016 was \$54.8 million, \$53.1 million and \$52.7 million, of which the majority is invested with UMF.

### Tuition and Fees

For academic year 2017–2018, tuition was raised an average of 3.1% for in-state undergraduate students. For academic year 2016–2017, tuition was raised on average 5.6%. Affordability continues to be a priority of the University and increases in fees are considered in conjunction with State support on an annual basis.

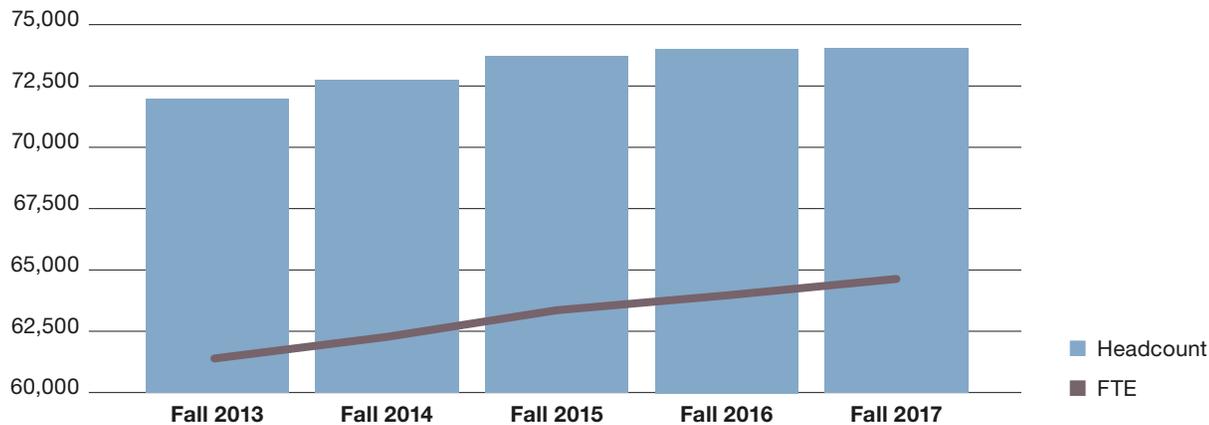
### Enrollment

As shown in the table on page 14, total enrollment in the fall of 2017 was 64,530 FTE (74,572 headcount students), an increase of 0.9% over the previous year's enrollment of 63,977 FTE (74,496 headcount students). Enrollment in the fall of 2015 was 63,333 FTE (73,744 headcount students). The five year enrollment growth of 5.2% is meaningful as other institutions of higher education have seen 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.

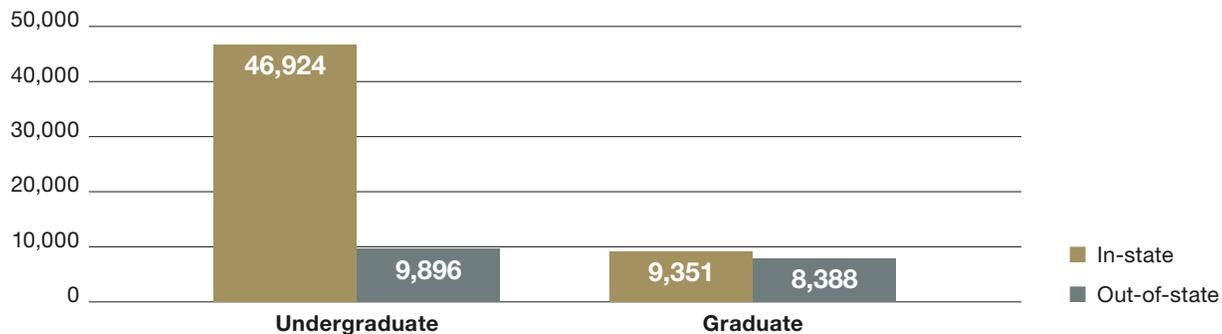
Admission to the University is open to residents of the Commonwealth and non-residents on a competitive basis. For the fall 2017 semester, Massachusetts residents accounted for 82.6% of the University's total undergraduate enrollment. Refer to the table below for detail on the fall 2017 enrollment.

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 2018, UMassOnline and the Continuing Education units at the five campuses collaboratively 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. For fiscal year 2017, UMassOnline generated tuition revenue of \$104.9 million and supported 75,565 course enrollments, an increase of 9.2% for revenue and an increase of 6.6% for course enrollments as compared to fiscal year 2016.

### TOTAL ENROLLMENT



### FALL 2017 ENROLLMENT BY TYPE



## Long-Term Debt

The University had outstanding long-term debt of \$3.1 billion at June 30, 2018, 2017 and 2016. 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 WCCC. Long-term debt is the University's largest liability as of June 30, 2018. For further details on outstanding balances with each issuer, refer to Note 9 of the accompanying financial statements.

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).

## University 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 of Massachusetts and the University of Massachusetts 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.

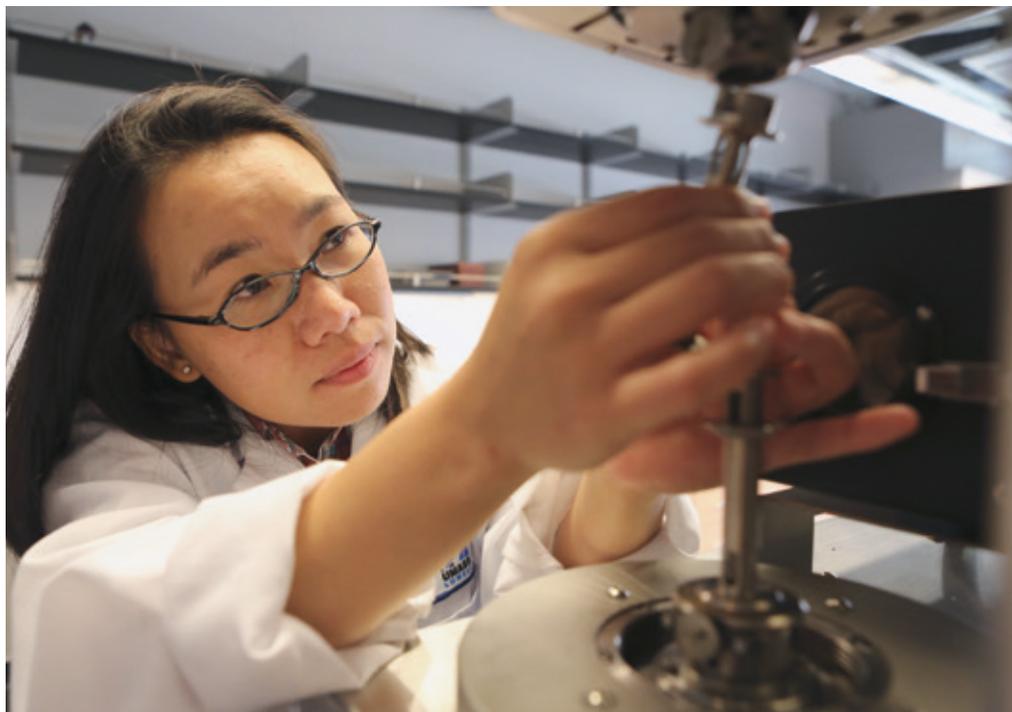
## Limitations on Additional Indebtedness

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 of Trustee policy, each campus' outstanding debt cannot exceed 8% of 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 payments 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, presently 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, 2018, 2017 and 2016 was \$113.5 million, \$115.3 million and \$117.4 million, respectively.



## Capital Plan

A majority of the capital spending during fiscal year 2018 related to continued investments in new buildings and renovation projects. In September 2018, the University's Trustees approved a five-year update to its capital plan for fiscal years 2019–2023, with \$2.1 billion of projects approved to continue or commence over the next 24 months. The University generally has funded its capital plans through a combination of funding received from 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 University Trustees in prior-year capital plans. In recent years, the University enhanced its policy regarding the approval of capital projects to ensure a clear process and to provide for multiple reviews during the process so that the President's Office, Building Authority and the Board of Trustees (the Board) are actively involved. Since the capital program requires significant investment, the President's office and the Board wanted to ensure that the proper steps were in place for reviewing and approving projects so that the University continues to live within its current capital and debt policies.

## 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 of Trustees 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, 2018 and 2017 (\$ in thousands)	2018	2017
<b>Assets</b>		
<b>Current assets</b>		
Cash and cash equivalents	\$ 88,463	\$ 92,344
Cash held by state treasurer	14,689	15,114
Accounts receivable, net	310,371	316,075
Short-term investments	470,139	286,171
Other current assets	35,023	32,778
Total current assets	918,685	742,482
<b>Noncurrent assets</b>		
Cash held by state treasurer	8,009	7,599
Deposits with bond trustees	319,228	438,585
Accounts receivable, net	64,251	62,121
Long-term investments	775,294	766,392
Other assets	124,527	129,506
Capital assets, net	5,075,476	4,854,110
Total noncurrent assets	6,366,785	6,258,313
<b>Total assets</b>	<b>7,285,470</b>	<b>7,000,795</b>
<b>Deferred Outflows of Resources</b>	<b>341,335</b>	<b>275,725</b>
<b>Liabilities</b>		
<b>Current liabilities</b>		
Accounts payable and accrued expenses	336,077	306,463
Unearned revenues and advances	59,323	52,503
Long-term debt, current portion	445,035	207,424
Other current liabilities	94,090	55,694
Total current liabilities	934,525	622,084
<b>Noncurrent liabilities</b>		
Unearned revenues and advances	120,990	60,702
Long-term debt	2,644,033	2,886,927
Derivative instruments, interest rate swaps	41,602	61,839
Net pension liability	420,234	429,871
Net other postemployment benefits liability	817,357	-
Other long-term liabilities	117,695	123,146
Total noncurrent liabilities	4,161,911	3,562,485
<b>Total liabilities</b>	<b>5,096,436</b>	<b>4,184,569</b>
<b>Deferred Inflows of Resources</b>	<b>141,485</b>	<b>37,671</b>
<b>Net Position</b>		
Net investment in capital assets	2,288,599	2,208,370
Restricted:		
Nonexpendable	28,022	27,443
Expendable	222,343	201,710
Unrestricted	(150,080)	616,757
<b>Total net position</b>	<b>\$ 2,388,884</b>	<b>\$ 3,054,280</b>

See accompanying notes to the financial statements.

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

For The Years Ended June 30, 2018 and 2017 (\$ in thousands)	2018	2017
<b>Revenues</b>		
<b>Operating Revenues</b>		
Tuition and fees (net of scholarship allowances of \$310,106 at June 30, 2018 and \$288,708 at June 30, 2017)	\$ 874,826	\$ 847,832
Grants and contracts	560,990	560,081
Sales and services, educational activities	30,591	28,910
Auxiliary enterprises	416,733	400,822
Other operating revenues:		
Sales and services, independent operations	68,497	79,261
Sales and services, public service activities	381,018	418,726
Other	136,159	104,957
<b>Total operating revenues</b>	<b>2,468,814</b>	<b>2,440,589</b>
<b>Expenses</b>		
<b>Operating expenses</b>		
Educational and general		
Instruction	876,235	824,042
Research	471,135	447,370
Public service	78,238	68,083
Academic support	187,495	177,173
Student services	156,934	151,033
Institutional support	271,535	247,740
Operation and maintenance of capital assets	255,825	240,501
Depreciation and amortization	261,417	245,300
Scholarships and fellowships	50,410	47,710
Auxiliary enterprises	313,741	306,850
Other expenditures		
Independent operations	52,211	57,276
Public service activities	325,216	345,875
<b>Total operating expenses</b>	<b>3,300,392</b>	<b>3,158,953</b>
<b>Operating loss</b>	<b>(831,578)</b>	<b>(718,364)</b>
<b>Nonoperating Revenues (Expenses)</b>		
Federal appropriations	6,688	6,602
State appropriations	751,894	720,817
Gifts	39,022	26,253
Investment income	37,622	31,567
Unrealized gain on investments	5,558	15,466
Endowment income distributed for operations	26,742	26,877
Interest on indebtedness	(115,851)	(110,069)
Nonoperating federal grants	81,590	74,050
Other nonoperating income	1,118	17,085
<b>Net nonoperating revenues</b>	<b>834,383</b>	<b>808,648</b>
<b>Income before other revenues, expenses, gains, and losses</b>	<b>2,805</b>	<b>90,284</b>
<b>Other Revenues, Expenses, Gains and Losses</b>		
Capital appropriations	67,437	121,380
Capital grants, contracts and gifts	8,732	29,080
Endowment return, net of amount used for operations	8,166	21,278
Disposal of plant facilities	(6,695)	(4,274)
Other deductions	(2,859)	(3,561)
<b>Total other revenues, expenses, gains, and losses</b>	<b>74,781</b>	<b>163,903</b>
<b>Total increase in net position</b>	<b>77,586</b>	<b>254,187</b>
<b>Net Position</b>		
Net position at beginning of year	3,054,280	2,800,093
Cummulative effect of adopting GASB 75	(742,982)	-
Net position at beginning of year, adjusted	2,311,298	2,800,093
<b>Net position at end of year</b>	<b>\$ 2,388,884</b>	<b>\$ 3,054,280</b>

See accompanying notes to the financial statements.

## STATEMENTS OF CASH FLOWS

For The Years Ended June 30, 2018 and 2017 (\$ in thousands)	2018	2017
<b>Cash Flows from Operating Activities</b>		
Tuition and fees	\$ 974,631	\$ 852,889
Grants and contracts	569,408	814,018
Payments to suppliers	(848,595)	(1,131,219)
Payments to employees	(1,690,799)	(1,461,100)
Payments for benefits	(402,823)	(401,143)
Payments for scholarships and fellowships	(50,402)	(47,675)
Loans issued to students and employees	(8,068)	(8,105)
Collections of loans to students and employees	8,751	6,989
Auxiliary enterprises	416,628	357,968
Sales and services, educational	30,573	25,118
Sales and services, independent operations	68,497	76,221
Sales and services, public service activities	394,927	428,012
Other receipts, net	194,419	-
<b>Net cash used for operating activities</b>	<b>(342,853)</b>	<b>(488,027)</b>
<b>Cash Flows from Noncapital Financing Activities</b>		
State appropriations	751,894	720,817
Federal appropriations	6,688	6,602
Grants, contracts and gifts for other than capital purposes	38,809	32,856
Nonoperating federal grants	81,590	74,050
Student organization agency transactions	1,549	155
<b>Net cash provided by noncapital financing activities</b>	<b>880,530</b>	<b>834,480</b>
<b>Cash Flows from Capital and Other Financing Activities</b>		
Proceeds from capital debt	105,380	236,666
Bond issuance costs paid	-	(620)
Capital appropriations	67,437	121,333
Capital grants, contracts and gifts	8,945	9,332
Purchases of capital assets and construction	(487,912)	(475,488)
Principal paid on capital debt and leases	(96,325)	(120,353)
Interest paid on capital debt and leases	(125,825)	(115,201)
<b>Net cash used for capital financing activities</b>	<b>(528,300)</b>	<b>(344,331)</b>
<b>Cash Flows from Investing Activities</b>		
Proceeds from sales and maturities of investments	1,244,020	1,124,176
Interest on investments	19,774	10,605
Purchases of investments	(1,396,424)	(1,187,713)
<b>Net cash used for investing activities</b>	<b>(132,630)</b>	<b>(52,932)</b>
<b>Net Decrease in Cash and Cash Equivalents</b>	<b>(123,253)</b>	<b>(50,810)</b>
<b>Cash and cash equivalents: beginning of the year</b>	<b>553,642</b>	<b>604,452</b>
<b>Cash and cash equivalents: end of the year</b>	<b>430,389</b>	<b>553,642</b>
<b>Reconciliation of Operating Loss to Net Cash Used by Operating Activities</b>		
Operating loss	(831,578)	(718,364)
Adjustments to reconcile loss to net cash used by operating activities:		
Depreciation and amortization expense	261,417	245,300
Changes in assets and liabilities:		
Accounts receivable, net	3,574	(33,994)
Other assets	2,734	44,153
Accounts payable and accrued expenses	41,749	(26,041)
Unearned revenues and advances	67,108	11,846
Other liabilities	33,411	(46,969)
Pension liability	(9,637)	21,453
Other postemployment benefits liability	74,375	-
Changes in deferred outflows related to employee benefits	(89,820)	(11,032)
Changes in deferred inflows	103,814	25,621
<b>Net cash used for operating activities</b>	<b>(342,853)</b>	<b>(488,027)</b>
<b>Supplemental Disclosure of Noncash Activities</b>		
Bonds issued to refund existing debt	-	130,325
Assets acquired and included in accounts payable and other liabilities	49,110	60,853
Donated assets	1,727	85,632
Accrued interest and bond issuance costs	22,305	22,696

See accompanying notes to the financial statements.

## COMPONENT UNITS STATEMENTS OF FINANCIAL POSITION

As of June 30, 2018 and 2017 (\$ in thousands)	2018	2017
<b>Assets</b>		
Cash	\$ 1,153	\$ 1,424
Bequests receivable	399	963
Pledges receivable, net	25,180	24,960
Investments of the Foundation and held on behalf of the University	1,223,596	1,165,270
Prepaid expenses and other assets	2,592	2,576
Land, property, plant and equipment, net	16,906	17,332
<b>Total assets</b>	<b>1,269,826</b>	<b>1,212,525</b>
<b>Liabilities and Net Assets</b>		
Liabilities		
Accounts payable and accrued expenses	448	74
Deferred revenue	1,049	1,162
Obligations to beneficiaries of split-interest agreements	2,384	2,764
Assets held on behalf of others	678,890	660,074
<b>Total liabilities</b>	<b>682,771</b>	<b>664,074</b>
Net assets		
Unrestricted	33,993	40,589
Temporarily restricted	119,694	99,883
Permanently restricted	433,368	407,979
<b>Total net assets</b>	<b>587,055</b>	<b>548,451</b>
<b>Total liabilities and net assets</b>	<b>\$ 1,269,826</b>	<b>\$ 1,212,525</b>

## COMPONENT UNITS STATEMENTS OF ACTIVITIES

For The Years Ended June 30, 2018 (with summarized financial information for the year ended June 30, 2017) (\$ in thousands)	Unrestricted	Temporarily Restricted	Permanently Restricted	Total 2018	Total 2017
<b>Support and Revenue</b>					
Gifts, bequests and grants	\$ 552	\$ 6,056	\$ 24,995	\$ 31,603	\$ 43,573
Other contributions	946	515	509	1,970	3,199
Total investment income, including net gains (losses) - net of fees	36,000	28,998	(283)	64,715	109,274
Investment management fee	11,022	-	-	11,022	10,010
Other income	51	236	36	323	301
Net assets released from restrictions	15,783	(15,783)	-	-	-
<b>Total support and revenue</b>	<b>64,354</b>	<b>20,022</b>	<b>25,257</b>	<b>109,633</b>	<b>166,357</b>
<b>Expenses</b>					
Distributions to the University	30,846	-	-	30,846	31,161
University program support	10,084	-	-	10,084	11,037
Fundraising support	6,210	-	-	6,210	5,684
Administrative and general	3,122	-	-	3,122	2,611
<b>Total expenses</b>	<b>50,262</b>	<b>-</b>	<b>-</b>	<b>50,262</b>	<b>50,493</b>
<b>Excess of support and revenue over expenses</b>	<b>14,092</b>	<b>20,022</b>	<b>25,257</b>	<b>59,371</b>	<b>115,864</b>
Less: amounts held on behalf of the University	(18,697)	-	-	(18,697)	(38,633)
Less: amounts held on behalf of EMKI	(1,683)	-	-	(1,683)	(489)
Transfers to (from) other funds	(89)	(43)	132	-	-
Change in value of split interest agreements	(387)	-	-	(387)	(737)
Adjustment for underwater endowments	168	(168)	-	-	-
<b>Change in net assets</b>	<b>(6,596)</b>	<b>19,811</b>	<b>25,389</b>	<b>38,604</b>	<b>76,005</b>
Net assets, beginning of year	40,589	99,883	407,979	548,451	472,446
<b>Net assets, end of year</b>	<b>\$ 33,993</b>	<b>\$ 119,694</b>	<b>\$ 433,368</b>	<b>\$ 587,055</b>	<b>\$ 548,451</b>

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# Notes to Consolidated Financial Statements

## 1. Summary of Significant Accounting Policies

### Reporting entity

The financial statements herein present the financial position, results of operations, changes in net position, and cash flows of the University of Massachusetts (University), a federal land grant institution. 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 of Massachusetts (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 included in the financial statements of the University because of the significance and exclusivity of their financial relationships with the University.

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). These foundations are related tax-exempt organizations founded to foster and promote the growth, progress and general welfare of the University. These foundations are Massachusetts not-for-profit organizations legally separate from the University but included in the financial statements due to the nature and significance of their financial relationship with the University. These foundations are separately presented as an aggregate component unit on page 19 of these financial statements in accordance with accounting and reporting requirements prescribed by the Financial Accounting Standards Board (FASB). All of the financial data for these organizations was derived from each entity's individual audited financial statements, each having a fiscal year end of June 30. In these financial statements, UMF and UMDF are collectively known as The Foundation. Refer to Note 4 which includes the Foundation agency funds held on behalf of the University.

The separately audited financial statements of the component units noted above may be obtained from the various entities, or by contacting the University Controller, [bcevallos@umassp.edu](mailto:bcevallos@umassp.edu), for component unit contact information.

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.

### 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. These financial statements are reported on a combined basis, and all intra-University transactions are eliminated.

Pursuant to GASB Statement No. 35, *Basic Financial Statements and Management's Discussion and Analysis-for Public Colleges and Universities* (GASB 35), 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 Statement of Revenues, Expenses and Changes in Net Position, the University's operating activities consist of tuition and fees, grants and contracts, sales and services and auxiliary enterprise revenues. 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 are recognized when earned and expenses are recognized when incurred with the exception of revenue earned on certain public service activities. Restricted grant revenue is recognized only when all eligibility requirements have been met. The University applies restricted net assets first when an expense or outlay is incurred for purposes for which both restricted and unrestricted net assets are available.

## Net position

GASB 35 establishes standards for external financial reporting by public colleges and universities that resources be classified into the following net position categories:

- **Invested in capital assets, net of related debt:** 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 consist primarily of demand deposit accounts, savings accounts, and money market accounts with an original maturity of three months or less.

## Accounts receivable, net

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

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. These pledges have been recorded as pledges receivable on the Statement of Net Position and as non-endowment gift revenues or capital gift revenue on the Statement of Revenues, Expenses, and Changes in Net Position, at the present value of the estimated future cash flows. Since the University cannot fulfill the time requirement for pledges to endowments until the gift is received, pledges to endowments are not reported. Because of uncertainties with regard to their realizability and valuation, bequests and other conditional promises are not recorded.

## Investments

Investments are measured and recorded 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

The University of Massachusetts Foundation, Inc. (Foundation) maintains and administers the University's endowment assets and Intermediate Term Investment Fund (ITIF). The Foundation 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, 2018 and 2017 was 4%.

## Inventories

The University inventories consist of books, general merchandise, central stores, vaccines, and operating supplies 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.

In the table to the right is the range of useful lives for the University's depreciable assets:

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.

Depreciable Asset	Useful Life
Land improvements	20 years
Buildings	20–50 years
Building improvements	3–20 years
Equipment, furniture and IT infrastructure	3–15 years
Software	5 years

## Deferred outflows of resources

Deferred outflows of resources are the consumption of assets or increase in liabilities that are applicable to future reporting periods and are reported in a separate section of the Statements of Net Position.

The University's deferred outflows consist of:

- The difference between the reacquisition price and the carrying value of refunded revenue bonds. These amounts are to be recognized as a component of interest expense over the shorter of the remaining life of the refunded bonds or the life of the new bonds.
- The accumulated change in the fair value of hedging derivatives. This change is recorded to offset the value of the University's interest-rate swap liabilities which qualify for treatment as an effective hedge based on historic interest flows.
- The deferral of the impact of assumption changes and investment losses that increase the pension and other postemployment benefits liabilities. These amounts are recognized as a component of operating expenses in future reporting periods.

## Compensated absences

Employees earn the right to be compensated during absences for annual vacation leave and sick leave. 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 based on the amount estimated to be paid to eligible employees in one year and beyond one year, respectively, on the Statements of Net Position.

## 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 recognized as qualifying expenses are incurred and therefore the revenue is earned.

In addition, certain loans to students are administered by the University with funding primarily supported by the federal government. The University's Statements of Net Position include both the notes receivable and the related federal refundable loan liability, representing federal capital contributions owed upon termination of the program.

## Deferred inflows of resources

Deferred inflows of resources are the acquisition of assets or reduction of liabilities that are applicable to future reporting periods and are reported in a separate section of the Statements of Net Position.

The University's deferred inflows consist of:

- Experience gains that reduce the pension and other postemployment benefits liabilities to be recognized as a component of operating expenses in future reporting periods.

## 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 monies from federal and state government agencies under grants and contracts for research and other activities including medical service reimbursements. The University records a receivable and corresponding revenue for grants and contracts and capital appropriations 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, 2018 and 2017 was \$131.4 million and \$131.6 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 entity 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.

## Other operating revenues and expenditures: sales and services, public service activities

Public service activities consist largely of sales and services provided to third parties by the UMass Medical School under its Commonwealth Medicine (CWM) programs, which 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. Included in this category of activities are CWM revenues of \$226.2 million and \$296.0 million for the years ended June 30, 2018 and 2017, respectively. Included in expenditures are CWM expenditures of \$173.6 million and \$253.0 million for the years ended June 30, 2018 and 2017, respectively.

Public Service Activities also include payments received by the Medical School for educational services it provides to its clinical affiliate, UMass Memorial Hospital, as required by the enabling legislation enacted by the Commonwealth in 1997. Educational services revenues included in public service revenues were \$171.7 million and \$140.0 million for the years ended June 30, 2018 and 2017, respectively. Finally, Public Service Activity expenditures include payments made to the Commonwealth of \$154.7 million and \$96.5 million for the years ended June 30, 2018 and 2017, pursuant to requirements of legislation enacted by the Commonwealth.

## 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.

Pursuant to the provisions of Paragraph(e), Section 5 of Chapter 163 of the Acts of 1997 and consistent with the September 22, 1992 Memorandum of Understanding between the Commonwealth's Executive Office of Administration and Finance and the University of Massachusetts, the University's Medical School campus has assumed the obligation for the cost of fringe benefits provided by the Commonwealth to University Medical School employees (other than those employees paid from state appropriated funds) for all periods on or after July 1, 1989. The Medical School determines the actual costs for the health insurance benefits and actuarially calculates the incurred service costs for pensions and retiree health insurance.

## 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 and the Building Authority are component units of the Commonwealth and are exempt from Federal and state income tax under the doctrine of intergovernmental tax immunity found in the U.S. Constitution. The University qualifies as a public charity eligible to receive charitable contributions under Section 170(b)(1)(A)(ii) of the Internal Revenue Code, as amended (the Code). The Building Authority qualifies as a public charity under Section 170(b)(1)(A)(iv) of 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, 2018 and 2017, respectively.

## Newly implemented accounting standards

Effective for fiscal year 2018, the University adopted GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. The Statement supersedes GASB Statement No. 45 and establishes new requirements for calculating and reporting the University's postemployment benefits. The implementation of GASB 75 resulted in a cumulative effect adjustment of \$743.0 million to the beginning net position of the 2018 Statement of Revenues, Expenses, and Changes in Net Position as of July 1, 2017 for the recording of the obligation associated with postemployment benefits other than pensions. The application of GASB 75 was recorded effective in the beginning of fiscal year 2018 because this was the earliest date for which was practical based on available information.

Effective for fiscal year 2018, GASB issued Statement No. 86, *Certain Debt Extinguishment Issues*, to improve consistency in accounting and financial reporting for in-substance defeasance of debt. This Statement also improves accounting and financial reporting for prepaid insurance on debt that is extinguished and notes to financial statements for debt that is defeased in substance. Adoption of this standard is reflected in the required disclosures surrounding debt in fiscal year 2018, with no material impact to those disclosures.

Effective for fiscal year 2018, GASB issued Statement No. 81, *Irrevocable Split-Interest Agreements*, which intends to improve accounting and financial reporting for irrevocable split-interest agreements by providing recognition and measurement guidance for beneficiaries of these type of agreements. Adoption of this standard had no effect on the University's financial statements.

## Reclassifications

Certain reclassifications were made in 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 \$22.7 million at June 30, 2018 and June 30, 2017. 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 Building Authority. At June 30, 2018 and 2017, there was \$319.2 million and \$438.6 million, respectively, held by trustees related to the Building Authority.

Pursuant to Trust Agreements between the Building Authority and its bond trustees, all funds deposited with those trustees shall be continuously maintained for the benefit of the Building Authority and Registered owners of the Bonds.

All investments shall be held with a bank or trust company approved by the Trustees and the Building Authority, as custodians, or in such other manner as may be required or permitted by applicable state and Federal laws and regulations. Investments shall consist of direct obligations of, or obligations which are unconditionally guaranteed by the United States of America, or any other agency or corporation which has been created pursuant to an act of Congress of the United States as an agency or instrumentality thereof; or other marketable securities eligible as collateral for the deposit of trust funds under regulations of the Comptroller of the Currency having a market value not less than the amount of such deposit. Direct obligations of, or obligations which are unconditionally guaranteed by the United States of America or any other agency or corporation which has been created pursuant to an act of Congress of the United States as an agency or instrumentality thereof, may be subject to repurchase upon demand by the owner pursuant to a repurchase agreement with a bank or trust company.

**Custodial Credit Risk** – Custodial credit risk is the risk that, in the event of a failure of the counterparty, the University would not be able to recover the value of its deposits and cash equivalents that were in the possession of an outside party. The Building Authority holds a majority of its cash and cash equivalents in high quality money market mutual funds that invest in securities that are permitted investments under the Building Authority's Enabling Act or in money market mutual funds that have been specifically permitted by state legislation.

For the years ending June 30, 2018 and 2017, the Building Authority's cash and cash equivalents consisted of the following (\$ in thousands):

	2018	2017
Cash	\$ 4,093	\$ 5,553
Permitted Money Market Accounts	303,431	426,797
<b>Total Cash and Cash Equivalents</b>	<b>\$ 307,524</b>	<b>\$ 432,350</b>

Deposits are exposed to custodial risk if they are uninsured and uncollateralized. The University

does not have a deposit policy for custodial credit risk. As of June 30, 2018 and June 30, 2017, the bank balances of uninsured deposits totaled \$4.4 million and \$5.1 million, respectively.

Custodial credit risk generally applies only to direct investments in marketable securities. Custodial credit risk does not apply to indirect investment in securities through the use of mutual funds or government investment pools, such as Massachusetts Municipal Depository Trust (MMDT), a money market account sponsored by the Treasurer of the Commonwealth and managed by Federated Investors, Inc. Direct investments in marketable securities are held by the Building Authority's Bond Trustee as the Building Authority's agent. In accordance with the Building Authority's repurchase agreements, collateral for the agreements is held in segregated accounts with market values between 100% and 105% of the repurchase price, depending on the type of asset used as security and the specific repurchase agreement.

**Concentration of Credit Risk** – Concentration of credit risk is assumed to arise when the amount of deposits or investments that the University has with one issuer exceeds 5% or more of the total value of the University's investments or deposits. The Building Authority places no limit on the amount it may invest in any one issuer. As of June 30, 2018 and 2017, the Building Authority had 98.3% and 98.8% of its investments in MMDT, respectively.

**Credit Risk** – Debt securities are subject to credit risk, which is the chance that an issuer will fail to pay interest or principal in a timely manner, or that negative perceptions of the issuer’s ability to make these payments will cause security prices to decline. These circumstances may arise due to a variety of factors such as financial weakness, bankruptcy, litigation and/or adverse political developments. Certain debt securities, primarily obligations of the U.S. government or those explicitly guaranteed by the U.S. government, are not considered to have 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.

**Interest Rate Risk** – Interest rate risk is the risk that changes in interest rates over time will adversely affect the fair value of an investment. The Building Authority has a formal investment policy that establishes minimum credit quality of certain instruments, outlines investment procedures, and provides for periodic reporting. Generally, the Building Authority holds its investments until maturity.

## 4. Investments

The investment portfolio of the University reflected on the Statements of Net Position for the year ended June 30, 2018 and 2017, respectively, includes the following:

	2018	2017
Short-term investments	\$ 470,139	\$ 286,171
Long-term investments	775,294	766,392
<b>Total</b>	<b>\$1,245,433</b>	<b>\$1,052,563</b>

Investment policies are established by the Board of Trustees of the University (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. The Foundation holds 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 Foundation, as of June 30, 2018 and 2017, respectively are summarized below (\$ in thousands):

	University		Foundation	
	2018	2017	2018	2017
Cash and cash equivalents	\$ 118,491	\$ 65,303	\$ 30,545	\$ 29,477
Money market and other investments	321,900	199,000	4,430	6,265
Fixed income investments	135,852	139,294	4,662	4,643
Pooled investments - Fund I	-	-	528,921	488,163
Commercial ventures and intellectual property	1,994	1,674	-	-
Annuity life income funds	15,833	14,657	3,675	4,087
	<b>\$ 594,070</b>	<b>\$ 419,928</b>	<b>\$ 572,233</b>	<b>\$ 532,635</b>
Foundation agency funds:				
Pooled investments - Fund I	341,464	331,524	341,464	331,524
Pooled investments - Fund II	309,899	301,111	309,899	301,111
<b>Total</b>	<b>\$1,245,433</b>	<b>\$1,052,563</b>	<b>\$1,223,596</b>	<b>\$1,165,270</b>

Investments held at the Foundation within Fund I represent the University’s endowment funds. These funds include both donor-restricted endowments and quasi-endowments. Investments held at the Foundation within Fund II represent a portion of the operating cash balance of the University that has been transferred to the Foundation 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 University maintains depository, payroll, disbursement, receipt, and imprest accounts. In addition to bank account deposits, the University 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.

Within the University endowment and similar investment holdings table above, the carrying amounts of bank balances with uninsured or uncollateralized deposits were \$450.1 million and \$293.9 million, at June 30, 2018 and 2017, respectively.

The University held non-money market investments with a carrying and fair market value of \$811.1 million and \$778.0 million at June 30, 2018 and 2017, 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, 2018 and 2017, 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 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>									
US treasury securities	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 44,611	\$ 44,611
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 CMO's	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
Other fixed income	69,199	18,373	16,452	22,319	7,658	2,451	276	8,049	144,777
<b>Total debt securities</b>	<b>\$ 82,873</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>\$ 70,766</b>	<b>\$ 285,436</b>

The table below presents the rated debt investments at fair value by credit quality of the University's investment portfolio as of June 30, 2017 (\$ in thousands):

	S&P quality ratings								Total
	AAA	AA	A	BBB	BB	B	<B	Unrated	
<b>Debt securities</b>									
US treasury securities	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 48,919	\$ 48,919
Government agency bonds	-	-	-	-	-	-	-	432	432
Asset backed securities	14,381	-	179	-	-	-	-	6,011	20,571
Commercial mortgage-backed securities	1,119	-	-	-	-	-	-	4,652	5,771
Government issued commercial mortgage-backed securities	-	-	-	-	-	-	-	253	253
Government mortgage-backed securities	-	-	-	-	-	-	-	3,047	3,047
Non-government backed CMO's	-	-	-	-	-	-	-	885	885
Corporate bonds	743	3,178	23,812	34,950	196	-	-	1,250	64,129
Municipal and provincial bonds	425	1,773	460	1,491	-	-	-	-	4,149
Other fixed income	61,128	25,099	18,617	27,621	13,038	5,683	1,225	8,944	161,355
<b>Total debt securities</b>	<b>\$ 77,796</b>	<b>\$ 30,050</b>	<b>\$ 43,068</b>	<b>\$ 64,062</b>	<b>\$ 13,234</b>	<b>\$ 5,683</b>	<b>\$ 1,225</b>	<b>\$ 74,393</b>	<b>\$ 309,511</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 asset class by limiting investments through targeted allocations to different asset classes.

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

	Investment maturity (in years)				Total
	Less than 1	1 to 5	6 to 10	More than 10	
<b>Debt securities</b>					
US treasury securities	\$ -	\$ 39,226	\$ 5,385	\$ -	\$ 44,611
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 CMO’s	640	799	-	-	1,439
Corporate bonds	15,131	45,172	2,527	423	63,253
Municipal and provincial bonds	2,051	144	-	-	2,195
Other fixed income	27,843	90,162	19,541	7,231	144,777
<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>

The following table presents the fair value by investment maturity of the rated debt investments component of the University’s investment portfolio as of June 30, 2017 (\$ in thousands):

	Investment maturity (in years)				Total
	Less than 1	1 to 5	6 to 10	More than 10	
<b>Debt securities</b>					
US treasury securities	\$ -	\$ 44,383	\$ 4,536	\$ -	\$ 48,919
Government agency bonds	296	136	-	-	432
Asset backed securities	10,194	10,198	179	-	20,571
Commercial mortgage-backed securities	1,671	4,100	-	-	5,771
Government issued commercial mortgage-backed securities	23	230	-	-	253
Government mortgage-backed securities	425	2,622	-	-	3,047
Non-government backed CMO’s	-	885	-	-	885
Corporate bonds	18,784	40,626	4,307	412	64,129
Municipal and provincial bonds	4,003	146	-	-	4,149
Other fixed income	24,751	81,212	44,488	10,904	161,355
<b>Total debt securities</b>	<b>\$60,147</b>	<b>\$184,538</b>	<b>\$53,510</b>	<b>\$11,316</b>	<b>\$ 309,511</b>

**Fair Value Measurement** – GASB Statement No. 72, *Fair Value Measurement and Application*, establishes general principles for measuring fair value and requires enhanced disclosures about fair value measurements of certain assets and liabilities, such as investments and interest-rate swaps. 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. GASB 72 requires that the University 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 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 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. 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, 2018 and 2017, 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, 2018 (\$ in thousands):

	Investments measured at NAV	Investments classified in the fair value hierarchy			
		Level 1	Level 2	Level 3	Total
<b>Cash equivalents</b>					
Money market funds	\$ -	\$ 503,288	\$ -	\$ -	\$ 503,288
Certificates of deposit	-	48	-	-	48
<b>Debt securities</b>					
US treasury securities	-	44,611	-	-	44,611
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 CMO’s	-	-	1,439	-	1,439
Corporate bonds	-	-	63,209	44	63,253
Municipal and provincial bonds	-	-	2,195	-	2,195
Other fixed income	-	110,652	34,125	-	144,777
<b>Total debt securities</b>	-	<b>155,263</b>	<b>130,129</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>227,830</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>209,432</b>
<b>Other securities</b>	-	18,015	-	-	18,015
<b>Total investments</b>	<b>\$209,432</b>	<b>\$904,444</b>	<b>\$130,129</b>	<b>\$1,428</b>	<b>\$1,245,433</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, 2018 (\$ in thousands):

	NAV	Unfunded commitments	Redemption frequency	Notice period
<b>Alternative investments</b>				
Multi-strategy hedge funds				
Equity	\$ 69,885	\$ -	daily to quarterly	01–60 days
Long/short	19,971	-	quarterly to not eligible	30–95 days
Fixed income	34,798	-	annual to not eligible	60–days
Absolute return	40,213	-	daily to annual	01–65 days
Real assets	11,689	-	annual	90 days
Private equity	8,652	18,573	temporarily illiquid	(1)
Private debt	19,462	12,408	temporarily illiquid	(1)
Private real estate	4,762	4,170	temporarily illiquid	(1)
<b>Total</b>	<b>\$ 209,432</b>	<b>\$ 35,151</b>		

(1) As noted above, 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, 2017 (\$ in thousands):

	Investments measured at NAV	Investments classified in the fair value hierarchy			
		Level 1	Level 2	Level 3	Total
<b>Cash equivalents</b>					
Money market funds	\$ -	\$ 285,380	\$ -	\$ -	\$ 285,380
Certificates of deposit	-	10,500	-	-	10,500
<b>Debt securities</b>					
US treasury securities	-	48,919	-	-	48,919
Government agency bonds	-	-	432	-	432
Asset backed securities	-	-	20,571	-	20,571
Commercial mortgage-backed securities	-	-	5,771	-	5,771
Government issued commercial mortgage-backed securities	-	-	253	-	253
Government mortgage-backed securities	-	-	3,047	-	3,047
Non-government backed CMO's	-	-	885	-	885
Corporate bonds	-	-	63,892	237	64,129
Municipal and provincial bonds	-	-	4,149	-	4,149
Other fixed income	-	147,948	13,407	-	161,355
<b>Total debt securities</b>	-	<b>196,867</b>	<b>112,407</b>	<b>237</b>	<b>309,511</b>
<b>Equity securities</b>					
Domestic equities	-	94,729	-	1,250	95,979
International equities	-	128,458	-	-	128,458
<b>Total equity securities</b>	-	<b>223,187</b>	-	<b>1,250</b>	<b>224,437</b>
<b>Alternative investments</b>					
Multi-strategy hedge funds					
Equity	46,681	-	-	-	46,681
Long/short	12,640	-	-	-	12,640
Fixed income	48,196	-	-	-	48,196
Absolute return	50,623	-	-	-	50,623
Real assets	11,784	-	-	-	11,784
Private equity	3,402	-	-	-	3,402
Private debt	19,221	-	-	-	19,221
Private real estate	3,829	-	-	-	3,829
<b>Total alternative investments</b>	<b>196,376</b>	-	-	-	<b>196,376</b>
<b>Other securities</b>	-	26,359	-	-	26,359
<b>Total Investments</b>	<b>\$ 196,376</b>	<b>\$ 742,293</b>	<b>\$ 112,407</b>	<b>\$ 1,487</b>	<b>\$ 1,052,563</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, 2017 (\$ in thousands):

	Fair value	Unfunded commitments	Redemption frequency	Notice period
<b>Alternative investments</b>				
Multi-strategy hedge funds				
Equity	\$ 46,681	\$ -	quarterly to not eligible	45–60 days
Long/short	12,640	-	quarterly to annual	30–95 days
Fixed income	48,196	-	quarterly to not eligible	30–60 days
Absolute return	50,623	-	quarterly to not eligible	01–65 days
Real assets	11,784	-	annual	150 days
Private equity	3,402	18,089	temporarily illiquid	(1)
Private debt	19,221	15,847	temporarily illiquid	(1)
Private real estate	3,829	5,060	temporarily illiquid	(1)
<b>Total</b>	<b>\$ 196,376</b>	<b>\$ 38,996</b>		

(1) As noted above, 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, 2018 and 2017 are as follows (\$ in thousands):

	2018	2017
Student tuition and fees	\$ 60,454	\$ 58,065
Student loans	62,462	63,660
Pledges receivable	25,199	20,437
Grants and contracts	94,235	94,583
Commonwealth Medicine	64,690	76,093
UMass Memorial	42,157	33,818
Other receivables	55,983	60,304
	<b>405,180</b>	<b>406,960</b>
Less: allowance for doubtful accounts and discount to present value for pledges	(30,558)	(28,764)
<b>Accounts receivable, net</b>	<b>\$ 374,622</b>	<b>\$ 378,196</b>

The receivable from UMass Memorial, which is uncollateralized, represents a potential concentration of credit risk for the University. The receivable from UMass Memorial represents 11.3% and 8.9% of total accounts receivable for the University at June 30, 2018 and 2017, respectively.

## 6. UMass Memorial Medical Center

The University has granted UMass Memorial Medical Center (UMass Memorial) the right to occupy portions of the University's Medical School campus facilities for a period of 99 years. As part of the ongoing agreement, 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, 2018 and 2017, the reimbursements for services provided to

UMass Memorial were \$140.5 million and \$147.7 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 \$85.5 million and \$89.2 million for the years ended June 30, 2018 and 2017, respectively. As of June 30, 2018 and 2017, the University has recorded a receivable in the amount of \$42.2 million and \$33.8 million, respectively from UMass Memorial which includes \$29.6 million and \$22.0 million, respectively, in payroll and related fringe charges. The University has recorded a payable of \$4.5 million and \$4.4 million at June 30, 2018 and 2017, 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, 2018 and 2017 (\$ in thousands):

	2016	Additions	Retirements/ Adjustments	2017	Additions	Retirements/ Adjustments	2018
Land	\$ 84,161	\$ 14,394	\$ (895)	\$ 97,660	\$ 68,771	\$ (1,063)	\$ 165,368
Buildings and improvements	5,611,906	456,132	(12,432)	6,055,606	444,250	(991)	6,498,865
Software	136,503	4,272	(29,737)	111,038	10,224	(8,078)	113,184
Equipment and furniture	651,947	79,975	(46,856)	685,066	52,453	(37,626)	699,893
Library books	65,978	-	(5,834)	60,144	-	(6,570)	53,574
	<b>6,550,495</b>	<b>554,773</b>	<b>(95,754)</b>	<b>7,009,514</b>	<b>575,698</b>	<b>(54,328)</b>	<b>7,530,884</b>
Accumulated depreciation	(2,690,595)	(245,300)	82,907	(2,852,988)	(261,417)	37,509	(3,076,896)
	<b>3,859,900</b>	<b>309,473</b>	<b>(12,847)</b>	<b>4,156,526</b>	<b>314,281</b>	<b>(16,819)</b>	<b>4,453,988</b>
Construction in progress	674,705	478,566	(455,687)	697,584	407,191	(483,287)	621,488
<b>Total capital assets</b>	<b>\$4,534,605</b>	<b>\$788,039</b>	<b>\$(468,534)</b>	<b>\$4,854,110</b>	<b>\$721,472</b>	<b>\$(500,106)</b>	<b>\$5,075,476</b>

The University purchased the capital assets of Mount Ida College in May 2018 for \$75.0 million. The assets have been allocated between land and construction in progress at June 30, 2018.

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, 2018 and 2017, the University capitalized net interest costs of \$11.6 million and \$20.5 million, respectively.

## 8. Leases

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 \$20.6 million and \$24.6 million for the years ended June 30, 2018 and 2017, 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, 2018 and 2017, the amount reported as rental income was \$20.5 million and \$18.9 million, respectively.

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, 2018 (\$ in thousands):

Fiscal year end	Operating lease payments
2019	\$ 25,471
2020	23,879
2021	21,805
2022	18,931
2023	15,059
2024 and thereafter	131,687
<b>Total payments</b>	<b>\$ 236,832</b>

## 9. Long-Term Debt

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

	Original borrowing	Maturity date	Interest rate	As of July 1, 2017	Additions	Reductions	As of June 30, 2018
<b>Building Authority</b>							
Series 2008-A	\$ 26,580	2038	variable	\$ 19,145	\$ -	\$ (995)	\$ 18,150
Series 2008-1	232,545	2038	variable	171,430	-	(8,315)	163,115
Series 2008-2	120,560	2038	4.0–5.0%	3,065	-	(3,065)	-
Series 2009-1	247,810	2039	3.0–5.0%	28,400	-	(13,115)	15,285
Series 2009-2	271,855	2039	6.4–6.6%	271,855	-	-	271,855
Series 2009-3	28,570	2039	5.8–6.2%	25,685	-	(585)	25,100
Series 2010-1	118,985	2020	5.0%	59,230	-	(13,745)	45,485
Series 2010-2	430,320	2040	3.8–5.5%	430,320	-	-	430,320
Series 2010-3	3,005	2040	5.8%	2,730	-	(55)	2,675
Series 2011-1	135,040	2034	variable	126,540	-	(1,550)	124,990
Series 2011-2	101,700	2034	variable	96,115	-	(1,060)	95,055
Series 2013-1	212,585	2043	2.0–5.0%	198,655	-	(4,910)	193,745
Series 2013-2	71,970	2043	0.4–2.7%	65,090	-	(2,265)	62,825
Series 2013-3	24,640	2043	4.0–5.0%	24,640	-	-	24,640
Series 2014-1	293,890	2044	3.0–5.0%	293,015	-	(525)	292,490
Series 2014-2	14,085	2019	0.4–2.1%	8,555	-	(2,805)	5,750
Series 2014-4	157,855	2025	0.2–3.4%	122,125	-	(30,030)	92,095
Series 2014-3	67,635	2029	2.0–5.0%	61,640	-	(3,480)	58,160
Series 2015-1	298,795	2036	4.0–5.0%	298,795	-	-	298,795
Series 2015-2	191,825	2036	3.0–5.0%	191,825	-	(2,825)	189,000
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	-	-	19,510
Series 2017-3	35,945	2038	3.0–5.0%	187,680	-	(2,920)	184,760
Series 2018-1	75,000	2043	2.0–2.9%	-	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>HEFA/MDFA</b>							
Series A	20,000	2030	variable	20,000	-	-	20,000
Series 2011	29,970	2034	2.5–4.0%	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 HEFA/MDFA</b>							
Series 2005-D	99,325	2029	5.0–5.3%	715	-	(100)	615
Series 2011	10,495	2023	2.0–5.0%	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	1,625	2027	3.50%	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>				1,917	64,535	(483)	65,969
<b>Capital lease obligations</b>				592	3,195	(1,525)	2,262
<b>Total long-term debt</b>				<b>\$ 3,094,351</b>	<b>\$ 105,380</b>	<b>\$ (110,663)</b>	<b>\$ 3,089,068</b>

The following table represents the outstanding long-term debt as of June 30, 2017, and the related activity during the fiscal year (\$ in thousands):

	As of July 1, 2016	Additions	Reductions	As of June 30, 2017
<b>Building Authority</b>				
Series 2004-1	\$ 1,515	\$ -	\$ (1,515)	\$ -
Series 2008-A	20,105	-	(960)	19,145
Series 2008-1	179,425	-	(7,995)	171,430
Series 2008-2	63,025	-	(59,960)	3,065
Series 2009-1	108,365	-	(79,965)	28,400
Series 2009-2	271,855	-	-	271,855
Series 2009-3	26,235	-	(550)	25,685
Series 2010-1	72,310	-	(13,080)	59,230
Series 2010-2	430,320	-	-	430,320
Series 2010-3	2,785	-	(55)	2,730
Series 2011-1	128,245	-	(1,705)	126,540
Series 2011-2	97,265	-	(1,150)	96,115
Series 2013-1	203,420	-	(4,765)	198,655
Series 2013-2	67,335	-	(2,245)	65,090
Series 2013-3	24,640	-	-	24,640
Series 2014-1	293,465	-	(450)	293,015
Series 2014-2	11,330	-	(2,775)	8,555
Series 2014-4	149,975	-	(27,850)	122,125
Series 2014-3	64,470	-	(2,830)	61,640
Series 2015-1	298,795	-	-	298,795
Series 2015-2	191,825	-	-	191,825
Series 2017-1	-	165,130	-	165,130
Series 2017-2	-	19,510	-	19,510
Series 2017-3	-	187,680	-	187,680
Unamortized bond premium	122,146	55,987	(13,246)	164,887
	<b>2,828,851</b>	<b>428,307</b>	<b>(221,096)</b>	<b>3,036,062</b>
<b>HEFA/MDFA</b>				
2000 Series A	20,000	-	-	20,000
2007 Series D	8,645	-	(8,645)	-
Series 2011	26,940	-	(1,015)	25,925
Unamortized bond premium	949	-	(79)	870
	<b>56,534</b>	<b>-</b>	<b>(9,739)</b>	<b>46,795</b>
<b>WCCC HEFA/MDFA</b>				
Series 2005-D	1,335	-	(620)	715
Series 2007-E	31,250	-	(31,250)	-
Series 2007-F	51,890	-	(51,890)	-
Series 2011	7,495	-	(805)	6,690
Unamortized bond premium	1,215	-	(591)	624
	<b>93,185</b>	<b>-</b>	<b>(85,156)</b>	<b>8,029</b>
<b>MDFA</b>				
Clean renewable energy bonds	1,052	-	(96)	956
<b>Total bonds payable</b>	<b>2,979,622</b>	<b>428,307</b>	<b>(316,087)</b>	<b>3,091,842</b>
<b>Notes and commercial paper</b>	<b>2,433</b>	<b>-</b>	<b>(516)</b>	<b>1,917</b>
<b>Capital lease obligations</b>	<b>598</b>	<b>161</b>	<b>(167)</b>	<b>592</b>
<b>Total long-term debt</b>	<b>\$2,982,653</b>	<b>\$ 428,468</b>	<b>\$ (316,770)</b>	<b>\$ 3,094,351</b>

Principal and interest, which is estimated using rates in effect at June 30, 2018, on long-term debt for the next five fiscal years and in subsequent five-year periods are as follows (\$ in thousands):

Fiscal Year	Principal	Interest
2019	\$ 100,270	\$ 118,528
2020	103,930	115,106
2021	107,866	111,092
2022	100,356	107,078
2023	104,641	103,170
2024–2028	530,997	456,206
2029–2033	503,675	350,345
2034–2038	531,100	245,546
2039–2043	541,515	113,966
2044–2048	244,445	19,763
<b>Total</b>	<b>\$ 2,868,795</b>	<b>\$ 1,740,800</b>

In accordance with GASB 1, 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 that the bonds will be remarketed within a reasonable period of time. As a result, the University's variable rate bonds are listed in the table above at their original maturities.

**Bond Premium and Issuance Expenses** – During the year ended June 30, 2017, premiums received totaled \$56.0 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.

The University incurs certain costs associated with bond issuances. For the years ended June 30, 2018 and 2017, bond issuance costs amounted to \$0.2 million and \$2.3 million, respectively, and were expensed in accordance with the provisions of GASB Statement No. 65, *Items Previously Reported as Assets and Liabilities*.

**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, 2019. During the fiscal year 2018, the Building Authority issued \$64.5 million of commercial paper and has an outstanding balance of \$64.5 million as of June 30, 2018. The Building Authority incurred total fees of \$0.7 million and \$0.8 million for the years ending June 30, 2018 and 2017, respectively, associated with the use of commercial paper.

**Bond Refundings** – During the year ended June 30, 2017, the Building Authority issued \$187.7 million of Refunding Revenue Senior Series 2017-3 Bonds which advance refunded \$77.3 million of the WCCC bonds series, \$57.0 million of the Building Authority's 2008-2 bonds and \$65.0 million of the Building Authority's 2009-1 bonds. The Building Authority deposited into trust accounts funds sufficient to provide for all future debt service payments on the refunded bonds until the bonds are called. These advanced refunded bonds are considered defeased and, accordingly, the liability for the bonds and the assets held to repay the debt are not recorded in the Building Authority's financial statements.

In connection with the Building Authority's refundings, the Building Authority recorded a difference between the reacquisition price and the net carrying amount of the refunded debt of \$5.8 million. This balance is being reported as a component of deferred outflows and will be amortized as an increase in interest expense over the remaining term of the original life of the refunded bonds. These refundings reduced the Building Authority's debt service payments in future years by \$30.2 million and resulted in present value savings of \$21.4 million as an economic gain.

During fiscal year ended June 30, 2017, the University refunded \$10.4 million of MHEFA Revenue Bonds, University of Massachusetts Issue Series D. The proceeds from this issuance were used to advance refund a portion of the MHEFA Revenue Bonds, University of Massachusetts Issue, 2001 Series B (the Series B Bonds). These advance refunded bonds were defeased, and accordingly, the liability for the bonds and the assets held to repay the debt have not been included in the University's financial statements.

There was no refunding of bonds in the year ended June 30, 2018.

**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.

All interest rate swaps held by the Building Authority are cash flow hedges and considered to be synthetic fixed. The Building Authority's interest rate swaps at June 30, 2018 and 2017 are as follows (\$ in thousands):

	Notional Value	As of July 1, 2017	Net Change	As of June 30, 2018	Effective Date	Term Date	Authority Pays	Authority Receives
Series 2008-1	\$232,545	\$25,267	\$ (8,690)	\$ 16,577	05/01/08	05/01/38	3.4%	70% of 1-Month LIBOR
Series 2008-A	26,580	2,884	(953)	1,931	11/13/08	05/01/38	3.4%	70% of 1-Month LIBOR
Series 2006-1	243,830	33,688	(10,594)	23,094	04/20/06	11/01/34	3.5%	60% of 3-Month LIBOR + .18%
<b>Total</b>		<b>\$61,839</b>	<b>\$(20,237)</b>	<b>\$41,602</b>				

**Swap payments and associated debt** – Using rates as of June 30, 2018, 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
2019	\$ 12,215	\$ 6,073	\$ 7,645	\$ 25,933
2020	12,720	5,885	7,409	26,014
2021	28,390	5,576	7,020	40,986
2022	29,545	5,140	6,471	41,156
2023	33,915	4,663	5,869	44,447
2024–2028	155,640	16,102	20,259	192,001
2029–2033	112,390	5,579	7,011	124,980
2034–2038	16,495	373	469	17,337
<b>Total</b>	<b>\$401,310</b>	<b>\$49,391</b>	<b>\$62,153</b>	<b>\$512,854</b>

	2018	2017
Change in fair value of interest rate swap	\$ 18,887	\$ 37,768
Loss on debt refundings	74,443	79,771

For the years ended June 30, 2018 and 2017, the amortization of the loss on debt refundings totaled \$5.3 million and \$6.8, respectively, which increases interest expenses.

## 10. Other Liabilities

During the years ended June 30, 2018 and 2017, the following changes occurred in other liabilities as recorded in the statements of net position (\$ in thousands):

	2016	Additions	Reductions	2017	Additions	Reductions	2018
Compensated absences	\$ 35,671	\$ -	\$ (5,276)	\$30,395	\$ 3,410	\$ (2,249)	\$ 31,556
Workers' compensation	12,160	-	(214)	11,946	233	(635)	11,544
Unearned revenues	23,936	24,257	(15,596)	32,597	73,697	(13,154)	93,140
Advances and deposits	27,705	799	(399)	28,105	490	(745)	27,850
Other liabilities	105,354	800	(25,349)	80,805	-	(6,210)	74,595

During the fiscal year 2018, the University received approximately \$87.0 million from the sale of its royalty revenue stream related to a licensed product. This transaction resulted in an increase to current and non-current liabilities.

## 11. Fringe Benefits

During the years ended June 30, 2018 and 2017, the Commonwealth paid \$358.1 million and \$329.3 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 \$134.1 million and \$123.8 million during the years ended June 30, 2018 and 2017, respectively. The remaining portion is included in revenue as state appropriations.

## 12. Pensions

The Massachusetts State Employees' Retirement System (MSERS) is a public employee retirement system (PERS) that administers a cost-sharing multi-employer defined benefit plan as defined by GASB Statement No. 67, *Financial Reporting for Pension Plans*, 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 average annual rate of regular compensation. For employees hired after April 1, 2012, retirement allowances are calculated on the basis of the last five years or any five consecutive years, whichever is greater in terms of compensation. 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 have been 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 \$107.4 million and \$89.9 million for the years ended June 30, 2018 and 2017, respectively. Annual covered payroll was 75.9% and 75.8% of annual total payroll for the University for the years ended June 30, 2018 and 2017, respectively. Pension expense of \$33.3 million and \$26.3 million was included in the fringe charge for the years ended June 30, 2018 and 2017, respectively.

As allowable under the terms of GASB 68, the University has elected to measure the net pension liability one year prior to the fiscal year end reporting date. The net pension 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. The net pension liability measured as of June 30, 2017 was determined based on a measurement date of June 30, 2016 from an actuarial valuation as of January 1, 2016 rolled forward to June 30, 2016. 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.

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

	June 30, 2017	June 30, 2016
Investment rate of return	7.50%	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%
<b>Mortality rates</b>		
Pre-retirement	RP-2014 Blue Collar Employees Scale MP-2016	RP-2000 Employees Scale BB base year 2015
Post-retirement	RP-2014 Blue Collar Healthy Annuitant Scale MP-2016	RP-2000 Healthy Annuitant Scale BB base year 2015
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

Chapter 176 of the Acts of 2011 created a one-time election for eligible members of the Optional Retirement Plan (ORP) to transfer to the State Employees' Retirement System (SERS) and purchase service for the period while members of the ORP.

For these actuarial valuations, experience studies were performed on February 27, 2014 and encompass the period January 1, 2006 to December 31, 2011.

**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, 2017 and 2016 are summarized in the following table:

Asset Class	June 30, 2017		June 30, 2016	
	Target Allocation	Long-term Expected Real Rate of Return	Target Allocation	Long-term Expected Real Rate of Return
Core Fixed Income	12.00%	1.10%	13.00%	1.60%
Global Equity	40.00%	5.00%	40.00%	6.90%
Hedge Funds	0.00%	3.60%	9.00%	4.00%
Portfolio Completion Strategies	13.00%	3.60%	4.00%	3.60%
Private Equity	11.00%	6.60%	10.00%	8.70%
Real Estate	10.00%	3.60%	10.00%	4.60%
Timber / Natural Resources	4.00%	3.20%	4.00%	5.40%
Value Added Fixed Income	10.00%	3.80%	10.00%	4.80%
<b>Total</b>	<b>100.00%</b>		<b>100.00%</b>	

**Discount Rate** – The discount rate used to measure the total pension liability was 7.50% at June 30, 2017 and 2016. 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 a 1% change in the discount rate for the net pension liability at June 30, 2018 (\$ in thousands):

Fiscal Year Ended	1% Decrease	Current Discount Rate 7.5%	1% Increase
June 30, 2018	\$621,615	\$420,234	\$323,338

**Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources**

**Related to Pensions** – At June 30, 2018 and 2017, the University reported a liability of \$420.2 million and \$429.9 million, respectively, for its proportionate share of MSERS's 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 following table shows the components of pension expense for the years ended June 30, 2018 and 2017 (\$ in thousands):

	2018	2017
Proportionate share of plan pension expense	\$ 52,383	\$ 58,723
Net amortization of deferred amounts from change in proportion	6,085	2,935
Employer contributions after measurement date	(28,292)	(25,618)
<b>Pension expense</b>	<b>\$30,176</b>	<b>\$36,040</b>

The University reported its proportionate share of MSERS's deferred outflows of resources and deferred inflows of resources related to pensions from the following sources as of June 30, 2018 and 2017 (\$ in thousands):

	2018		2017	
	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources
Changes of assumptions	\$ -	\$ 43,732	\$ -	\$ 47,670
Changes in proportion due to internal allocation	28,949	36,532	37,464	34,668
Employer contributions after measurement date	-	28,292	-	25,618
Differences between expected and actual experience	11,434	16,248	-	20,418
Net difference between projected and actual investment earnings on pension plan investments	5,007	-	-	28,853
Changes in proportion from Commonwealth	150	1,440	207	958
<b>Total</b>	<b>\$45,540</b>	<b>\$126,244</b>	<b>\$37,671</b>	<b>\$158,185</b>

The net amounts of the University's balances of deferred outflows and inflows of resources related to pensions will be recognized in pension expense as follows:

Year Ended June 30	
2019	\$ 16,098
2020	29,325
2021	13,310
2022	(7,018)
2023	697
Thereafter	-
<b>Total</b>	<b>\$ 52,412</b>

Non-vested faculty and certain other employees of the University can opt out of MSERS and participate in a defined contribution plan, the ORP, administered by the Commonwealth's Department of Higher Education. As of June 30, 2018 and 2017, there were 1,687 and 1,674 University employees, respectively, participating in ORP. Employees contribute at the same rate as members in SERS and the Commonwealth matches 5% of employee contributions. The Commonwealth contributed \$8.4 million and \$7.2 million in 2018 and 2017, respectively. University employees contributed \$17.4 million and \$15.8 million in 2018 and 2017, 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 for 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 5%. As of June 30, 2018 and 2017, the plan assets were \$3.4 million and \$2.5 million, respectively.

### 13. Other Postemployment Benefits

The Commonwealth administers 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 Massachusetts General Laws (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, 2017, retirees contribute between 0% - 20% of premium costs, depending on the date of hire.

As allowable under the terms of GASB 75, the University has elected to measure the total postemployment liability one year prior to the fiscal year end reporting date. 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 postemployment liability between the measurement date and the reporting date, other than typical plan experience.

**Actuarial Assumptions** – Significant actuarial assumptions used at the 2017 measurement date are as follows:

Annual healthcare cost trend rates		
<b>Medical</b>	8.5% decreasing by 0.5% each year to an ultimate rate of 5.0% in 2024	
<b>Employer group waiver program</b>	5.0%	
<b>Administrative costs</b>	5.0%	
<b>Mortality rates</b>	RP-2014 Blue Collar Employees projected with Scale MP-2016	
<b>Participation rates</b>	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 coversate 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:	
	Retirement Age	
	Under 65	Over 65
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, 2017 and 2016 are summarized in the following table:

Asset Class	Long-term Expected Real Rate of Return		
	Target Allocation	2017	2016
Global equity	40.00%	5.0%	6.9%
Portfolio completion strategies	13.00%	3.6%	3.6%
Core fixed income	12.00%	1.1%	1.6%
Private equity	11.00%	6.6%	8.7%
Value added fixed income	10.00%	3.8%	4.8%
Real estate	10.00%	3.6%	4.6%
Timber/natural resources	4.00%	3.2%	5.4%
Hedge funds	0.00%	3.6%	4.0%
<b>Total</b>	<b>100.00%</b>		

**Discount Rate** – The discount rates used to measure the OPEB liability as of June 30, 2017 and 2016 were 3.63% and 2.88%, respectively. These rates were based on a blend of the Bond Buyer Index rates of 3.58% and 2.85%, respectively, as of the measurement dates June 30, 2017 and 2016 and the expected rates of return. 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 2023. Therefore, the long-term expected rate of return on plan investments of 7.50% per annum was not applied to all periods of projected benefit payments to determine the total OPEB liability as of June 30, 2017 and 2016.

**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, 2017	\$970,268	\$817,357	\$695,780

**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, 2017	\$676,259	\$817,357	\$1,003,033

**OPEB Liabilities, OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB** – In connection with the adoption of GASB 75, the University recorded \$817.4 million as the proportionate share of the OPEB liability as of June 30, 2018 and the cumulative effect of the prior year's beginning balances of \$743.0 million. The University's proportion of the net OPEB liability was based on a projection of the University's long-term share of contributions to the OPEB relative to the total projected contributions of all participating entities, actuarially determined.

The following table shows the components of OPEB expense for the year ended June 30, 2018 (\$ in thousands):

	2018
Proportionate share of plan OPEB expense	\$ 47,783
Net amortization of deferred amounts from change in proportion	357
Net amortization of deferred amounts from internal allocation change in proportion	20,591
Employer specific OPEB expenses	1,249
Employer contributions after measurement date	(21,421)
<b>OPEB expense</b>	<b>\$48,559</b>

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, 2018 (\$ in thousands):

	Deferred Inflows of Resources	Deferred Outflows of Resources
Changes of assumptions	\$ 92,574	\$ -
Changes in proportion due to internal allocation	-	98,629
Employer contributions after measurement date	-	21,421
Differences between expected and actual experience	1,880	-
Net difference between projected and actual investment earnings on OPEB plan investments	1,491	-
Changes in proportion from Commonwealth	-	1,711
<b>Total</b>	<b>\$ 95,945</b>	<b>\$ 121,761</b>

The difference between the University's balances of deferred outflows and inflows of resources related to OPEB will be recognized in OPEB expense as follows:

Year Ended June 30	
2019	\$ (24)
2020	(24)
2021	(24)
2022	(24)
2023	4,491
<b>Total</b>	<b>\$ 4,395</b>

## 14. Operating Expenses

The following table summarizes the University's operating expenses 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	\$ 761,546	\$ 114,689	\$ -	\$ -	\$ -	\$ 876,235
Research	282,123	189,012	-	-	-	471,135
Public service	63,995	14,243	-	-	-	78,238
Academic support	134,392	53,103	-	-	-	187,495
Student services	119,601	37,333	-	-	-	156,934
Institutional support	241,374	30,161	-	-	-	271,535
Operation and maintenance of plant	126,923	128,902	-	-	-	255,825
Depreciation and amortization	-	-	-	261,417	-	261,417
Scholarships and fellowships	-	-	50,410	-	-	50,410
<b>Auxiliary enterprises</b>	146,623	167,118	-	-	-	313,741
<b>Other expenditures</b>						
Independent operations	24,854	27,357	-	-	-	52,211
Public service activities	83,260	241,956	-	-	-	325,216
<b>Total operating expenses</b>	<b>1,984,691</b>	<b>1,003,874</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>\$1,984,691</b>	<b>\$1,003,874</b>	<b>\$50,410</b>	<b>\$261,417</b>	<b>\$115,851</b>	<b>3,416,243</b>

The following table summarizes the University's operating expenses by natural and functional classification for the year ended June 30, 2017 (\$ in thousands):

	Compensation and benefits	Supplies and services	Scholarships and fellowships	Depreciation and amortization	Interest	Total
<b>Educational and general</b>						
Instruction	\$ 716,135	\$ 107,907	\$ -	\$ -	\$ -	\$ 824,042
Research	273,638	173,732	-	-	-	447,370
Public service	58,381	9,702	-	-	-	68,083
Academic support	124,239	52,934	-	-	-	177,173
Student services	112,183	38,850	-	-	-	151,033
Institutional support	231,935	15,805	-	-	-	247,740
Operation and maintenance of plant	118,304	122,197	-	-	-	240,501
Depreciation and amortization	-	-	-	245,300	-	245,300
Scholarships and fellowships	-	-	47,710	-	-	47,710
<b>Auxiliary enterprises</b>	142,438	164,412	-	-	-	306,850
<b>Other expenditures</b>						
Independent operations	23,854	33,422	-	-	-	57,276
Public service activities	88,452	257,423	-	-	-	345,875
<b>Total operating expenses</b>	<b>1,889,559</b>	<b>976,384</b>	<b>47,710</b>	<b>245,300</b>	<b>-</b>	<b>3,158,953</b>
Interest on indebtedness	-	-	-	-	110,069	110,069
<b>Total operating expenses and interest</b>	<b>\$1,889,559</b>	<b>\$976,384</b>	<b>\$47,710</b>	<b>\$245,300</b>	<b>\$110,069</b>	<b>\$3,269,022</b>

## 15. Unrestricted Net Position

The University adopted a reserve policy and standards in 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 of Trustees 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, 2018 (\$ in thousands):

	2018
<b>Unrestricted resources</b>	
Unexpended plant and facilities	\$ 267,319
Auxiliary enterprises	91,539
Education and general	244,472
Quasi-endowment	280,517
Stabilization	109,168
Other unrestricted	(12,024)
<b>Subtotal</b>	<b>980,991</b>
Unfunded portion of pension liabilities	(339,530)
Unfunded portion of postretirement benefits other than pension liabilities	(791,541)
<b>Total unrestricted net position</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 \$120.7 million and \$283.6 million at June 30, 2018 and 2017, respectively. In connection with investments in certain limited partnership agreements, the University has \$35.2 million and \$39.0 million in committed calls as of June 30, 2018 and 2017, respectively, which are scheduled to be funded over a number of years. The University has entered an Energy Performance Contract that is being managed by the Commonwealth's Division of Capital Asset Management (DCAM) under its Clean Energy Investment Program. This project includes 32 energy conservation measures. The installation costs will be incurred over 2 phases with Phase 1 being \$18.0 million and Phase 2 being \$13.5 million. The term of these transactions is 20 years. The University has a commitment to the Commonwealth for Clean Energy Investment Program Funds used through June 30, 2018 and 2017 of \$26.1 million and \$27.1 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 \$14.7 million and \$14.6 million as of June 30, 2018 and 2017, respectively. Estimated future payments related to such costs have been discounted at a rate of 4.0%.

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. Subsequent Events

Subsequent to year-end, the University issued \$38.4 million of Series 2013-A commercial paper to be used for funding of approved capital projects at the Lowell, Amherst and Dartmouth campuses. The commercial paper is expected to be repaid with proceeds from the University's next long-term bond financing.

On November 14, 2018, the University entered into an agreement whereby the University sub-leased property on the University of Massachusetts Dartmouth campus to Provident Commonwealth Educational Resources II Inc., a Massachusetts not-for-profit corporation. The land is leased to the University by the Commonwealth. Provident Commonwealth Educational Resources II Inc. will engage a contractor to construct a 1,210-bed student housing facility on the site. The University will sub-lease the property to Provident Commonwealth Educational Resources II Inc. for a term of approximately 45 years. Commencing with the first lease year of the lease following the completion of the project (estimated completion is August 2020), the annual rental amount payable to the University under the ground lease will be \$0.6 million.

Pursuant to the Dining Facility Sublease dated November 14, 2018 between Provident Commonwealth Educational Resources II Inc., as sub-lessor and the University, as sub-lessee, the Provident Commonwealth Educational Resources II Inc. shall lease the dining facility, located within the residential hall, to the Campus and shall operate the Dining Facility or cause it to be operated.

For purposes of determining the effects of subsequent events on these financial statements, management has evaluated events subsequent to June 30, 2018 and through January 8, 2019, the date on which the financial statements were available to be issued and, determined that there were no matters requiring recognition or disclosure to 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

	6/30/2018	6/30/2017	6/30/2016	6/30/2015
University's proportion of the net pension liability	3.56%	3.39%	3.92%	3.49%
University's proportionate share of the net pension liability	\$ 420,234	\$ 429,871	\$ 408,418	\$ 237,134
University's covered-employee payroll	\$ 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	35.96%	37.18%	35.83%	22.35%
Plan fiduciary net position as a percentage of total pension liability	67.21%	63.48%	67.87%	76.32%

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

	6/30/2018	6/30/2017	6/30/2016	6/30/2015
Contractually required contribution	\$28,292	\$25,618	\$22,386	\$22,870
Contributions in relation to the contractually required contribution	(28,292)	(25,618)	(22,386)	(22,870)
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -
University's covered-employee payroll	\$ 1,168,661	\$ 1,156,082	\$ 1,139,719	\$ 1,061,132
Contributions as a percentage of covered-employee payroll	2.42%	2.22%	1.96%	2.16%

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

	6/30/2018
University's proportion of the net OPEB	4.13%
University's proportionate share of the net OPEB	\$ 817,357
University's covered-employee payroll	\$ 1,168,661
University's proportionate share of the net OPEB as a percentage of its covered-employee payroll	69.94%
Plan fiduciary net position as a percentage of total OPEB liability	4.80%

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

	6/30/2018
Contractually required contribution	\$21,421
Contributions in relation to the contractually required contribution	(21,421)
Contribution deficiency (excess)	\$ -
University's covered-employee payroll	\$ 1,168,661
Contributions as a percentage of covered-employee payroll	1.83%

1 Until a full ten year trend is compiled, the University is presenting only information for the years for which information is available.

**SUPPLEMENTAL INFORMATION**

**UNIVERSITY OF MASSACHUSETTS**  
**Schedule of Expenditures of Federal Awards**  
**Year Ended June 30, 2018**

Federal Grantor/Pass Through Grantor/Cluster Title	CFDA No.	Direct Award or Pass Through Entity Identifying Number	Program Title	Amounts Passed Through to Subrecipients	Total Federal Expenditures
<b>Research and Development Cluster:</b>					
<b>Agency For International Development</b>					
Horn of Africa Regional Environment	98.001	AID-OAA-A-16-00009	USAID Foreign Assistance for Programs Overseas	\$ -	\$ 9,124
Interfaith Mediation Centre	98.001	AID-620-A-12-00003	USAID Foreign Assistance for Programs Overseas	-	81,656
Interfaith Mediation Centre	98.001	AID-620-A-12-00003	USAID Foreign Assistance for Programs Overseas	-	(19,662)
University of California Berkeley	98.001	UCBerkeley00009687	USAID Foreign Assistance for Programs Overseas	-	41,848
Total USAID Foreign Assistance for Programs Overseas				-	112,966
National Academy of Sciences	98.012	NAS PGA -2000003662 Mod 02	USAID Development Partnerships for University Cooperation and Development	-	13,085
Education Development Center, Inc.	98.U01	GS-10F-0406P	United State Agency for International Development Contracts	-	339,307
FHI 360	98.U02	#4576-01-UMASS Amend #1	United State Agency for International Development Contracts	239,435	5,139,773
Tetra Tech, Inc.	98.U03	1072-1601	United State Agency for International Development Contracts	-	22,766
Tetra Tech, Inc.	98.U04	SAR Task Force-India	United State Agency for International Development Contracts	-	(607)
<b>Agency For International Development Total</b>				239,435	5,627,290
<b>Department of Agriculture</b>					
U.S. Department of Agriculture	10.001	Direct	Agricultural Research-Basic and Applied Research	-	189,425
U.S. Department of Agriculture	10.025	Direct	Plant and Animal Disease, Pest Control, and Animal Care	-	254,976
MA Department of Agricultural Resources	10.170	AMIT0IOOXXXXG054	Specialty Crop Block Grant Program - Farm Bill	-	2,969
MA Department of Agricultural Resources	10.170	F15SCBGPMA	Specialty Crop Block Grant Program - Farm Bill	-	10,314
MA Department of Agricultural Resources	10.170	116-1923	Specialty Crop Block Grant Program - Farm Bill	-	8,977
Total Specialty Crop Block Grant Program - Farm Bill				-	22,260
Rutgers University	10.200	6173-NER17F-SandLER	Grants for Agricultural Research, Special Research Grants	-	5,999
Rutgers University	10.200	6184-NER170OH-MADEIRAS	Grants for Agricultural Research, Special Research Grants	-	3,974
Rutgers University	10.200	6185-NER170OH-BRAZEE	Grants for Agricultural Research, Special Research Grants	-	3,506
Total Grants for Agricultural Research, Special Research Grants				-	13,479
U.S. Department of Agriculture	10.202	Direct	Cooperative Forestry Research	-	355,419
U.S. Department of Agriculture	10.203	Direct	Payments to Agricultural Experiment Stations Under the Hatch Act	-	2,854,230
U.S. Department of Agriculture	10.207	Direct	Animal Health and Disease Research	-	10,914
Applied Geosolutions	10.212	2163361025687	Small Business Innovation Research	-	4,539

See accompanying notes to Schedule of Expenditures of Federal Awards

**UNIVERSITY OF MASSACHUSETTS**  
**Schedule of Expenditures of Federal Awards**  
**Year Ended June 30, 2018**

Federal Grantor/Pass Through Grantor/Cluster Title	CFDA No.	Direct Award or Pass Through Entity Identifying Number	Program Title	Amounts Passed Through to Subrecipients	Total Federal Expenditures
<b>Department of Agriculture, continued</b>					
University of Vermont	10.215	ENE15-140-29994	Sustainable Agriculture Research and Education	\$ 823	\$ 37,485
University of Vermont	10.215	GNE15-102-29001	Sustainable Agriculture Research and Education	-	11,072
University of Vermont	10.215	GNE17-161-31064	Sustainable Agriculture Research and Education	-	14,567
University of Vermont	10.215	LNE15-340-29994	Sustainable Agriculture Research and Education	7,923	24,676
University of Vermont	10.215	LNE18-365-32231	Sustainable Agriculture Research and Education	-	522
University of Vermont	10.215	ONE 16-281C-29994	Sustainable Agriculture Research and Education	-	5,486
University of Vermont	10.215	ONE17-300-3 1064	Sustainable Agriculture Research and Education	-	1,054
University of Vermont	10.215	SARE GNE16-114-29994	Sustainable Agriculture Research and Education	-	6,794
University of Vermont	10.215	SARE LNE15-339-29994/DARBY	Sustainable Agriculture Research and Education	-	12,681
University of Vermont	10.215	SARE SNE17-04-31064	Sustainable Agriculture Research and Education	-	9,676
University of Vermont	10.215	SNE-16-04-29994	Sustainable Agriculture Research and Education	-	7,183
Total Sustainable Agriculture Research and Education				8,746	131,196
Johns Hopkins University	10.250	2003016257	Agricultural and Rural Economic Research, Cooperative Agreements and Collaborations	-	4,384
U.S. Department of Agriculture	10.303	Direct	Integrated Programs	22,400	91,172
Cornell University	10.304	80289-10778	Homeland Security-Agricultural	-	18,561
U.S. Department of Agriculture	10.310	Direct	Agriculture and Food Research Initiative (AFRI)	322,424	2,294,408
Brigham Young University	10.310	15-0422	Agriculture and Food Research Initiative (AFRI)	-	(1,023)
Cornell University	10.310	79850-10737	Agriculture and Food Research Initiative (AFRI)	-	38,103
Cornell University	10.310	79943-I 0841	Agriculture and Food Research Initiative (AFRI)	-	11,980
Cornell University	10.310	80019-10850	Agriculture and Food Research Initiative (AFRI)	-	82,212
Louisiana State University	10.310	LSU PO 0000019947	Agriculture and Food Research Initiative (AFRI)	-	35,533
North Carolina State University	10.310	2015-68004-23179	Agriculture and Food Research Initiative (AFRI)	-	40,363
Tennessee State University	10.310	332-77-16-642	Agriculture and Food Research Initiative (AFRI)	-	4,057
University of Illinois	10.310	2015-07319-01	Agriculture and Food Research Initiative (AFRI)	-	63,962
University of Wisconsin	10.310	649K950	Agriculture and Food Research Initiative (AFRI)	-	3,876
Total Agriculture and Food Research Initiative (AFRI)				322,424	2,573,471
U.S. Department of Agriculture	10.328	Direct	National Food Safety Training, Education, Extension, Outreach, and Technical Assistance Competitive Grants Program	7,030	80,728

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<b>Department of Agriculture, continued</b>					
U.S. Department of Agriculture	10.329	Direct	Crop Protection and Pest Management Competitive Grants Program	\$ -	\$ 164,252
Cornell University	10.329	73984-11014	Crop Protection and Pest Management Competitive Grants Program	-	3,013
Cornell University	10.329	73984-I0394	Crop Protection and Pest Management Competitive Grants Program	-	7,143
CT Agricultural Experiment Station	10.329	CAES-2016-34947-1	Crop Protection and Pest Management Competitive Grants Program	-	2,960
CT Agricultural Experiment Station	10.329	CAES-PP-2015-10	Crop Protection and Pest Management Competitive Grants Program	-	3,440
University of Maryland	10.329	30430-Z5750002	Crop Protection and Pest Management Competitive Grants Program	-	6,344
Total Crop Protection and Pest Management Competitive Grants Program				-	187,152
MA Department of Transitional Assistance	10.331	WEL 4400 3081 UMS 16A	Food Insecurity Nutrition Incentive Grants Program	-	65,609
U.S. Department of Agriculture	10.458	Direct	Crop Insurance Education in Targeted States	52,900	224,279
MA Department of Elementary & Secondary Ed	10.560	CT DOE 15CT75UMASSAMHRSTERI	State Administrative Expenses for Child Nutrition	-	(1,691)
MA Department of Elementary & Secondary Ed	10.560	CT-DOE-15CT7500UMASS MAKECOUN	State Administrative Expenses for Child Nutrition	-	1,085
Total State Administrative Expenses for Child Nutrition				-	(606)
U.S. Forest Service	10.652	Direct	Forestry Research	-	324,947
U.S. Forest Service	10.664	Direct	Cooperative Forestry Assistance	-	3,696
MA Department of Conservation and Recreation	10.664	118-0349	Cooperative Forestry Assistance	-	32,521
MA Department of Conservation and Recreation	10.664	118-0447	Cooperative Forestry Assistance	-	5,113
MA Department of Conservation and Recreation	10.664	4CTDCR3760CUMASSUNIV	Cooperative Forestry Assistance	44,733	109,055
Total Cooperative Forestry Assistance				44,733	150,385
U.S. Forest Service	10.680	Direct	Forest Health Protection	-	144,757
U.S. Forest Service	10.693	Direct	Watershed Restoration and Enhancement Agreement Authority	4,281	18,027
U.S. Forest Service	10.699	Direct	Partnership Agreements	-	26,945
Natural Resources Conservation Services	10.902	Direct	Soil and Water Conservation	-	50,880
University of Rhode Island	10.902	68-3A75-17-480	Soil and Water Conservation	-	1,403
Total Soil and Water Conservation				-	52,283

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<b>Department of Agriculture, continued</b>					
U.S. Department of Agriculture	10.912	Direct	Environmental Quality Incentives Program	\$ -	\$ 564
U.S. Department of Agriculture	10.U01	Direct - 14-JV-11242306-117	Miscellaneous Department of Agriculture	-	3,816
U.S. Forest Service	10.U02	Direct - FS 15-JV-11242307-097	Miscellaneous Department of Agriculture	-	119,885
U.S. Forest Service	10.U03	Direct - FS 16-JV-11330140-050	Department of Agriculture Contracts	-	8,167
U.S. Forest Service	10.U04	Direct - FS 13-JV-11242307-075 Mod 8	Department of Agriculture Contracts	-	162,351
World Farmers	10.U05	2015-05075	Department of Agriculture Contracts	-	27,238
<b>Department of Agriculture Total</b>				462,514	8,120,553
<b>Department of Commerce</b>					
National Oceanic and Atmospheric Administration	11.011	Direct	Ocean Exploration	-	32,570
University of Washington	11.011	UWSC9353	Ocean Exploration	-	36,491
Total Ocean Exploration				-	69,061
Northeastern Regional Association of Coastal Ocean Observation Systems	11.012	A008-005	Integrated Ocean Observing System (IOOS)	-	37,950
Rutgers University	11.012	5931	Integrated Ocean Observing System (IOOS)	-	86,501
Rutgers University	11.012	6170	Integrated Ocean Observing System (IOOS)	-	63,903
Total Integrated Ocean Observing System (IOOS)				-	188,354
Massachusetts Institute of Technology	11.417	5710003902	Sea Grant Support	-	16,662
Massachusetts Institute of Technology	11.417	5710003903	Sea Grant Support	-	59,625
Massachusetts Institute of Technology	11.417	5710004070	Sea Grant Support	45,622	80,510
Massachusetts Institute of Technology	11.417	5710004158	Sea Grant Support	-	1,442
Massachusetts Institute of Technology	11.417	5710004254	Sea Grant Support	-	72,199
Massachusetts Institute of Technology	11.417	85496	Sea Grant Support	-	21,008
Massachusetts Institute of Technology	11.417	S447 / PO 150170	Sea Grant Support	-	17,012
Woods Hole Oceanographic Institution	11.417	22007420, sub A101298	Sea Grant Support	-	41,739
Woods Hole Oceanographic Institution	11.417	A101229	Sea Grant Support	-	14,234
Woods Hole Oceanographic Institution	11.417	A101254	Sea Grant Support	-	4,672
Woods Hole Oceanographic Institution	11.417	A101307	Sea Grant Support	-	15,671
Woods Hole Oceanographic Institution	11.417	A101312	Sea Grant Support	-	59,857
Woods Hole Oceanographic Institution	11.417	A101382	Sea Grant Support	-	7,900
Total Sea Grant Support				45,622	412,531

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<b>Department of Commerce, continued</b>					
Woods Hole Oceanographic Institution	11.419	WHOI A101336	Coastal Zone Management Administration Awards	\$ -	\$ 92,095
MA Dept of Conservation and Recreation	11.420	20045	Coastal Zone Management Estuarine Research Reserves	-	(5,206)
National Oceanic and Atmospheric Administration	11.427	Direct	Fisheries Development and Utilization Research and Development Grants and Cooperative Agreements Program	-	236,828
Gulf of Maine Research Institute	11.427	10-SKOBT-15 UMassD	Fisheries Development and Utilization Research and Development Grants and Cooperative Agreements Program	-	3,624
Gulf of Maine Research Institute	11.427	10ATLCOD14-UMASSD	Fisheries Development and Utilization Research and Development Grants and Cooperative Agreements Program	-	695
MA Division of Marine Fisheries	11.427	26181	Fisheries Development and Utilization Research and Development Grants and Cooperative Agreements Program	-	5,667
Nature Conservancy	11.427	MA041117G	Fisheries Development and Utilization Research and Development Grants and Cooperative Agreements Program	-	49,810
New England Aquarium	11.427	2684	Fisheries Development and Utilization Research and Development Grants and Cooperative Agreements Program	-	14
Total Fisheries Development and Utilization Research and Development Grants and Cooperative Agreements Program				-	296,638
National Oceanic and Atmospheric Administration	11.431	Direct	Climate and Atmospheric Research	41,012	188,961
Columbia University	11.431	4GG012355	Climate and Atmospheric Research	-	61,539
Gulf of Maine Research Institute	11.431	10-COCAMS-17 UMassD	Climate and Atmospheric Research	-	64,455
Hazen and Sawyer, P.C.	11.431	31235-000	Climate and Atmospheric Research	-	4,252
Woods Hole Oceanographic Institution	11.431	A101376	Climate and Atmospheric Research	-	8,138
Total Climate and Atmospheric Research				41,012	327,345
National Marine Fisheries Service	11.432	Direct	National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes	-	9,290
Global Science and Technology, Inc.	11.432	SA16-UMB01	National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes	-	80,116
Woods Hole Oceanographic Institution	11.432	A101176	National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes	-	72,065
Woods Hole Oceanographic Institution	11.432	A101257	National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes	-	84,387
Total National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes				-	245,858

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<b>Department of Commerce, continued</b>					
New England Fishery Management Council	11.441	17-08	Regional Fishery Management Councils	\$ -	\$ 12,568
National Oceanic and Atmospheric Administration	11.454	Direct	Unallied Management Projects	12,589	121,691
National Oceanic and Atmospheric Administration	11.459	Direct	Weather and Air Quality Research	-	19,246
National Oceanic and Atmospheric Administration	11.463	Direct	Habitat Conservation	-	19,263
National Oceanic and Atmospheric Administration	11.472	Direct	Unallied Science Program	33,669	73,924
Gulf of Maine Research Institute	11.472	10-ATLBFT-15-UMass-D	Unallied Science Program	-	7,877
Gulf of Maine Research Institute	11.472	10BFTMSE17SMASST	Unallied Science Program	-	746
MA Division of Marine Fisheries	11.472	26882	Unallied Science Program	-	13,014
Total Unallied Science Program				33,669	95,561
Ne Reg Assoc of Coastal Ocean Observ Sys	11.473	A007-005	Office for Coastal Management	-	62,370
National Oceanic and Atmospheric Administration	11.482	Direct	Coral Reef Conservation Program	-	23,147
National Institute of Standards and Technology	11.609	Direct	Measurement and Engineering Research and Standards	(115)	227,141
University of Texas at San Antonio	11.609	1000002047	Measurement and Engineering Research and Standards	-	36,990
Total Measurement and Engineering Research and Standards				(115)	264,131
National Institute of Standards	11.619	Direct	Arrangements for Interdisciplinary Research Infrastructure	47,157	53,083
Earth Networks, Inc.	11.U01	1181135	Department of Commerce Contracts	-	49,985
Earth Networks, Inc.	11.U02	EARTH NETWORKS PRIME NOAA	Department of Commerce Contracts	-	99,809
Global Science and Technology, Inc.	11.U03	SA13-UOM01-008-001	Department of Commerce Contracts	-	5,360
National Oceanic and Atmospheric Administration	11.U04	Direct - WE-133F-15-SE-1480	Department of Commerce Contracts	-	3,737
National Oceanic and Atmospheric Administration	11.U05	Direct - EE-133F-15-SE-1587	Department of Commerce Contracts	-	9,068
<b>Department of Commerce Total</b>				179,934	2,465,695
<b>Department of Defense</b>					
Defense Logistics Agency	12.002	Direct	Procurement Technical Assistance For Business Firms	-	245,494
Air Force Civil Engineer Center	12.130	Direct	Estuary Habitat Restoration Program	500	55,317
Air Force Research Laboratory	12.300	Direct	Basic and Applied Scientific Research	-	467,631
Office of Naval Research	12.300	Direct	Basic and Applied Scientific Research	238,972	2,846,044
U.S. Army Corps of Engineers	12.300	Direct	Basic and Applied Scientific Research	-	10,195

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<b>Department of Defense, continued</b>					
Arizona State University	12.300	Subaward 16-971	Basic and Applied Scientific Research	\$ -	\$ 38,285
Boston University	12.300	4500002614	Basic and Applied Scientific Research	-	31,266
Carnegie Mellon University	12.300	1150139-354945	Basic and Applied Scientific Research	-	78,202
Total Basic and Applied Scientific Research				238,972	3,471,623
Defense Threat Reduction Agency	12.351	Direct	Scientific Research - Combating Weapons of Mass Destruction	-	138,625
Lawrence Livermore National Lab University of California	12.351	No. B602042	Scientific Research - Combating Weapons of Mass Destruction	-	67,940
Total Scientific Research - Combating Weapons of Mass Destruction				-	206,565
U.S. Department of the Army	12.420	Direct	Military Medical Research and Development	1,417,655	5,806,263
Charles River Analytics	12.420	SC1705703	Military Medical Research and Development	-	2,787
Harvard School of Public Health	12.420	NSPH/DOD W81XWH-17-0692	Military Medical Research and Development	-	214,450
Henry M. Jackson Foundation	12.420	SB: 857395 PO: 3170	Military Medical Research and Development	-	602,041
Massachusetts General Hospital	12.420	W81XWH-17-1-0212	Military Medical Research and Development	-	32,203
Ocean State Research Institute, Inc.	12.420	SB: 292206	Military Medical Research and Development	-	354,578
Triton Systems, Inc.	12.420	TSI-4029-08-78762	Military Medical Research and Development	-	3,577
University of Connecticut	12.420	UCH6-74814610	Military Medical Research and Development	-	17,095
University of Washington	12.420	754368	Military Medical Research and Development	-	135
Total Military Medical Research and Development				1,417,655	7,033,129
U.S. Department of the Army	12.431	Direct	Basic Scientific Research	614,091	4,218,206
Brown University	12.431	00000822	Basic Scientific Research	-	149,322
Colorado School of Mines	12.431	401300-5801 PO# 180471	Basic Scientific Research	-	45,705
Cornell University	12.431	66220-9902	Basic Scientific Research	-	152,811
Duke University	12.431	313-0589	Basic Scientific Research	-	195,476
H F Webster Engineering Services, Inc.	12.431	W911NF-15-2-0034	Basic Scientific Research	-	16,068
Montana State University	12.431	G 167-1 7-W623 3	Basic Scientific Research	-	124,518
National Institute of Aerospace	12.431	8503-UMASS	Basic Scientific Research	-	127,099
Northeastern University	12.431	504081-78050A	Basic Scientific Research	-	20,078
Northeastern University	12.431	504081-78050B	Basic Scientific Research	-	317,671
Northeastern University	12.431	504108-78056	Basic Scientific Research	-	68,279
Northeastern University	12.431	504109-78055	Basic Scientific Research	-	205,347
Raytheon BBN Technologies Corp	12.431	13765021	Basic Scientific Research	-	199,132

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<b>Department of Defense, continued</b>							
University of Liverpool	12.431	Collaboration Agreement dated 10/3/17		Basic Scientific Research	\$ -	\$	56,172
University of Missouri	12.431	Sub# C00045065-1		Basic Scientific Research	-		144,984
Worcester Polytechnic Institute	12.431	16-TMP-00-215461		Basic Scientific Research	-		409,295
Worcester Polytechnic Institute	12.431	215464		Basic Scientific Research	-		169,100
Yale University	12.431	CON80000152 C17J12516 (J00255)		Basic Scientific Research	-		84,008
Total Basic Scientific Research							<u>614,091</u>
							<u>6,703,271</u>
Office of the Secretary of Defense	12.630	Direct		Basic, Applied, and Advanced Research in Science and Engineering	-		120,801
Advanced Functional Fabrics of America	12.630	EXHIBIT 1-B TASK ORDER 001		Basic, Applied, and Advanced Research in Science and Engineering	-		4,282
Advanced Functional Fabrics of America	12.630	W15QKN-16-3-0001		Basic, Applied, and Advanced Research in Science and Engineering	-		1,443
IBM Corporation	12.630	PO 5004950716		Basic, Applied, and Advanced Research in Science and Engineering	-		187,772
IBM Corporation	12.630	PO 5005129637		Basic, Applied, and Advanced Research in Science and Engineering	-		73,755
University of Illinois	12.630	088831-16647		Basic, Applied, and Advanced Research in Science and Engineering	-		385,282
Total Basic, Applied, and Advanced Research in Science and Engineering					-		<u>773,335</u>
Air Force Research	12.800	Direct		Air Force Defense Research Sciences Program	61,407		1,383,682
Massachusetts Institute of Technology	12.800	5710003633		Air Force Defense Research Sciences Program	-		54,797
Massachusetts Institute of Technology	12.800	5710004252		Air Force Defense Research Sciences Program	-		1,013
Truventic LLC	12.800	Air Force/Truventic		Air Force Defense Research Sciences Program	-		44,653
University of California Santa Barbara	12.800	KK1235		Air Force Defense Research Sciences Program	-		106
University of Rhode Island	12.800	SB: 0005427/102316		Air Force Defense Research Sciences Program	-		155,365
University of Wisconsin	12.800	717K555		Air Force Defense Research Sciences Program	-		(1,999)
Total Air Force Defense Research Sciences Program					<u>61,407</u>		<u>1,637,617</u>
Solid State Scientific Corporation	12.810	SB: 1805-01		Air Force Medical Research and Development	-		23,724
National Security Agency	12.905	Direct		CyberSecurity Core Curriculum	-		20,945
Defense Advanced Research Projects Agency	12.910	Direct		Research and Technology Development	579,473		2,632,694
California Institute of Technology	12.910	7S-1097879		Research and Technology Development	-		186,807
Massachusetts Institute of Technology	12.910	Sub# 26991		Research and Technology Development	-		130,542
Raytheon BBN Technologies Corp	12.910	PO# 9500013240		Research and Technology Development	-		5,387
Total Research and Technology Development					<u>579,473</u>		<u>2,955,430</u>

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<b>Department of Defense, continued</b>					
Army Research Institute	12.U02	Direct - W5J9CQ-11-C-0047	Department of Defense Contracts	\$ 23,267	\$ 23,267
Azimuth Corporation	12.U03	117-0365	Department of Defense Contracts	-	57,418
BAE Systems	12.U04	PO#963054	Department of Defense Contracts	-	27,979
BAE Systems	12.U05	990090	Department of Defense Contracts	-	24,186
BAE Systems	12.U06	PO# 961574	Department of Defense Contracts	-	251,328
Boston Engineering	12.U07	27791	Department of Defense Contracts	-	9,791
Boston Engineering	12.U08	27562	Department of Defense Contracts	-	4,963
Boston Engineering	12.U09	26656	Department of Defense Contracts	-	9,665
CDM Smith	12.U10	1402-991-003-AL	Department of Defense Contracts	-	(1,233)
Charles River Analytics	12.U11	SC1623301	Department of Defense Contracts	-	305,431
DCS Corp	12.U12	PO 161511	Department of Defense Contracts	-	31,475
Defense Advanced Research Projects Agency	12.U13	Direct - N65236-16-C-8002	Department of Defense Contracts	-	378,463
Defense Advanced Research Projects Agency	12.U14	Direct - IPA #237	Department of Defense Contracts	-	286,919
Dynetics, Inc.	12.U15	CM002014	Miscellaneous Department of Defense	-	3,537
Energy Research Consultants	12.U16	FA865 0-1 6-C-2723	Department of Defense Contracts	-	116,163
Engility Corporation	12.U17	14463-PETTT	Department of Defense Contracts	-	65,610
FTL Labs Corporation	12.U18	W81XWH17C0104	Department of Defense Contracts	-	24,957
FTL Labs Corporation	12.U19	FA8501-16-C-0001	Department of Defense Contracts	-	16,937
FTL Labs Corporation	12.U20	D16PC00092	Department of Defense Contracts	-	13,848
GE Global Research	12.U21	401039445	Department of Defense Contracts	-	8
Government of Israel	12.U22	PO 444/0672138	Department of Defense Contracts	-	(1,804)
H F Webster Engineering Services, Inc.	12.U23	W911QX16C0024	Department of Defense Contracts	-	50,000
Hypres, Inc.	12.U24	Hybrid Temp. Heterogenous Tech. Data	Department of Defense Contracts	-	140,615
Karagozian & Case	12.U25	Subcontract# UML2360.000	Department of Defense Contracts	-	101,057
Leidos, Inc.	12.U26	P010184242	Department of Defense Contracts	-	89,599
Lowell Digisonde International, LLC	12.U27	LDI20151027-1	Department of Defense Contracts	-	196,842
Lowell Digisonde International, LLC	12.U28	LDI20170613-1	Department of Defense Contracts	-	47,762
MA Development Finance Agency	12.U29	MOU Dated 10/16/2017	Miscellaneous Department of Defense	-	76,057
Microbiotix	12.U30	19865	Department of Defense Contracts	-	(687)
MIT Lincoln Laboratory	12.U31	7000344532	Department of Defense Contracts	-	38,001
Nano-Bio Manufacturing Consortium	12.U32	PROJECT# 17-14	Department of Defense Contracts	-	126,759

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<b>Department of Defense, continued</b>							
Nano-Bio Manufacturing Consortium	12.U33	Project # 16-10		Department of Defense Contracts	\$ 35,067	\$	39,898
National Security Information Associates	12.U34	Subcontract Agreement N4000001		Department of Defense Contracts	-		601,145
Naval Air Warfare Center	12.U35	Direct - N00421-16-P-0521		Department of Defense Contracts	-		1,576
Nextflex	12.U36	Development Agreement dated 10/3/16		Department of Defense Contracts	-		249,020
Nextflex	12.U37	Development Agreement dated 2/1/2017		Department of Defense Contracts	-		152,499
Nextflex	12.U38	FA8650-15-2-5401		Department of Defense Contracts	217,629		418,362
Photon Spot, Inc	12.U39	702-1		Department of Defense Contracts	-		35,194
Raytheon BBN Technologies Corp	12.U40	14720 PO# 9500013529		Department of Defense Contracts	-		148,071
Raytheon BBN Technologies Corp	12.U41	13891 PO# 9500013440		Department of Defense Contracts	-		2,212
Raytheon BBN Technologies Corp	12.U42	14775		Department of Defense Contracts	-		217,183
Raytheon Company	12.U43	PO 4201645039		Department of Defense Contracts	-		41,954
Raytheon Company	12.U44	PO 4201472189		Department of Defense Contracts	-		119,106
Raytheon Company	12.U45	PO# 4201267819 / Contract 20150270		Department of Defense Contracts	-		(3,862)
SI2 Technologies, Inc.	12.U46	SI2-2017-2084-002		Department of Defense Contracts	-		31,138
SI2Technologies, Inc.	12.U47	SI2-2016-2081-001		Department of Defense Contracts	-		12,418
SI2Technologies, Inc.	12.U48	Subcontract # SI2-2016-2068-001		Department of Defense Contracts	-		52,950
SI2Technologies, Inc.	12.U49	Subcontract Number: S12-2017-3041-001		Department of Defense Contracts	-		285,655
SI2Technologies, Inc.	12.U50	Subcontract # SI2-2016-2074-001		Department of Defense Contracts	-		100
Spero Devices, Inc.	12.U51	D17PC00304		Department of Defense Contracts	-		125,783
Stevens Institute of Technology	12.U52	2102662-03		Department of Defense Contracts	-		89,328
Systems & Technology Research	12.U53	2014-1047		Department of Defense Contracts	-		420,825
Technology Assessment and Transfer, Inc.	12.U54	7001-01		Department of Defense Contracts	-		29,208
Teqnovations LLC	12.U55	702-1		Department of Defense Contracts	-		832
Teqnovations LLC	12.U56	N68335-17-C-0058		Department of Defense Contracts	-		75,353
Triton Systems, Inc.	12.U57	TSI-2440-14-103158		Department of Defense Contracts	-		(3,901)
Triton Systems, Inc.	12.U58	TSI-2505-17-106772		Department of Defense Contracts	-		11,303
Triton Systems, Inc.	12.U59	TSI-2511-17-106397		Department of Defense Contracts	-		5,890
Triton Systems, Inc.	12.U60	TSI-2522-17-106658		Department of Defense Contracts	-		21,822
Triton Systems, Inc.	12.U61	TSI-2527-17-106660		Department of Defense Contracts	-		15,616
Triton Systems, Inc.	12.U62	TSI-2538-17-107125		Department of Defense Contracts	-		38,381

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<b>Department of Defense, continued</b>							
Triton Systems, Inc.	12.U63	TSI-2544-18-107350		Department of Defense Contracts	\$ -	\$	13,691
Triton Systems, Inc.	12.U64	TSI-4014-04-003		Miscellaneous Department of Defense	-		8,904
U.S. Army Corps of Engineers	12.U65	Direct - W912HQ-15-C-0052		Department of Defense Contracts	261,434		507,001
U.S. Army Corps of Engineers	12.U66	Direct - W912HQ-14-C-0035 P00006		Department of Defense Contracts	217,787		345,862
U.S. Army Natick Soldier Research, Development & Engineering Cen	12.U67	Direct - W911QY-16-P-0235		Department of Defense Contracts	-		42,228
U.S. Army Natick Soldier Research, Development & Engineering Cen	12.U68	Direct - W911QY-18-P-0029		Department of Defense Contracts	-		38,548
U.S. Army Natick Soldier Research, Development & Engineering Cen	12.U69	Direct - W911QY-15-C-0068		Department of Defense Contracts	-		217
U.S. Department of Defense	12.U70	Direct - W912HQ-13-C-0067		Department of Defense Contracts	-		(4,377)
U.S. Department of The Army	12.U72	Direct - W911W5-16-C-0006		Department of Defense Contracts	-		3,638,645
UES, Inc.	12.U73	S-926-013-010		Department of Defense Contracts	-		9,302
UES, Inc.	12.U74	S-111-024-003		Department of Defense Contracts	-		(1,385)
United Technologies Research Center	12.U75	N66001-16-C-4050		Department of Defense Contracts	-		49,499
University of Memphis	12.U76	A17-090-S002		Department of Defense Contracts	-		415,089
University of Southern California	12.U77	89341790		Department of Defense Contracts	-		117,371
University of Southern California	12.U78	94671240		Department of Defense Contracts	-		152,578
Vector Controls, Inc.	12.U79	N00014-11-C-0475		Department of Defense Contracts	-		1,682
<b>Department of Defense Total</b>					<b>3,667,282</b>		<b>34,211,277</b>
<b>Department of Education</b>							
U.S. Department of Education	84.021	Direct		Overseas Program- Group Projects Abroad	31,547		106,648
Association on Higher Education and Disability	84.116	P116D150005		Fund for the Improvement of Postsecondary Education	-		33,285
MA Commission for The Blind	84.126	VMCB41103021UMS15C, FH126A15VR		Rehabilitation Services-Vocational Rehabilitation Grants to States	7,111		7,111
U.S. Department of Education	84.129	Direct		Rehabilitation Long-Term Training	-		205,558
TransCen, Inc.	84.133	H133B140043		National Institute on Disability and Rehabilitation Research	-		(612)
U.S. Department of Education	84.200	Direct		Graduate Assistance in Areas of National Need	-		525,917
City of Lowell, Public Schools	84.215	PO# 17002718-00		Fund for the Improvement of Education	-		5,408
City of Lowell, Public Schools	84.215	PO# 18003767		Fund for the Improvement of Education	-		39,378
City of Lowell, Public Schools	84.215	PO# 89370565-00		Fund for the Improvement of Education	-		(99)
Total Fund for the Improvement of Education					-		44,687

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<b>Department of Education, continued</b>						
U.S. Department of Education	84.235	Direct		Rehabilitation Services Demonstration and Training Programs	\$ 2,288,905	\$ 2,837,443
Nebraska Department of Education	84.235	1745132		Rehabilitation Services Demonstration and Training Programs	-	73,287
Total Rehabilitation Services Demonstration and Training Programs					2,288,905	2,910,730
MA Charter Public School Association	84.282	115-0299		Charter Schools	-	116,111
U.S. Department of Education	84.305	Direct		Education Research, Development and Dissemination	15,379	303,928
U.S. Department of Education	84.324	Direct		Research in Special Education	-	43,335
Vanderbilt University	84.324	Sub# UNIV58652		Research in Special Education	-	5,439
Total Research in Special Education					-	48,774
U.S. Department of Education	84.325	Direct		Special Education - Personnel Development to Improve Services and Results for Children with Disabilities	-	843,434
Jackson State University	84.325	Sub No. 2017-631554UMB		Special Education - Personnel Development to Improve Services and Results for Children with Disabilities	-	30,654
Total Special Education - Personnel Development to Improve Services and Results for Children with Disabilities					-	874,088
Boston Plan For Excellence	84.336	U336S140088		Teacher Quality Partnership Grants	15,000	198,204
Boston Plan For Excellence	84.336	U336S14088		Teacher Quality Partnership Grants	-	(30,078)
Total Teacher Quality Partnership Grants					15,000	168,126
U.S. Department of Education	84.365	Direct		English Language Acquisition State Grants	-	133,460
MA Department of Elementary & Secondary Ed	84.366	150-009-7-1261-R		Mathematics and Science Partnerships	24,709	113,594
MA Department of Elementary & Secondary Ed	84.366	150-015-6-1261-Q		Mathematics and Science Partnerships	-	489
MA Department of Elementary & Secondary Ed	84.366	150-162119-2018-1261		Mathematics and Science Partnerships	42,412	73,033
Total Mathematics and Science Partnerships					67,121	187,116
National Writing Project	84.367	92-MA01-SEED2017-ILI		Supporting Effective Instruction State Grants (formerly Improving Teacher Quality State Grants)	-	11,553
National Writing Project	84.367	94-MA02-SEED2016-ILI		Supporting Effective Instruction State Grants (formerly Improving Teacher Quality State Grants)	-	4,905

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<b>Department of Education, continued</b>					
National Writing Project	84.367	94-MA02-SEED2017 PSC	Supporting Effective Instruction State Grants (formerly Improving Teacher Quality State Grants)	\$ -	\$ 7,207
National Writing Project	84.367	94-MA02-SEED2018-C3WPPD	Supporting Effective Instruction State Grants (formerly Improving Teacher Quality State Grants)	-	1,845
Total Supporting Effective Instruction State Grants (formerly Improving Teacher Quality State Grants)				-	25,510
U.S. Department of Education	84.407	Direct	Transition Programs for Students with Intellectual Disabilities into Higher Education	372,046	2,350,073
U.S. Department of Education	84.411	Direct	Education Innovation and Research (formerly Investing in Innovation (i3) Fund)	165,871	549,732
<b>Department of Education Total</b>				<b>2,962,980</b>	<b>8,590,242</b>
<b>Department of Energy</b>					
U.S. Department of Energy	81.049	Direct	Office of Science Financial Assistance Program	379,350	3,671,074
Argonne National Labs	81.049	DE-AC02-06CH11357	Office of Science Financial Assistance Program	-	5,048
Innosense LLC	81.049	UMASS-3101-022017	Office of Science Financial Assistance Program	-	67,499
Marine Biological Laboratory	81.049	MBL: 47812	Office of Science Financial Assistance Program	-	39,257
Product Innovation and Engineering	81.049	08012017	Office of Science Financial Assistance Program	-	17,106
Stanford University	81.049	61322281-123421	Office of Science Financial Assistance Program	-	62,916
University of Delaware	81.049	37776	Office of Science Financial Assistance Program	-	212,835
University of Delaware	81.049	48467	Office of Science Financial Assistance Program	-	17,074
University of Nevada	81.049	117GC000056	Office of Science Financial Assistance Program	-	47,531
Total Office of Science Financial Assistance Program				379,350	4,140,340
U.S. Department of Energy	81.057	Direct	University Coal Research	7,958	54,189
Michigan Technological University	81.086	1502062Z1	Conservation Research and Development	-	135,195
U.S. Department of Energy	81.087	Direct	Renewable Energy Research and Development	793	146,997
Littoral Power Systems, LLC	81.087	LPS-001	Renewable Energy Research and Development	-	67,650
Total Renewable Energy Research and Development				793	214,647
U.S. Department of Energy	81.104	Direct	Environmental Remediation and Waste Processing and Disposal	100,000	306,288
U.S. Department of Energy	81.112	Direct	Stewardship Science Grant Program	-	169,692

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<b>Department of Energy, continued</b>							
U.S. Department of Energy	81.117	Direct		Energy Efficiency and Renewable Energy Information Dissemination, Outreach, Training and Technical Analysis/Assistance	\$ -	\$	238,945
Pace University	81.117	DE-EE0006279		Energy Efficiency and Renewable Energy Information Dissemination, Outreach, Training and Technical Analysis/Assistance	-		116,042
Total Energy Efficiency and Renewable Energy Information Dissemination, Outreach, Training and Technical Analysis/Assistance					-		354,987
U.S. Department of Energy	81.121	Direct		Nuclear Energy Research, Development and Demonstration	57,931		281,184
Massachusetts Institute of Technology	81.135	571000-4079		Advanced Research Projects Agency - Energy	-		216,943
UHV Technologies, Inc.	81.135	Subaward dated 8/30/2017		Advanced Research Projects Agency - Energy	-		18,707
Total Advanced Research Projects Agency - Energy					-		235,650
Alliance For Sustainability, LLC	81.U01	XEJ-8-70303-01		Department of Energy Contracts	-		46,680
Argonne National Labs	81.U02	3F32741		Department of Energy Contracts	-		3,476
Argonne National Labs	81.U03	7F-30047		Department of Energy Contracts	-		29,621
Argonne National Labs	81.U04	8F-30061		Department of Energy Contracts	-		41,127
Brookhaven National Laboratory	81.U05	233969		Department of Energy Contracts	-		210,349
Brookhaven National Laboratory	81.U06	Subcontract Number 330349		Department of Energy Contracts	-		13,513
Honeywell International Inc	81.U07	N000242948		Department of Energy Contracts	-		15,724
Honeywell International Inc	81.U08	N000266033		Department of Energy Contracts	-		12,378
Lawrence Berkeley National Lab U-California	81.U09	7251704		Department of Energy Contracts	-		19,412
Lawrence Berkeley National Lab U-California	81.U10	7345970		Department of Energy Contracts	-		25,000
Lawrence Livermore National Lab U-California	81.U11	B623647		Department of Energy Contracts	-		24,657
National Renewable Energy Lab	81.U12	Sub No.: XAT-6-62163-01		Department of Energy Contracts	-		76,078
National Renewable Energy Lab	81.U13	Subcontract No. AFC-5-52004-05		Department of Energy Contracts	-		31
Oak Ridge National Laboratory	81.U14	Direct - ORNL: 4000135366		Department of Energy Contracts	-		131,628
Oak Ridge National Laboratory	81.U15	Direct - ORNL: 4000136881		Department of Energy Contracts	-		6,864
Pacific Northwest National Laboratory	81.U16	355442		Department of Energy Contracts	-		33,032
Pacific Northwest National Laboratory	81.U17	Contract 325324		Department of Energy Contracts	-		96,398
Sandia National Labs	81.U18	1666643-REV 3		Department of Energy Contracts	-		93,165
Sandia National Labs	81.U19	Standard PO 1809035		Department of Energy Contracts	-		44,637
Sandia National Labs	81.U20	Standard PO 1770246		Department of Energy Contracts	-		26,403

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		Number			Through to Subrecipients	Total Federal Expenditures
<b>Department of Energy, continued</b>						
Triton Systems, Inc.	81.U21	TSI-2486-17-106117		Department of Energy Contracts	\$ -	\$ 2,656
U.S. Atlas	81.U22	336326		Department of Energy Contracts	-	6,953
UT-Battelle LLC	81.U23	4000158644		Department of Energy Contracts	-	88,581
<b>Department of Energy Total</b>					<b>546,032</b>	<b>6,940,535</b>
<b>Department of Health and Human Services</b>						
Highland Valley Elder Services, Inc.	93.052	116-0125		National Family Caregiver Support, Title III, Part E	-	562
Centers for Disease Control & Prevention	93.068	Direct		Chronic Diseases: Research, Control, and Prevention	-	529,175
American Thrombosis & Hemostasis Network	93.080	ATHN2015001-1-2		Blood Disorder Program: Prevention, Surveillance, and Research	102,942	72,071
Harvard Pilgrim Health Care, Inc.	93.084	U54CK000484		Prevention of Disease, Disability, and Death by Infectious Diseases	-	31,808
U.S. Food and Drug Administration	93.103	Direct		Food and Drug Administration-Research	-	248,450
University of Vermont	93.103	30689SUB52094		Food and Drug Administration-Research	-	2,457
Weill Cornell Medical College	93.103	1 U01 FD005478-02		Food and Drug Administration-Research	-	1,045
Total Food and Drug Administration-Research					-	251,952
Health Resources & Service Administration	93.107	Direct		Area Health Education Centers	410,492	595,669
Health Resources & Service Administration	93.110	Direct		Maternal and Child Health Federal Consolidated Programs	330,343	1,169,675
Children's Hospital	93.110	6 T73MC000202402 / PO# 0001204102		Maternal and Child Health Federal Consolidated Programs	-	115,095
Icahn School of Medicine At Mount Sinai	93.110	SB: 0253-6546-4609		Maternal and Child Health Federal Consolidated Programs	-	34,683
Langston University	93.110	Sub# LU 5-17047-1 / PO# P0078505		Maternal and Child Health Federal Consolidated Programs	-	5,322
MA Department of Public Health	93.110	INTF3050HH2500224026		Maternal and Child Health Federal Consolidated Programs	-	9,260
Mount Sinai Medical Center	93.110	SB: 0253-6544-4609		Maternal and Child Health Federal Consolidated Programs	-	(2,548)
Total Maternal and Child Health Federal Consolidated Programs					<b>330,343</b>	<b>1,331,487</b>
National Institutes of Health	93.113	Direct		Environmental Health	253,556	3,074,488
Harvard Pilgrim Health Care, Inc.	93.113	Sub No. PH000552B		Environmental Health	-	5,165
Harvard School of Public Health	93.113	SB: 112176-5095841		Environmental Health	-	45,901
University of Vermont	93.113	3 1292SUB52223		Environmental Health	-	13,066
University of Wisconsin	93.113	SB: 783K042		Environmental Health	-	66,026
Total Environmental Health					<b>253,556</b>	<b>3,204,646</b>

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<b>Department of Health and Human Services, continued</b>						
National Institutes of Health	93.121	Direct		Oral Diseases and Disorders Research	\$ 15,968	\$ 653,451
Brigham and Women's Hospital	93.121	114810		Oral Diseases and Disorders Research	-	20,330
University of California	93.121	SB: 8871sc		Oral Diseases and Disorders Research	-	77,928
University of California San Francisco	93.121	SB: 9502SC		Oral Diseases and Disorders Research	-	27,726
University of Rochester	93.121	416663-G		Oral Diseases and Disorders Research	-	12,993
Total Oral Diseases and Disorders Research					15,968	792,428
Centers for Disease Control & Prevention	93.135	Direct		Centers for Research and Demonstration for Health Promotion and Disease Prevention	-	873,952
Dartmouth College	93.135	SB: 1614		Centers for Research and Demonstration for Health Promotion and Disease Prevention	-	726
Total Centers for Research and Demonstration for Health Promotion and Disease Prevention					-	874,678
MA Department of Public Health	93.136	INTF3401M03700115043		Injury Prevention and Control Research and State and Community Based Programs	-	21,929
MA Department of Public Health	93.136	INTF3401M03 181228065		Injury Prevention and Control Research and State and Community Based Programs	-	105,759
Total Injury Prevention and Control Research and State and Community Based Programs					-	127,688
National Institutes of Health	93.142	Direct		NIEHS Hazardous Waste Worker Health and Safety Training	621,902	1,447,071
Boston University	93.143	4500002440		NIEHS Superfund Hazardous Substances-Basic Research and Education	-	28,029
Health Resources & Service Administration	93.145	Direct		HIV-Related Training and Technical Assistance	1,641,027	2,123,421
Rutgers University	93.145	SB: 821743		HIV-Related Training and Technical Assistance	-	6,642
Total HIV-Related Training and Technical Assistance					1,641,027	2,130,063
National Institutes of Health	93.172	Direct		Human Genome Research	2,012,905	4,546,592
Biospyder Technologies, Inc	93.172	2 R44HG008917		Human Genome Research	-	40,647
The Broad Institute	93.172	SB: 500530-550000908		Human Genome Research	-	25,831
Total Human Genome Research					2,012,905	4,613,070
National Institutes of Health	93.173	Direct		Research Related to Deafness and Communication Disorders	45,654	1,461,748
Emerson College	93.173	SB: 3452-UMMS		Research Related to Deafness and Communication Disorders	-	(58)
Total Research Related to Deafness and Communication Disorders					45,654	1,461,690

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<b>Department of Health and Human Services, continued</b>					
Health Resources & Service Administration	93.178	Direct	Nursing Workforce Diversity	\$ -	\$ 293,569
National Institutes of Health	93.213	Direct	Research and Training in Complementary and Integrative Health	279,928	1,306,663
Brown University	93.213	1 UH2 AT008145-02	Research and Training in Complementary and Integrative Health	-	154,607
Miriam Hospital	93.213	Subaward No.710-9138	Research and Training in Complementary and Integrative Health	-	9,395
University of California San Francisco	93.213	SB: 9560sc	Research and Training in Complementary and Integrative Health	-	167,657
Yale University	93.213	1 UG3 AT009758-01	Research and Training in Complementary and Integrative Health	-	14,637
Yale University	93.213	1 UG3 AT009767-01	Research and Training in Complementary and Integrative Health	-	27,199
Total Research and Training in Complementary and Integrative Health				279,928	1,680,158
Agency for Healthcare Research & Quality	93.226	Direct	Research on Healthcare Costs, Quality and Outcomes	729,258	1,895,580
Harvard Pilgrim Health Care, Inc.	93.226	R18HS021424	Research on Healthcare Costs, Quality and Outcomes	-	20,049
Ohio State University	93.226	SUB: 60065338	Research on Healthcare Costs, Quality and Outcomes	-	16,236
University of California Irvine	93.226	SB: 2015-3303	Research on Healthcare Costs, Quality and Outcomes	-	6,036
University of Minnesota	93.226	P005171401	Research on Healthcare Costs, Quality and Outcomes	-	6,105
Worcester Polytechnic Institute	93.226	SB: 15-21084-00	Research on Healthcare Costs, Quality and Outcomes	-	5,348
Yale University	93.226	Sub# GR101546 (CON-80001090)	Research on Healthcare Costs, Quality and Outcomes	-	154,869
Total Research on Healthcare Costs, Quality and Outcomes				729,258	2,104,223
National Institutes of Health	93.233	Direct	National Center on Sleep Disorders Research	-	340,874
National Institutes of Health	93.242	Direct	Mental Health Research Grants	968,483	6,202,556
Icahn School of Medicine At Mount Sinai	93.242	SB: 0255-0091-4809	Mental Health Research Grants	-	78,000
Massachusetts General Hospital	93.242	SB: 228314	Mental Health Research Grants	-	143,604
McLean Hospital	93.242	SB: 401122	Mental Health Research Grants	-	24,975
Michigan State University	93.242	SB: RC108066UMASS	Mental Health Research Grants	-	6,470
Pennsylvania State University	93.242	5 R01 MH098003-04	Mental Health Research Grants	-	14,901
Praxis, Inc.	93.242	1R41MH116534-01A1	Mental Health Research Grants	-	18,291
Praxis, Inc.	93.242	PR: R41 MH113381-01	Mental Health Research Grants	-	50,926
Rand Corporation	93.242	Sub# 9920170094	Mental Health Research Grants	-	24,489
University of Alaska	93.242	UAF 18-0030	Mental Health Research Grants	-	109,605
University of North Carolina	93.242	SB: 516171	Mental Health Research Grants	-	5,166
University of Southern California	93.242	SB: 91991408	Mental Health Research Grants	-	56,968

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<b>Department of Health and Human Services, continued</b>						
University of Toronto	93.242	1 R01 MH099167-01		Mental Health Research Grants	\$ -	\$ (9,057)
Yale University	93.242	5 R01 MH110926-03		Mental Health Research Grants	-	77,779
Yale University	93.242	SB: GR100931CON-80000917		Mental Health Research Grants	-	58,701
Total Mental Health Research Grants					968,483	6,863,374
Substance Abuse and Mental Health Services	93.243	Direct		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	181,973	980,871
American Psychiatric Association	93.243	SM060562-05		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	228
Baystate Medical Center, Inc.	93.243	U79 SM063204		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	57,516
Boston University	93.243	4500002244		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	19,088
Colorado Seminary	93.243	H79TI026380/1H79SM060845		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	8,761
MA Department of Public Health	93.243	INTF2330MM3W16007103		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	297,857
MA Department of Public Health	93.243	INTF2400H78500224280		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	142,840
MA Department of Public Health	93.243	INTF4107H78500224088		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	87,196
MA Department of Public Health	93.243	SCDMH822018084030000		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	23,039
University of California	93.243	1647 G UA158		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	188,342
Total Substance Abuse and Mental Health Services-Projects of Regional and National Significance					181,973	1,805,738
Health Resources & Service Administration	93.247	Direct		Advanced Nursing Education Workforce Grant Program	386,341	846,112
Centers for Disease Control & Prevention	93.262	Direct		Occupational Safety and Health Program	512,595	2,532,742
Harvard School of Public Health	93.262	2017-2018 ERC Pilot Project		Occupational Safety and Health Program	-	12,281
Johns Hopkins University	93.262	2 U54 OH007542		Occupational Safety and Health Program	-	6,304

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<b>Department of Health and Human Services, continued</b>						
Pennington Biomedical Research Center	93.262	R210H010785-O1A1S1		Occupational Safety and Health Program	\$ -	\$ 3,123
The Center for Construction Research & Training	93.262	No. 3001-607-01		Occupational Safety and Health Program	-	224,921
The Mary Imogene Bassett Hospital	93.262	2 U54 OH007542-16		Occupational Safety and Health Program	-	39,915
The Mary Imogene Bassett Hospital	93.262	2 U54 OH007542-17		Occupational Safety and Health Program	-	118,754
The Mary Imogene Bassett Hospital	93.262	5 U54 OH007542-15		Occupational Safety and Health Program	-	(2,880)
Total Occupational Safety and Health Program					512,595	2,935,160
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	-	19,413
Yale University	93.266	M13A11547 (A09063)		Health Systems Strengthening and HIV/AIDS Prevention, Care and Treatment under the President's Emergency Plan for AIDS Relief	-	55,163
Yale University	93.266	M13A11547(A09064)		Health Systems Strengthening and HIV/AIDS Prevention, Care and Treatment under the President's Emergency Plan for AIDS Relief	6,929	59,457
Total Health Systems Strengthening and HIV/AIDS Prevention, Care and Treatment under the President's Emergency Plan for AIDS Relief					6,929	134,033
National Institutes of Health	93.273	Direct		Alcohol Research Programs	111,124	4,033,895
Brown University	93.273	SB: 00000831		Alcohol Research Programs	-	30,198
Brown University	93.273	Sub# 00000856		Alcohol Research Programs	-	10,021
Cleveland Clinic Foundation	93.273	U01 AA021893-05		Alcohol Research Programs	-	366,276
Praxis, Inc.	93.273	SB: STTR: Mission U		Alcohol Research Programs	-	2,166
Rhode Island Hospital	93.273	SB: 7017137290-1		Alcohol Research Programs	-	1,719
Signablok, Inc.	93.273	1R34AA024355-01A1		Alcohol Research Programs	-	67,578
Tridium, Inc.	93.273	2 R42 AA022035-04		Alcohol Research Programs	10,349	194,564
University of New Mexico	93.273	SB: 028326-871G		Alcohol Research Programs	-	8,294
Total Alcohol Research Programs					121,473	4,714,711
National Institutes of Health	93.279	Direct		Drug Abuse and Addiction Research Programs	246,699	4,635,382
Brown University	93.279	Sub# 00001061		Drug Abuse and Addiction Research Programs	-	22,255
Dartmouth College	93.279	5 R01 DA032533-03		Drug Abuse and Addiction Research Programs	-	(7,740)
Florida International University	93.279	SB: 800001069-02		Drug Abuse and Addiction Research Programs	-	1,447
Kaiser Foundation Research Institute	93.279	5 UG1 DA040314-02		Drug Abuse and Addiction Research Programs	-	10,711

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<b>Department of Health and Human Services, continued</b>							
Nat'l Development and Research Institutes	93.279	Project #6420		Drug Abuse and Addiction Research Programs	\$ -	\$	15,366
Nat'l Development and Research Institutes	93.279	Project #642D/PO No.000820		Drug Abuse and Addiction Research Programs	-		(59)
Oregon Social Learning Center, Inc.	93.279	1 R01 DA041425-01		Drug Abuse and Addiction Research Programs	-		247,856
University of California	93.279	5 U24 DA041123-02		Drug Abuse and Addiction Research Programs	-		37,173
University of Colorado At Denver	93.279	Subaward: FY18.893.001		Drug Abuse and Addiction Research Programs	-		31,087
University of Nebraska	93.279	24-0524-0054-004		Drug Abuse and Addiction Research Programs	-		5,169
University of Wisconsin Madison	93.279	7R01DA041641-02		Drug Abuse and Addiction Research Programs	-		17,951
Virginia Polytechnic Institute and State University	93.279	5R01 DA036017-05		Drug Abuse and Addiction Research Programs	-		30,026
Total Drug Abuse and Addiction Research Programs					246,699		5,046,624
University of Rochester	93.280	416935-G/UR FAO GR510519		National Institutes of Health Loan Repayment Program for Clinical Researchers	-		14,047
University of South Carolina	93.283	SB: 17-3249		Centers for Disease Control and Prevention-Investigations and Technical Assistance	-		35,390
National Institutes of Health	93.286	Direct		Discovery and Applied Research for Technological Innovations to Improve Human Health	1,405,146		4,554,267
Montana State University	93.286	G173-15-W5173		Discovery and Applied Research for Technological Innovations to Improve Human Health	-		49,619
Stanford University	93.286	Sub No. 60812904-108947		Discovery and Applied Research for Technological Innovations to Improve Human Health	-		(1,823)
Stanford University	93.286	Sub No. 60812904-108947 (Amnd 1)		Discovery and Applied Research for Technological Innovations to Improve Human Health	-		(5,114)
Stanford University	93.286	Sub No. 60812904-108947 (Amnd 3)		Discovery and Applied Research for Technological Innovations to Improve Human Health	-		108,708
University of Florida	93.286	5 R01 EB014869-04		Discovery and Applied Research for Technological Innovations to Improve Human Health	-		559
University of Memphis	93.286	5-40312		Discovery and Applied Research for Technological Innovations to Improve Human Health	-		174,063
Worcester Polytechnic Institute	93.286	SB: 18-211110-01		Discovery and Applied Research for Technological Innovations to Improve Human Health	-		18,367
Total Discovery and Applied Research for Technological Innovations to Improve Human Health					1,405,146		4,898,646

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<b>Department of Health and Human Services, continued</b>						
National Institutes of Health	93.307	Direct		Minority Health and Health Disparities Research	\$ 229,032	\$ 2,022,374
National Institutes of Health	93.310	Direct		Trans-NIH Research Support	1,163,638	7,311,792
Boston College	93.310	Sub# 5101963-7		Trans-NIH Research Support	2,953	2,410
California Institute of Technology	93.310	DP5 OD12190-06		Trans-NIH Research Support	-	(9,108)
Harvard Pilgrim Health Care, Inc.	93.310	PH000615E		Trans-NIH Research Support	-	66,377
Henry Ford Health System	93.310	SB: B11170UMMS		Trans-NIH Research Support	-	24,453
Henry Ford Health System	93.310	SB: B11149UMASS		Trans-NIH Research Support	-	84,989
University of California Irvine	93.310	SB: 2015-3290		Trans-NIH Research Support	-	150,526
University of Delaware	93.310	47942		Trans-NIH Research Support	-	19,999
University of North Carolina	93.310	SB: 5106194		Trans-NIH Research Support	-	316,554
Total Trans-NIH Research Support					<u>1,166,591</u>	<u>7,967,992</u>
Boston Public Health Commission	93.311	PO 201601767		Mobilization For Health: National Prevention Partnership Awards	-	6,997
Centers for Disease Control & Prevention	93.318	Direct		Protecting and Improving Health Globally: Building and Strengthening Public Health Impact, Systems, Capacity and Security	2,004,476	4,404,040
National Institutes of Health	93.350	Direct		National Center for Advancing Translational Sciences	400,257	5,305,707
Boston Medical Center	93.350	535401		National Center for Advancing Translational Sciences	-	41,912
University of Alabama	93.350	SB: 000508606-014		National Center for Advancing Translational Sciences	-	24,453
University of Alabama	93.350	SB: 000508606-021		National Center for Advancing Translational Sciences	-	119,663
Total National Center for Advancing Translational Sciences					<u>400,257</u>	<u>5,491,735</u>
National Institutes of Health	93.351	Direct		Research Infrastructure Programs	238,221	2,166,378
Jackson Laboratory	93.351	U54 OD020351		Research Infrastructure Programs	-	23,819
The Broad Institute	93.351	5400000054		Research Infrastructure Programs	-	18,618
Total Research Infrastructure Programs					<u>238,221</u>	<u>2,208,815</u>
Geisinger Medical Center	93.353	SB: 646018UOM01		21st Century Cures Act - Beau Biden Cancer Moonshot	-	13,602
Health Resources & Service Administration	93.358	Direct		Advanced Education Nursing Traineeships	-	58,232
University of Florida	93.360	SB: UFDSP00011615		Biomedical Advanced Research and Development Authority (BARDA), Biodefense Medical Countermeasure Development	-	128,676
National Institutes of Health	93.361	Direct		Nursing Research	-	744,871
Rhode Island Hospital	93.361	5 R01 NR014782-03		Nursing Research	-	17,873

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<b>Department of Health and Human Services, continued</b>						
Rush University Medical Center	93.361	5 R01 NR013910-05		Nursing Research	\$ -	\$ 2,986
Temple University	93.361	259909-UMASS		Nursing Research	-	8,715
Total Nursing Research					-	774,445
National Institutes of Health	93.393	Direct		Cancer Cause and Prevention Research	666,195	3,133,565
Boston University	93.393	4500001969		Cancer Cause and Prevention Research	-	19,075
Boston University	93.393	R01 CA181392-02		Cancer Cause and Prevention Research	-	327,968
Harvard School of Public Health	93.393	111170-5081524		Cancer Cause and Prevention Research	-	32,432
Kaiser Foundation Research Institute	93.393	SB: RNG200623-MPCI-01		Cancer Cause and Prevention Research	-	16,739
Klein Buendel, Inc.	93.393	SB: 0301-0154-000		Cancer Cause and Prevention Research	-	20,373
New York University School of Medicine	93.393	5 R21 CA187612-02		Cancer Cause and Prevention Research	-	(344)
Tridium, Inc.	93.393	SB: SBC Project		Cancer Cause and Prevention Research	-	224,184
University of Pennsylvania	93.393	5 R01 CA202699-02		Cancer Cause and Prevention Research	-	(5,684)
University of Pennsylvania	93.393	565706 PO # 3980600		Cancer Cause and Prevention Research	-	23,464
University of Pennsylvania	93.393	PO#3758858		Cancer Cause and Prevention Research	-	26,173
University of Puerto Rico	93.393	5 R21CA198963-02		Cancer Cause and Prevention Research	-	30,814
University of Wisconsin	93.393	173405330		Cancer Cause and Prevention Research	-	26,441
Wake Forest University	93.393	SB: WFUHS114040		Cancer Cause and Prevention Research	-	81,855
Total Cancer Cause and Prevention Research					666,195	3,957,055
National Institutes of Health	93.394	Direct		Cancer Detection and Diagnosis Research	261,311	1,217,014
Lumamed LLC	93.394	SBIR Dated 12/15/14		Cancer Detection and Diagnosis Research	-	(20,619)
University of Arkansas for Medical Sciences	93.394	SB: 51599		Cancer Detection and Diagnosis Research	-	38,479
University of Michigan	93.394	SB: 3004625568		Cancer Detection and Diagnosis Research	-	20,914
Worcester Polytechnic Institute	93.394	SB: 14-210730-02		Cancer Detection and Diagnosis Research	-	102,328
Total Cancer Detection and Diagnosis Research					261,311	1,358,116
National Institutes of Health	93.395	Direct		Cancer Treatment Research	126,776	1,409,655
American College of Radiology	93.395	1 U24 CA18083-04		Cancer Treatment Research	-	567,820
American College of Radiology	93.395	1612		Cancer Treatment Research	-	822,266
Children's Hospital of Philadelphia	93.395	U10 CA180886		Cancer Treatment Research	-	35,796
Children's Hospital of Philadelphia	93.395	U10CA0180886		Cancer Treatment Research	-	15,839
Northwestern University	93.395	1 R01 CA219013-01		Cancer Treatment Research	-	6,362
Purdue University	93.395	Sub No. 4102-74345		Cancer Treatment Research	-	24,660
Total Cancer Treatment Research					126,776	2,882,398

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<b>Department of Health and Human Services, continued</b>						
National Institutes of Health	93.396	Direct		Cancer Biology Research	\$ 557,272	\$ 3,867,820
Beckman Research Institute City of Hope	93.396	1 R21 CA205106-01		Cancer Biology Research	-	87,640
Beckman Research Institute City of Hope	93.396	R21CA205106		Cancer Biology Research	-	23,310
Massachusetts General Hospital	93.396	SB: 229519		Cancer Biology Research	-	279,947
Mayo Clinic Rochester	93.396	PO: 64195304 / SB: UNI-203270		Cancer Biology Research	-	7,502
Sage Bionetworks	93.396	CSBCUMA2017		Cancer Biology Research	-	40,918
Sanford Burnham Prebys Medical Discovery Institute	93.396	SB: 60025-12917-UMASS		Cancer Biology Research	-	35,743
Total Cancer Biology Research					557,272	4,342,880
National Institutes of Health	93.397	Direct		Cancer Centers Support Grants	-	1,962,062
Indiana University	93.397	SB: IN4687567UMASS		Cancer Centers Support Grants	-	37,839
Indiana University	93.397	SB: IN4687577UMASS		Cancer Centers Support Grants	-	24,069
Indiana University	93.397	SB: PO # 1571596		Cancer Centers Support Grants	-	19,221
Northwestern University	93.397	SB: 6003974 UM		Cancer Centers Support Grants	-	99,952
Total Cancer Centers Support Grants					-	2,143,143
National Institutes of Health	93.398	Direct		Cancer Research Manpower	-	1,050,939
Dana Farber Cancer Institute	93.398	Sub# 1156001		Cancer Research Manpower	-	22,027
Total Cancer Research Manpower					-	1,072,966
Association 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	-	10,364
U.S. Department of Health and Human Services	93.433	Direct		ACL National Institute on Disability, Independent Living, and Rehabilitation Research	371,284	1,641,708
Brandeis University	93.433	403315		ACL National Institute on Disability, Independent Living, and Rehabilitation Research	-	15,840
FTL Labs Corporation	93.433	90BISB0007-01-00		ACL National Institute on Disability, Independent Living, and Rehabilitation Research	-	12,902
Langston University	93.433	Sub# LU 5-17044-1		ACL National Institute on Disability, Independent Living, and Rehabilitation Research	-	(1,224)
Transcen, Inc.	93.433	90RT5034-02-00		ACL National Institute on Disability, Independent Living, and Rehabilitation Research	-	118,998
University of Medicine & Dentistry of NJ	93.433	SB: 8094		ACL National Institute on Disability, Independent Living, and Rehabilitation Research	-	99,259
Total ACL National Institute on Disability, Independent Living, and Rehabilitation Research					371,284	1,887,483

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<b>Department of Health and Human Services, continued</b>							
Boston University	93.516	4500001666		Public Health Training Centers Program	\$ -	\$	54,810
Children's Friend and Family Service	93.600	EHSCCP-Eval-001		Head Start	18,148		34,570
State of Rhode Island	93.624	SRI/Agreement #: SIM MTG-002		ACA - State Innovation Models: Funding for Model Design and Model testing Assistance	-		34,529
University of Connecticut	93.624	1 G1CMS331404		ACA - State Innovation Models: Funding for Model Design and Model testing Assistance	-		2,673
Total ACA - State Innovation Models: Funding for Model Design and Model Testing Assistance					-		37,202
Florida Developmental Disabilities Council	93.630	973EM16		Developmental Disabilities Basic Support and Advocacy Grants	-		(7,151)
U.S. Department of Health and Human Services	93.631	Direct		Developmental Disabilities Projects of National Significance	9,483		168,065
U.S. Department of Health and Human Services	93.632	Direct		University Centers for Excellence in Developmental Disabilities Education, Research, and Service	22,885		539,958
Children's Hospital	93.632	90DD0013-04-00, PO# 0000704943		University Centers for Excellence in Developmental Disabilities Education, Research, and Service	7,500		283,980
Total University Centers for Excellence in Developmental Disabilities Education, Research, and Service					30,385		823,938
Centers For Medicare & Medicaid Services	93.638	Direct		ACA-Transforming Clinical Practice Initiative: Practice Transformation Networks (PTNs)	2,676,544		8,185,903
MA Executive Office of Health & Human Services	93.644	16UMMSCONTRACEPTIVSW		Adult Medicaid Quality: Improving Maternal and Infant Health Outcomes in Medicaid and CHIP	-		40,973
Luk Crisis Center, Inc.	93.652	90C01057		Adoption Opportunities	-		17,634
National Institutes of Health	93.837	Direct		Cardiovascular Diseases Research	1,417,183		10,083,371
Boston University	93.837	1R01HL136660		Cardiovascular Diseases Research	-		141,945
Brigham and Women's Hospital	93.837	113892		Cardiovascular Diseases Research	-		11,383
FocalCool LLC	93.837	R43-NS095573-01A1		Cardiovascular Diseases Research	-		165,032
Gentuity, LLC	93.837	1 R34 NS100163-01A1		Cardiovascular Diseases Research	-		68,875
Harvard Medical School	93.837	1R01HL126896-01A1		Cardiovascular Diseases Research	-		213,148
Illinois Institute of Technology	93.837	SB: SA557-0614-8907		Cardiovascular Diseases Research	-		442,145
Massachusetts General Hospital	93.837	SB: 226216		Cardiovascular Diseases Research	-		6,539
Massachusetts General Hospital	93.837	SB: 228345		Cardiovascular Diseases Research	-		11,482
Massachusetts General Hospital	93.837	SB: 230189		Cardiovascular Diseases Research	-		141,768
Massachusetts General Hospital	93.837	4 R01 HL112661-04		Cardiovascular Diseases Research	-		(20,032)

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<b>Department of Health and Human Services, continued</b>					
Mobile Sense Technologies, Inc.	93.837	SB: 1R43HI135961-01A1-MST01	Cardiovascular Diseases Research	\$ -	\$ 41,985
New England Research Institute, Inc.	93.837	SB: CT1500024	Cardiovascular Diseases Research	-	29,759
Signablok, Inc.	93.837	5 R44HL110417-03	Cardiovascular Diseases Research	-	(12,316)
Texas Tech University	93.837	PR: R15 HL121761-02	Cardiovascular Diseases Research	-	59,447
University of Cincinnati	93.837	SB: 010679-002	Cardiovascular Diseases Research	-	11,000
University of Rochester	93.837	1 R34 HL133526-01	Cardiovascular Diseases Research	-	4,842
University of Rochester	93.837	SB: 416917-G	Cardiovascular Diseases Research	-	111,142
University of Utah	93.837	SB: 10023730-01	Cardiovascular Diseases Research	-	195,283
Yale University	93.837	5 R01 HL115295-04	Cardiovascular Diseases Research	-	(3,703)
Yale University	93.837	GR100590	Cardiovascular Diseases Research	-	44,325
Total Cardiovascular Diseases Research				1,417,183	11,747,420
National Institutes of Health	93.838	Direct	Lung Diseases Research	-	2,554,676
Baystate Medical Center, Inc.	93.838	FED705-17120-1	Lung Diseases Research	-	28,205
The University of Texas At Tyler	93.838	SB: 6104360165-04	Lung Diseases Research	-	12,704
Wayne State University	93.838	SB: WSU18011-A1	Lung Diseases Research	-	8,031
Total Lung Diseases Research				-	2,603,616
National Institutes of Health	93.839	Direct	Blood Diseases and Resources Research	235,687	1,496,466
L2 Diagnostics LLC	93.839	1 R41AI134497	Blood Diseases and Resources Research	-	82,175
Tufts Medical Center	93.839	SB: 6013015-SERV	Blood Diseases and Resources Research	-	55,792
Tufts Medical Center	93.839	SB: 6013016-SERV	Blood Diseases and Resources Research	-	18,955
University of Florida	93.839	SB: UFDSP00011731	Blood Diseases and Resources Research	-	184,715
Total Blood Diseases and Resources Research				235,687	1,838,103
National Institutes of Health	93.840	Direct	Translation and Implementation Science Research for Heart, Lung, Blood Diseases, and Sleep Disorders	5,411	60,358
Health Strategy and Policy Institute	93.840	1 U01 HL138631	Translation and Implementation Science Research for Heart, Lung, Blood Diseases, and Sleep Disorders	-	101,612
Total Translation and Implementation Science Research for Heart, Lung, Blood Diseases, and Sleep Disorders				5,411	161,970
National Institutes of Health	93.846	Direct	Arthritis, Musculoskeletal and Skin Diseases Research	456,346	4,840,779
Brigham and Women's Hospital	93.846	115810	Arthritis, Musculoskeletal and Skin Diseases Research	-	124,498
Purdue University	93.846	Sub No. 4102-85217	Arthritis, Musculoskeletal and Skin Diseases Research	-	4,707

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<b>Department of Health and Human Services, continued</b>							
University of Colorado At Denver	93.846	SB: FY15.090.004		Arthritis, Musculoskeletal and Skin Diseases Research	\$ -	\$ -	16,716
University of Florida	93.846	1 R01AR069660-02		Arthritis, Musculoskeletal and Skin Diseases Research	-	-	82,269
University of Nevada	93.846	R01 AR070432		Arthritis, Musculoskeletal and Skin Diseases Research	-	-	20,778
University of Pittsburgh	93.846	2 R01 AR060744-07		Arthritis, Musculoskeletal and Skin Diseases Research	-	-	17,643
Washington State University	93.846	1 R01 AR062279-05		Arthritis, Musculoskeletal and Skin Diseases Research	-	-	16,257
Total Arthritis, Musculoskeletal and Skin Diseases Research						456,346	5,123,647
National Institutes of Health	93.847	Direct		Diabetes, Digestive, and Kidney Diseases Extramural Research	890,724	-	12,431,335
Baystate Medical Center, Inc.	93.847	R18 HL08810-05		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	5,148
Beckman Research Institute City of Hope	93.847	51504.2000556.6		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	339
Boston Medical Center	93.847	5101963-7		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	(3,602)
Boston Medical Center	93.847	5P30DK046200-25		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	3,000
Children's Hospital	93.847	RSTFD00007000021		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	27,157
Duke University	93.847	12-NIH-1126		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	2,442
George Washington University	93.847	2018-40841		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	22,588
George Washington University	93.847	R01DK100916		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	63,603
George Washington University	93.847	Sub No. 14-M25		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	99,583
Harvard University	93.847	SB: 164623-5098789		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	537,925
Indiana University	93.847	SB: IN-4681920-UMA		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	51,611
Joslin Diabetes Center	93.847	SB: PERL Study		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	15,231
Rutgers University	93.847	SB: 5471		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	32,727
Tulane University	93.847	5 R01 DK099598-04		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	17,240
University of Connecticut	93.847	5 R01 DK103944		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	31,448
University of North Carolina	93.847	SB: 510150		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	104,606
University of Pennsylvania	93.847	5 P30 DK047757		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	83,750
University of Pittsburgh	93.847	SB: 0028057(123009-1)		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	(8,510)
University of Wisconsin	93.847	580K646/U54DK104310 YR2 640K942		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	(90,166)
University of Wisconsin	93.847	SB: 640K942		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	80,046
University of Wisconsin	93.847	Sub# 697K163		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	114,463
University of Wisconsin Madison	93.847	Sub# 786K870		Diabetes, Digestive, and Kidney Diseases Extramural Research	-	-	103,616
Total Diabetes, Digestive, and Kidney Diseases Extramural Research					890,724	-	13,725,580
Auburn University	93.852	R01 NS093941		National Syndromic Surveillance Program Community of Practice (NSSP CoP)	-	-	261,022

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Federal Grantor/Pass Through Grantor/Cluster Title	CFDA No.	Direct Award or Pass Through Entity Identifying		Program Title	Amounts Passed	
		Number			Through to Subrecipients	Total Federal Expenditures
<b>Department of Health and Human Services, continued</b>						
National Institutes of Health	93.853	Direct		Extramural Research Programs in the Neurosciences and Neurological Disorders	\$ 1,042,430	\$ 12,173,255
Beth Israel Deaconess Medical Center	93.853	U01 NS074425-01		Extramural Research Programs in the Neurosciences and Neurological Disorders	-	26,062
Harvard School of Public Health	93.853	114512-5097014		Extramural Research Programs in the Neurosciences and Neurological Disorders	-	48,578
Harvard University	93.853	SB: 138074-5085856		Extramural Research Programs in the Neurosciences and Neurological Disorders	-	183,581
Massachusetts General Hospital	93.853	1 U10 NS086729-04		Extramural Research Programs in the Neurosciences and Neurological Disorders	-	10,758
Massachusetts General Hospital	93.853	SB: 229293		Extramural Research Programs in the Neurosciences and Neurological Disorders	-	94,789
Research Foundation of SUNY	93.853	SB: 1131404-74506		Extramural Research Programs in the Neurosciences and Neurological Disorders	-	157,821
TCG, Inc.	93.853	2R44NS074540-02A1		Extramural Research Programs in the Neurosciences and Neurological Disorders	-	(6,426)
TCG, Inc.	93.853	SB: UM-20160927-01-TCG		Extramural Research Programs in the Neurosciences and Neurological Disorders	-	84,268
The J. David Gladstone Institute	93.853	5 R01 NS079725-04		Extramural Research Programs in the Neurosciences and Neurological Disorders	-	(5,149)
University of South Florida	93.853	SB: 6125-1076-00B		Extramural Research Programs in the Neurosciences and Neurological Disorders	-	49,836
Total Extramural Research Programs in the Neurosciences and Neurological Disorders					1,042,430	12,817,373
National Institutes of Health	93.855	Direct		Allergy and Infectious Diseases Research	1,974,916	26,835,240
Beth Israel Deaconess Medical Center	93.855	1028929		Allergy and Infectious Diseases Research	-	103,454
Brigham and Women's Hospital	93.855	112669		Allergy and Infectious Diseases Research	-	189,426
Brown University	93.855	SB: 00001168		Allergy and Infectious Diseases Research	-	99,709
Children's Hospital	93.855	RSTFD0000678743		Allergy and Infectious Diseases Research	-	390,474
Dana Farber Cancer Institute	93.855	SB: 1055115		Allergy and Infectious Diseases Research	-	21,996
EpiVax, Inc	93.855	EpiVax/Research Agreement:		Allergy and Infectious Diseases Research	-	18,639
Harvard Medical School	93.855	1 R01AI136789-01		Allergy and Infectious Diseases Research	-	125,947
Harvard School of Public Health	93.855	SB: 109708-5064861		Allergy and Infectious Diseases Research	-	286,448
Johns Hopkins University	93.855	2003004918		Allergy and Infectious Diseases Research	-	104,598
Johns Hopkins University	93.855	SB: 2003433533		Allergy and Infectious Diseases Research	-	87,362
Massachusetts General Hospital	93.855	SB: 223544		Allergy and Infectious Diseases Research	-	64,577
New York University School of Medicine	93.855	1 P01 AI100151-04		Allergy and Infectious Diseases Research	-	134,393
NovaSterilis	93.855	2 R44 AI20282 02		Allergy and Infectious Diseases Research	-	46,124
Planet Biotechnology, Inc.	93.855	SB: R41 FH-Fc UMASSMED		Allergy and Infectious Diseases Research	-	75,409
Purdue University	93.855	Sub No. 4102-72705		Allergy and Infectious Diseases Research	-	2,018
Sigmovir Biosystems, Inc.	93.855	2R42-A1109926-02		Allergy and Infectious Diseases Research	-	390,751
Texas A&M University	93.855	1 P01 1A1095208-04		Allergy and Infectious Diseases Research	-	(2,503)
Tufts University	93.855	SB: 101315-00001		Allergy and Infectious Diseases Research	-	33,100

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			Number		Through to Subrecipients		
<b>Department of Health and Human Services, continued</b>							
University of Alabama	93.855	SB: 000503587-001		Allergy and Infectious Diseases Research	\$ -	\$	335,187
University of California	93.855	PR: HL / SB: VEST/PREDICTS		Allergy and Infectious Diseases Research	-		(95)
University of California San Diego	93.855	2 U19 AI089681-08		Allergy and Infectious Diseases Research	-		175,070
University of California San Francisco	93.855	SB: 10249sc		Allergy and Infectious Diseases Research	-		40,038
University of California San Francisco	93.855	SB: 10250sc		Allergy and Infectious Diseases Research	-		24,508
University of California San Francisco	93.855	SB: 9617sc		Allergy and Infectious Diseases Research	-		74,868
University of North Carolina	93.855	5 R01 AI121558-03		Allergy and Infectious Diseases Research	-		118,068
University of North Carolina	93.855	5 R21 AI115752-02		Allergy and Infectious Diseases Research	-		(699)
University of North Carolina	93.855	PR: 5 U19 AI109965		Allergy and Infectious Diseases Research	-		137,277
University of North Carolina	93.855	SB: 5109909		Allergy and Infectious Diseases Research	-		50,878
University of Pennsylvania	93.855	SB: 566489		Allergy and Infectious Diseases Research	-		50,427
University of Pittsburgh	93.855	5 UH2 AI22295-02		Allergy and Infectious Diseases Research	-		10,183
University of Rhode Island	93.855	SB: 07142014/4508		Allergy and Infectious Diseases Research	-		105,475
University of Texas at San Antonio	93.855	SB: 10000753		Allergy and Infectious Diseases Research	-		29,397
University of Washington	93.855	SB: UWSC8525		Allergy and Infectious Diseases Research	-		88,638
University of Wisconsin	93.855	SB: 617K536		Allergy and Infectious Diseases Research	-		35,709
Veterans Medical Research Foundation	93.855	09473001-318542		Allergy and Infectious Diseases Research	-		47,043
Washington University	93.855	5 R01 AI081803-08		Allergy and Infectious Diseases Research	-		97,860
Washington University	93.855	SB: WU-14-364-MOD-2		Allergy and Infectious Diseases Research	-		113,569
Washington University	93.855	SB: WU-16-307		Allergy and Infectious Diseases Research	-		322,642
Wistar Institute	93.855	5 U19 AI109646-03		Allergy and Infectious Diseases Research	-		274,986
Total Allergy and Infectious Diseases Research					1,974,916		31,138,191
National Institutes of Health	93.859	Direct		Biomedical Research and Research Training	1,190,347		31,214,504
Albert Einstein College of Medicine	93.859	PO0619340		Biomedical Research and Research Training	-		103,207
Beth Israel Deaconess Medical Center	93.859	2 R01 GM104987		Biomedical Research and Research Training	-		5,481
Boston College	93.859	AG048962		Biomedical Research and Research Training	-		16,737
Cornell University	93.859	78565-10975		Biomedical Research and Research Training	-		40,980
Emory University	93.859	Sub T938891		Biomedical Research and Research Training	-		5,758
Kansas State University	93.859	KSU:S17166		Biomedical Research and Research Training	-		115,489
Northwestern University	93.859	60042974 UMA		Biomedical Research and Research Training	-		13,405
QuarryBio LLC	93.859	2R44GM116211-02		Biomedical Research and Research Training	-		19,515
ReclaimRX LLC	93.859	Phase 1-Reclaim 2015: Check4283		Biomedical Research and Research Training	-		3,969

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Federal Grantor/Pass Through Grantor/Cluster Title	CFDA No.	Direct Award or Pass Through Entity Identifying		Program Title	Amounts Passed	
		Number			Through to Subrecipients	Total Federal Expenditures
<b>Department of Health and Human Services, continued</b>						
Smith College	93.859	SB: 636070-1		Biomedical Research and Research Training	\$ -	\$ 2,338
Tufts University	93.859	003129-00002		Biomedical Research and Research Training	-	10,534
Tufts University	93.859	4K12GM074869-10		Biomedical Research and Research Training	-	95
University of California	93.859	SB: 9185sc		Biomedical Research and Research Training	-	105,419
University of California Berkeley	93.859	SB: 00009037		Biomedical Research and Research Training	-	(1,651)
University of California Davis	93.859	1 R01 GM124120-01		Biomedical Research and Research Training	-	45,680
University of Michigan	93.859	SB: 30038554238		Biomedical Research and Research Training	-	179,893
Vuronyx Technologies, LLC	93.859	1R43GM123868-01A1		Biomedical Research and Research Training	-	66,186
Total Biomedical Research and Research Training					1,190,347	31,947,539
National Institutes of Health	93.865	Direct		Child Health and Human Development Extramural Research	2,204,741	9,710,489
Brandeis University	93.865	403193		Child Health and Human Development Extramural Research	-	27,834
Brandeis University	93.865	403519		Child Health and Human Development Extramural Research	-	26,509
Cincinnati Children's Hospital Medical Center	93.865	Subaward No. 136785		Child Health and Human Development Extramural Research	-	33,510
Columbia University	93.865	PO #G0545		Child Health and Human Development Extramural Research	-	22,045
Florida State University	93.865	Sub# R01954		Child Health and Human Development Extramural Research	-	68,477
Harvard Pilgrim Health Care, Inc.	93.865	AH000630		Child Health and Human Development Extramural Research	-	14,427
Harvard University	93.865	Sub# 116353-5087577		Child Health and Human Development Extramural Research	-	23,175
Praxis, Inc.	93.865	5R42HD069070-02		Child Health and Human Development Extramural Research	-	13,099
Tufts Cummings School of Veterinary Medicine	93.865	SB: 1012913-00001		Child Health and Human Development Extramural Research	-	67,241
University of Alabama	93.865	2 R01 HD061959-10		Child Health and Human Development Extramural Research	-	(220)
University of California	93.865	55962754		Child Health and Human Development Extramural Research	-	12,013
University of California San Francisco	93.865	1 R21 HD082330-01A1		Child Health and Human Development Extramural Research	-	1,211
University of Minnesota	93.865	1U54HD093540-01		Child Health and Human Development Extramural Research	-	129,429
University of North Carolina	93.865	SB: 5108779		Child Health and Human Development Extramural Research	-	2,447
University of Tennessee	93.865	A16-1281-S001-A01		Child Health and Human Development Extramural Research	-	145,089
Weill Cornell Medical College	93.865	1R01HD088571-01A1		Child Health and Human Development Extramural Research	-	136,356
Wellesley College	93.865	26390-01		Child Health and Human Development Extramural Research	-	3,131
Total Child Health and Human Development Extramural Research					2,204,741	10,436,262
National Institutes of Health	93.866	Direct		Ageing Research	820,319	5,989,922
Albert Einstein College of Medicine	93.866	311108		Ageing Research	-	10,472
Brigham and Women's Hospital	93.866	5 U01 AG048270-04		Ageing Research	244,549	326,295

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			Number		Through to Subrecipients		
<b>Department of Health and Human Services, continued</b>							
Brown University	93.866	5 R01AG048940-03		Aging Research	\$ -	\$	143,110
Fordham University	93.866	SUB# FORD0016		Aging Research	-		14,050
George Washington University	93.866	Sub# 17-M25		Aging Research	-		6,467
Hebrew Rehab	93.866	2R01AG025037		Aging Research	-		18,678
Hebrew Senior Life	93.866	SB: 90083		Aging Research	-		3,557
Kaiser Foundation Research Institute	93.866	U01 AG034661-04		Aging Research	-		54,642
Massachusetts General Hospital	93.866	SB: 226821		Aging Research	-		172,557
University of Alabama	93.866	SB: 000517881-001		Aging Research	-		10,277
University of California Los Angeles	93.866	1558 G VA069		Aging Research	-		25,000
University of Connecticut	93.866	SB: USHS6-62703698		Aging Research	-		12,769
University of Michigan	93.866	Sub# 3003486688		Aging Research	-		98,690
University of Pittsburgh	93.866	SB: 0040521(124995-5)		Aging Research	-		215,795
Weill Cornell Medical College	93.866	Subaward# 16091600		Aging Research	-		(313)
Total Aging Research							<u>1,064,868</u>
							<u>7,101,968</u>
National Institutes of Health	93.867	Direct		Vision Research	-		1,477,721
National Institutes of Health	93.879	Direct		Medical Library Assistance	103,364		1,568,973
Harvard Medical School	93.879	G08 LM012154		Medical Library Assistance	-		32,354
Total Medical Library Assistance							<u>103,364</u>
							<u>1,601,327</u>
Harvard University	93.884	6 UH1 HP29962-01-01		Grants for Primary Care Training and Enhancement	-		161,616
Health Resources & Service Administration	93.918	Direct		Grants to Provide Outpatient Early Intervention Services with Respect to HIV Disease	-		470,482
Johns Hopkins University	93.936	5 R01 HD080474-04		National Institutes of Health Acquired Immunodeficiency Syndrome Research Loan Repayment Program	-		287,143
Purdue University	93.936	Sub No. 4301-80198		National Institutes of Health Acquired Immunodeficiency Syndrome Research Loan Repayment Program	-		22,935
Total National Institutes of Health Acquired Immunodeficiency Syndrome Research Loan Repayment Program							<u>-</u>
							<u>310,078</u>
National Institutes of Health	93.989	Direct		International Research and Research Training	302,686		622,819
Mahidol University	93.989	5U01TW010091-02		International Research and Research Training	-		12,545
Mahidol University	93.989	5U01TW010091-03 REVISED		International Research and Research Training	-		3,228

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		Number			Through to Subrecipients		
<b>Department of Health and Human Services, continued</b>							
University of Alabama	93.989	SB: 000421737-0001		International Research and Research Training	\$ -	\$ -	19,395
University of California	93.989	SB: 61686358		International Research and Research Training	-	-	26,100
Total International Research and Research Training					302,686		684,087
MA Department of Public Health	93.994	INTF3054M03300819017/124499		Maternal and Child Health Services Block Grant to the States	-	-	2,040
Antagen Pharmaceuticals, Inc.	93.U01	200-2015-64147		Department of Health and Human Services Contracts	-	-	86,063
Baylor College of Medicine	93.U02	102038483		Department of Health and Human Services Contracts	-	-	(2,948)
Boston College	93.U03	5101962-10		Department of Health and Human Services Contracts	-	-	(121)
Boston University	93.U04	4500001819		Department of Health and Human Services Contracts	-	-	660
Cellerant Therapeutics, Inc.	93.U05	Protocol: CLT008-03/CT1500031		Department of Health and Human Services Contracts	-	-	3,510
Centers for Disease Control & Prevention	93.U06	Direct - Contract No. 200-2014-M-61111		Department of Health and Human Services Contracts	-	-	26,200
Centers for Disease Control & Prevention	93.U07	Direct - Contract No. 211-2013-M-57158		Department of Health and Human Services Contracts	-	-	4,006
Duke University	93.U08	SB: Task Order 33		Department of Health and Human Services Contracts	-	-	2,315
Harvard Pilgrim Health Care, Inc.	93.U10	HHSF2232009100061		Department of Health and Human Services Contracts	-	-	3,589
Harvard Pilgrim Health Care, Inc.	93.U11	HHSF22301007T		Department of Health and Human Services Contracts	-	-	(82)
Harvard Pilgrim Health Care, Inc.	93.U12	HHSF22301002TSB		Department of Health and Human Services Contracts	-	-	36,454
Harvard Pilgrim Health Care, Inc.	93.U13	200-2011-42037		Department of Health and Human Services Contracts	-	-	44,909
Harvard Pilgrim Health Care, Inc.	93.U14	HHSF2232014000021		Department of Health and Human Services Contracts	-	-	28,638
Harvard Pilgrim Health Care, Inc.	93.U15	SB: Task Order S03		Department of Health and Human Services Contracts	-	-	13,560
Harvard Pilgrim Health Care, Inc.	93.U16	SB: HHSF22301012T-0030		Department of Health and Human Services Contracts	-	-	103,046
Harvard Pilgrim Health Care, Inc.	93.U17	HHSF22320140030I		Department of Health and Human Services Contracts	-	-	145,240
Harvard Pilgrim Health Care, Inc.	93.U18	HHSF223201400042I		Department of Health and Human Services Contracts	-	-	76,157
Hospice of Henderson County, Inc.	93.U19	1C1CMS331331		Department of Health and Human Services Contracts	-	-	6,492
Johns Hopkins University	93.U20	PO 2001837780		Miscellaneous Department of Health and Human Services	-	-	8,290
Langston University	93.U21	Sub# LU 5-17044-1		Department of Health and Human Services Contracts	-	-	144,434
Lawrence Berkeley National Laboratory	93.U22	SB: 7339894		Department of Health and Human Services Contracts	-	-	57,304
MA Department of Mental Health	93.U23	32103559UMASS5		Department of Health and Human Services Contracts	-	-	89,060
National Institutes of Health	93.U24	Direct - 1 R01 HD083311-01A1		Department of Health and Human Services Contracts	181,653	-	645,504
National Institutes of Health	93.U26	Direct - 1UG4 LM01234701		Department of Health and Human Services Contracts	-	-	9,694
National Institutes of Health	93.U27	Direct - NLM/HHSN276201700195P		Department of Health and Human Services Contracts	-	-	37,585
National Institutes of Health	93.U28	Direct - NCI HHSN261201500029C		Department of Health and Human Services Contracts	64,591	-	297,447

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<b>Department of Health and Human Services, continued</b>						
National Institutes of Health	93.U29	Direct - HHSN272201600011C		Department of Health and Human Services Contracts	\$ 6,585	\$ 30,276
Prism	93.U30	Subcontract No.720201		Department of Health and Human Services Contracts	-	88,988
Research Triangle International	93.U31	HHS2832012000061/HHSS2834204T		Department of Health and Human Services Contracts	-	168,184
Swedish Medical Center	93.U32	SMC: 223004 B.01		Department of Health and Human Services Contracts	-	509,556
Tridium, Inc.	93.U33	Polaris: Prime: 5R44DA23441-3		Department of Health and Human Services Contracts	-	5,577
U.S. Food and Drug Administration	93.U34	Direct - HHSF223201710131P		Department of Health and Human Services Contracts	-	55,870
U.S. Food and Drug Administration	93.U35	Direct - HHSF223201710435P		Department of Health and Human Services Contracts	-	70,675
University of Alabama	93.U36	SB: 000501394-02		Department of Health and Human Services Contracts	-	42,222
University of Minnesota	93.U37	A003856705		Department of Health and Human Services Contracts	-	31,868
University of Minnesota	93.U38	90RT5019-02-00		Department of Health and Human Services Contracts	-	10,796
University of Mississippi	93.U39	SB: 66102700414-04UMASS		Department of Health and Human Services Contracts	-	28,898
University of Mississippi Medical Center	93.U40	66102690414-04UML		Department of Health and Human Services Contracts	-	16,850
VentureWell	93.U41	VENTUREWELL/SPRINT/Houston		Department of Health and Human Services Contracts	-	14,087
Verlyx Pharma, Inc.	93.U42	VLX103-ASH-16-01/CT1600075		Department of Health and Human Services Contracts	-	25
<b>Department of Health and Human Services Total</b>					<b>30,171,121</b>	<b>235,842,923</b>
<b>Department of Homeland Security</b>						
MA Emergency Management Agency	97.036	CTFEMA405UMASA00340		Disaster Grants - Public Assistance (Presidentially Declared Disasters)	-	36,499
MA Emergency Management Agency	97.039	HMGP 1994-10		Hazard Mitigation Grant	-	(412)
<b>Department of Homeland Security Total</b>					<b>-</b>	<b>36,087</b>
<b>Department of Housing and Urban Development</b>						
MA Department of Housing & Community Development	14.228	B-17-DC-25-0001		Community Development Block Grants/State's program and Non-Entitlement Grants in Hawaii	16,000	32,353
Pioneer Valley Planning Commission	14.228	00775		Community Development Block Grants/State's program and Non-Entitlement Grants in Hawaii	-	32,447
Pioneer Valley Planning Commission	14.228	FY2017 00806		Community Development Block Grants/State's program and Non-Entitlement Grants in Hawaii	-	33,298
Total Community Development Block Grants/State's program and Non-Entitlement Grants in Hawaii					<b>16,000</b>	<b>98,098</b>
City of Lowell, Division of Planning & Development	14.900	PO# 32770032 / 32760108		Lead-Based Paint Hazard Control in Privately-Owned Housing	-	15,932

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<b>Department of Housing and Urban Development, continued</b>					
MA Department of Public Health	14.906	INTF3056HH2500224031	Healthy Homes Technical Studies Grants	\$ -	\$ (275)
U.S. Department of Housing & Urban Development	14.906	Direct	Healthy Homes Technical Studies Grants	41,422	325,834
Total Healthy Homes Technical Studies Grants				<u>41,422</u>	<u>325,559</u>
Healthy Housing Solutions, Inc.	14.U01	93HHSI-16-S-1003	Department of Housing and Urban Development Contracts	-	9,739
<b>Department of Housing and Urban Development Total</b>				<u>57,422</u>	<u>449,328</u>
<b>Department of Justice</b>					
North American Indian Center of Boston, Inc	16.016	2015-UW-AX-0009	Culturally and Linguistically Specific Services Program	-	59,976
U.S. Department of Justice	16.540	Direct	Juvenile Justice and Delinquency Prevention	-	186,744
U.S. Department of Justice	16.541	Direct	Part E - Developing, Testing and Demonstrating Promising New Programs	-	12,079
U.S. Department of Justice	16.560	Direct	National Institute of Justice Research, Evaluation, and Development Project Grants	140,942	440,531
University of Iowa Health Care	16.560	W000630365	National Institute of Justice Research, Evaluation, and Development Project Grants	-	12,929
Wellesley College	16.560	26316-01	National Institute of Justice Research, Evaluation, and Development Project Grants	-	1,187
Total National Institute of Justice Research, Evaluation, and Development Project Grants				<u>140,942</u>	<u>454,647</u>
MA Office for Victim Assistance	16.575	ISAVWAVOCAEVCUMA1 8A	Crime Victim Assistance	-	59,592
MA Office for Victim Assistance	16.575	VOCA2017EVWC00000000	Crime Victim Assistance	-	164
MA Department of Public Health	16.589	INTF3222M04W40188034	Rural Domestic Violence, Dating Violence, Sexual Assault, and Stalking Assistance Program	-	13,831
Town of Amherst	16.590	2017-WE-AX-0009	Grants to Encourage Arrest Policies and Enforcement of Protection Orders Program	-	38,465
Town of Belchertown	16.590	2017-WE-AX-0012	Grants to Encourage Arrest Policies and Enforcement of Protection Orders Program	-	43,953
Total Grants to Encourage Arrest Policies and Enforcement of Protection Orders Program				<u>-</u>	<u>82,418</u>
U.S. Department of Justice	16.726	Direct	Juvenile Mentoring Program	25,746	27,380
National 4-H Council	16.726	2017-JU-FX-0016	Juvenile Mentoring Program	-	10,420
National 4-H Council	16.726	DOJ2016JUFX0022	Juvenile Mentoring Program	-	64,567
Total Juvenile Mentoring Program				<u>25,746</u>	<u>102,367</u>

See accompanying notes to Schedule of Expenditures of Federal Awards

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		Number			Through to Subrecipients	Total Federal Expenditures
<b>Department of Justice, continued</b>						
Boston Public Health Commission	16.730	14013684, PO 201401848		Reduction and Prevention of Children's Exposure to Violence	\$ -	\$ 327
City of Lowell	16.738	PO # 18000093-00		Edward Byrne Memorial Justice Assistance Grant Program	-	28,389
City of Boston	16.745	MOA_PO BOSTN-0000679639		Criminal and Juvenile Justice and Mental Health Collaboration Program	-	3,476
Fox Valley Technical College	16.751	D2016010051		Edward Byrne Memorial Competitive Grant Program	-	8,298
City of Lowell	16.754	PO # 18000212-00		Harold Rogers Prescription Drug Monitoring Program	-	21,171
Administrative Office of The Trial Court	16.812	2015-RW-BX-0006		Second Chance Act Reentry Initiative	-	931
City of Springfield	16.817	Contract # 20170155		Innovations in Community-Based Crime Reduction	-	58,982
Federal Bureau of Investigation	16.U01	FBI DJF-17-1200-D-0000377		Department of Justice Contracts	-	397,707
Federal Bureau of Investigation	16.U02	FBI DJF-16-1200-D-0001522		Department of Justice Contracts	-	1,399
Town of Amherst	16.U03	2610-15		Department of Justice Contracts	-	23,889
<b>Department of Justice Total</b>					<b>166,688</b>	<b>1,516,387</b>
<b>Department of Labor</b>						
National Lab for Education Transformation	17.282	2017-DL002		Trade Adjustment Assistance Community College and Career Training (TAACCCT) Grants	-	20,148
U.S. Department of Labor	17.791	Direct		Department of Labor Chief Evaluation Office	20,754	168,564
<b>Department of Labor Total</b>					<b>20,754</b>	<b>188,712</b>
<b>Department of State</b>						
International Research and Exchanges Board	19.021	Sub# FY16-HEP-UMB-01		Investing in People in The Middle East and North Africa	-	(1,853)
International Research and Exchanges Board	19.022	FY18-TEA-UMASS-02		Educational and Cultural Exchange Programs Appropriation Overseas Grants	-	28,160
U.S. Department of State	19.033	Direct		Global Threat Reduction	-	23,949
U.S. Department of State	19.040	Direct		Public Diplomacy Programs	-	5,000
Harvard University	19.345	108846-5 102725		International Programs to Support Democracy, Human Rights and Labor	-	64,084
Institute for Training and Development	19.408	S-ECAGD-15-CA-1078		Academic Exchange Programs - Teachers	-	1,486
Institute for Training and Development	19.408	S-ECAGD-16-CA-1084		Academic Exchange Programs - Teachers	-	10,552
International Research and Exchanges Board	19.408	FY18-TEA-UMASS-01		Academic Exchange Programs - Teachers	-	171,947
Total Academic Exchange Programs - Teachers					-	183,985
U.S. Department of State	19.900	Direct		AEECA/ESF PD Programs	19,994	61,195
Mitre Corporation	19.U01	Subcontract Agrmt No. 114866		Department of State Contracts	-	84,135
<b>Department of State Total</b>					<b>19,994</b>	<b>448,655</b>

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<b>Department of The Interior</b>					
MA Division of Ecological Restoration	15.153	ISAFWE6008FILMUMA16A 155428	Hurricane Sandy Disaster Relief - Coastal Resiliency Grants.	\$ -	\$ 41,219
Portland State University	15.232	204JET449	Wildland Fire Research and Studies	-	9,828
University of California Davis	15.232	201501679-02	Wildland Fire Research and Studies	-	14,398
Total Wildland Fire Research and Studies				-	24,226
University of Rhode Island	15.408	0006507/111617	Bureau of Ocean Energy Management Renewable Energy	-	22,474
Bureau of Ocean Energy Management	15.424	Direct	Marine Minerals Activities	-	129,842
MA Division of Fisheries and Wildlife	15.608	1434-HQ-11-RU-01575	Fish and Wildlife Management Assistance	12,617	12,617
MA Department of Fish & Game	15.634	1434-HQ-11-RU-01575	State Wildlife Grants	-	413
MA Department of Fish & Game	15.634	UM18COOP	State Wildlife Grants	-	163,529
MA Division of Fisheries and Wildlife	15.634	FWEWOODTRTLUMA15aB	State Wildlife Grants	-	20,312
Total State Wildlife Grants				-	184,254
U.S. Fish and Wildlife Service	15.650	Direct	Research Grants (Generic)	-	24,980
U.S. Fish and Wildlife Service	15.655	Direct	Migratory Bird Monitoring, Assessment and Conservation	-	220,314
Wildlife Management Institute	15.664	NALCC 2015-06	Fish and Wildlife Coordination and Assistance	-	38,097
Wildlife Management Institute	15.664	NALCC 2015-08	Fish and Wildlife Coordination and Assistance	-	34,978
Total Fish and Wildlife Coordination and Assistance				-	73,075
U.S. Fish and Wildlife Service	15.669	Direct	Cooperative Landscape Conservation	-	141,904
U.S. Fish and Wildlife Service	15.672	Direct	Wildlife Without Borders Amphibians in Decline	-	3,481
U.S. Fish and Wildlife Service	15.677	Direct	Hurricane Sandy Disaster Relief Activities-FWS	15,535	20,913
U.S. Fish and Wildlife Service	15.678	Direct	Cooperative Ecosystem Studies Units	-	10,983
U.S. Geological Survey	15.805	Direct	Assistance to State Water Resources Research Institutes	-	67,124
U.S. Geological Survey	15.807	Direct	Earthquake Hazards Program Assistance	-	(4,608)
U.S. Geological Survey	15.808	Direct	U.S. Geological Survey- Research and Data Collection	-	43,699
U.S. Geological Survey	15.810	Direct	National Cooperative Geologic Mapping	89,831	110,868
U.S. Geological Survey	15.812	Direct	Cooperative Research Units	-	55,727
U.S. Geological Survey	15.820	Direct	National and Regional Climate Adaptation Science Centers	861,776	2,112,550
U.S. Department of Interior	15.945	Direct	Cooperative Research and Training Programs Resources of the National Park System	-	119,310
U.S. Department of Interior	15.946	Direct	Cultural Resources Management	-	(8,768)

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		Number			Through to Subrecipients	Total Federal Expenditures
<b>Department of The Interior, continued</b>						
U.S. Department of Interior	15.954	Direct		National Park Service Conservation, Protection, Outreach, and Education	\$ -	\$ 446,036
National Writing Project	15.954	94-MA02-NPS2017		National Park Service Conservation, Protection, Outreach, and Education	-	3,500
Total National Park Service Conservation, Protection, Outreach, and Education					-	449,536
Bureau of Safety and Environmental Enforcement	15.U01	BUREAU of SAFETY E16PC00008		Department of the Interior Contracts	10,000	92,124
MA Division of Fisheries and Wildlife	15.U02	ISAFWE6008FILMUMA16A		Department of the Interior Contracts	-	83,798
U.S. Fish and Wildlife Service	15.U03	F16PX01323		Department of the Interior Contracts	-	9,800
<b>Department of The Interior Total</b>					<b>989,759</b>	<b>4,041,442</b>
<b>Department of Transportation</b>						
Federal Aviation Administration	20.108	Direct		Aviation Research Grants	-	150,019
University of Wisconsin	20.200	737K634		Highway Research and Development Program	-	10,134
U.S. Department of Transportation	20.215	Direct		Highway Training and Education	-	29,464
MA Department of State Police	20.218	ISAPOL81002010UMS17A		Motor Carrier Safety Assistance	-	49,259
Federal Motor Carrier Safety Administration	20.232	Direct		Commercial Driver's License Program Implementation Grant	-	30,046
Federal Motor Carrier Safety Administration	20.237	Direct		Motor Carrier Safety Assistance High Priority Activities Grants and Cooperative Agreements	-	36,920
MA Executive Office of Public Safety & Security	20.614	113-1636		National Highway Traffic Safety Administration (NHTSA) Discretionary Safety Grants and Cooperative Agreements	-	51,170
Massachusetts Institute of Technology	20.701	5700003804		University Transportation Centers Program	-	(1,043)
Massachusetts Institute of Technology	20.701	5710003604		University Transportation Centers Program	-	306,411
Massachusetts Institute of Technology	20.701	5710003798		University Transportation Centers Program	-	31,769
Massachusetts Institute of Technology	20.701	5710003799		University Transportation Centers Program	-	55
Massachusetts Institute of Technology	20.701	5710003800		University Transportation Centers Program	-	20,842
Massachusetts Institute of Technology	20.701	5710003801		University Transportation Centers Program	-	42,242
Massachusetts Institute of Technology	20.701	5710003802		University Transportation Centers Program	-	55,947
Massachusetts Institute of Technology	20.701	5710003803		University Transportation Centers Program	-	1,590
Ohio State University	20.701	60040605		University Transportation Centers Program	-	10,708
University of Iowa Health Care	20.701	69A3551747131		University Transportation Centers Program	-	236,709
University of Iowa Health Care	20.701	W000546107		University Transportation Centers Program	-	69,368
Total University Transportation Centers Program					-	774,598

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<b>Department of Transportation, continued</b>					
U.S. Department of Transportation	20.931	Direct	Transportation Planning, Research and Education	\$ (4,281)	\$ (5,489)
Earth Science Systems, LLC	20.U01	117-0607	Department of Transportation Contracts	-	44,406
Federal Railroad Administration	20.U02	Direct - RAILROAD DOT DTFR5316C00020	Department of Transportation Contracts	12,405	91,238
MA Department of Transportation	20.U03	102534	Department of Transportation Contracts	-	24,995
MA Department of Transportation	20.U04	92801	Department of Transportation Contracts	-	629
Pennsylvania State University	20.U05	5519-UM-FRA-0023	Department of Transportation Contracts	-	49,928
University of Vermont	20.U06	Subaward No. 26014SUB51981	Miscellaneous Department of Transportation	-	88,356
<b>Department of Transportation Total</b>				<b>8,124</b>	<b>1,425,673</b>
<b>Department of Veterans Affairs</b>					
Providence VA Medical Center	64.015	Direct	Veterans State Nursing Home Care	-	64,138
Department of Veterans Affairs	64.028	Direct	Post-9/11 Veterans Educational Assistance	-	45,366
Department of Veterans Affairs	64.U01	Direct - VA241-14-J-1477/241-12-D-0224	Department of Veterans Affairs Contracts	-	103,435
Department of Veterans Affairs	64.U02	Direct - VA IPA_BROWN	Department of Veterans Affairs Contracts	-	10,473
Veteran Affairs Boston Healthcare System	64.U03	VA Boston/ Task Order 2	Department of Veterans Affairs Contracts	-	9,789
<b>Department of Veterans Affairs Total</b>				<b>-</b>	<b>233,201</b>
<b>Environmental Protection Agency</b>					
U.S. Environmental Protection Agency	66.129	Direct	Southeast New England Coastal Watershed Restoration	25,000	262,929
University of Connecticut	66.437	116033	Long Island Sound Program	-	3,980
U.S. Environmental Protection Agency	66.461	Direct	Regional Wetland Program Development Grants	-	191,504
U.S. Environmental Protection Agency	66.509	Direct	Science To Achieve Results (STAR) Research Program	661,031	1,045,741
Dartmouth College	66.509	Subaward# R953	Science To Achieve Results (STAR) Research Program	-	34,197
Total Science To Achieve Results (STAR) Research Program				<b>661,031</b>	<b>1,079,938</b>
U.S. Environmental Protection Agency	66.514	Direct	Science To Achieve Results (STAR) Fellowship Program	-	16,654
U.S. Environmental Protection Agency	66.516	Direct	P3 Award: National Student Design Competition for Sustainability	-	23,763
MA Department of Environmental Protection	66.605	CTEQF5014UMASSAMHERST01609319	Performance Partnership Grants	-	131,631
U.S. Environmental Protection Agency	66.708	Direct	Pollution Prevention Grants Program	-	16,287
U.S. Environmental Protection Agency	66.714	Direct	Regional Agricultural IPM Grants	-	24,655
MA Department of Agricultural Resources	66.714	CTAGR15	Regional Agricultural IPM Grants	-	41,106
Total Regional Agricultural IPM Grants				<b>-</b>	<b>65,761</b>

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		Number			Through to Subrecipients	Total Federal Expenditures
<b>Environmental Protection Agency, continued</b>						
MA Department of Agricultural Resources	66.U01	118-1467		Environmental Protection Agency Contracts	\$ -	\$ 28,436
The Cadmus Group, Inc.	66.U02	WA1-91 / 022-UMassLowell-1		Environmental Protection Agency Contracts	-	127
<b>Environmental Protection Agency Total</b>					<b>686,031</b>	<b>1,821,010</b>
<b>National Aeronautics and Space Administration</b>						
National Aeronautics and Space Administration	43.001	Direct		Science	891,245	4,139,974
Bermuda Institute of Ocean Sciences	43.001	154444UMB		Science	-	83,290
California Institute of Technology	43.001	JPL Subcontract No. 1560781		Science	-	87,138
California Institute of Technology	43.001	NNN12AAO1C		Science	-	13
California Institute of Technology	43.001	RSA 1579247		Science	-	74,944
California Institute of Technology	43.001	[JPL]: 44E-1096749		Science	-	14,945
Computational Physics Inc.	43.001	NNX13AF41G		Science	-	(2,686)
Hampton University	43.001	HU-180001		Science	-	71,967
Mount Holyoke College	43.001	GD8861		Science	-	47,482
Ohio State University	43.001	60050055		Science	-	35,114
SETI Institute	43.001	SC 3153		Science	-	9,151
SETI Institute	43.001	SC3139		Science	-	18,333
Smithsonian Astrophysical Observatory	43.001	G06-17024X		Science	-	51,286
Smithsonian Astrophysical Observatory	43.001	GO2-13077X		Science	-	5,416
Smithsonian Astrophysical Observatory	43.001	TM3-14006X		Science	-	2,543
Space Telescope Science Institute	43.001	HST-AR-14299.001-A		Science	-	29,499
Space Telescope Science Institute	43.001	HST-AR-14589.001-A		Science	-	53,377
Space Telescope Science Institute	43.001	HST-GO-13293.004-A		Science	-	5,109
Space Telescope Science Institute	43.001	HST-GO-13342.002-A		Science	-	18,490
Space Telescope Science Institute	43.001	HST-GO-14066.004-A		Science	-	2,206
Space Telescope Science Institute	43.001	HST-GO-14134.005-A		Science	-	17,781
Space Telescope Science Institute	43.001	HST-GO-14227.003-A		Science	-	6,359
Space Telescope Science Institute	43.001	HST-GO-14602.003-A		Science	-	24,530
Space Telescope Science Institute	43.001	HST-GO-14653.004-A		Science	-	68,866
Space Telescope Science Institute	43.001	HST-GO-14684.005-A		Science	-	4,295
Space Telescope Science Institute	43.001	HST-HF2-51392.001-A		Science	-	81,638
Space Telescope Science Institute	43.001	NAS5-26555		Science	-	117,306

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			Number		Through to Subrecipients		
<b>National Aeronautics and Space Administration, continued</b>							
Space Telescope Science Institute	43.001	STSI: HST-AR-14285.001-A	Science		\$ -	\$ 15,060	
Space Telescope Science Institute	43.001	STSI: HST-GO-14095.003-A	Science		-	25,439	
Tufts University	43.001	TUFTS: NASA90	Science		-	58,266	
University of California Irvine	43.001	U of California Irvine 2017-3522	Science		-	13,972	
University of California Los Angeles	43.001	1295 G VA072	Science		-	64,066	
University of Colorado	43.001	1551866	Science		-	64,150	
University of New Hampshire	43.001	17-025	Science		-	21,940	
University of South Florida	43.001	2500-1602-00-A	Science		-	5,073	
Total Science					891,245	5,336,332	
Space Telescope Science Institute	43.002	HST-GO-12060.16-A	Aeronautics		-	(32)	
Space Telescope Science Institute	43.002	HST-GO-13491.001-A	Aeronautics		-	23,153	
Total Aeronautics					-	23,121	
National Aeronautics and Space Administration	43.003	Direct	Exploration		-	216,944	
National Aeronautics and Space Administration	43.007	Direct	Space Operations		-	352,836	
NASA Goddard Space Flight Center	43.008	Direct	Education		-	53,649	
Delaware State University	43.008	Subaward No. 17-014HEH	Education		-	106,830	
National Institute of Aerospace	43.008	C17-201018-UMASSD	Education		-	25,899	
Total Education					-	186,378	
National Aeronautics and Space Administration	43.009	Direct	Cross Agency Support		-	9,399	
NASA Goddard Space Flight Center	43.012	Direct	Space Technology		-	181,165	
Northeastern University	43.012	Subaward 505098-78050	Space Technology		-	93,035	
Total Space Technology					-	274,200	
Aurora Flight Sciences Corporation	43.U01	Subcontract No. AFS15-1266 (STTR)	National Aeronautics and Space Administration Contracts		-	39,743	
California Institute of Technology	43.U02	[JPL]: 1486198	National Aeronautics and Space Administration Contracts		-	22,558	
California Institute of Technology	43.U03	[JPL]: 1509300	National Aeronautics and Space Administration Contracts		-	(5,412)	
California Institute of Technology	43.U04	Sub# 1561247	Miscellaneous National Aeronautics and Space Administration		-	69,330	
California Institute of Technology	43.U05	[JPL]: 1539558	National Aeronautics and Space Administration Contracts		-	(1,917)	
Massachusetts Institute of Technology	43.U06	7000387885	National Aeronautics and Space Administration Contracts		-	110,446	
MIT Lincoln Laboratory	43.U08	7000377396	National Aeronautics and Space Administration Contracts		-	8,897	

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<b>National Aeronautics and Space Administration, continued</b>					
Mount Holyoke College	43.U09	GD8761	National Aeronautics and Space Administration Contracts	\$ -	\$ (525)
Space Telescope Science Institute	43.U10	HST-AR-13894.002-A	National Aeronautics and Space Administration Contracts	-	(1,067)
Space Telescope Science Institute	43.U11	STSI: HST-GO-13846.001-A	National Aeronautics and Space Administration Contracts	-	39,714
Space Telescope Science Institute	43.U12	STSI: HST-HF2-51368.001 A	National Aeronautics and Space Administration Contracts	-	13,450
Space Telescope Science Institute	43.U13	HST-GO-13773.005-A	National Aeronautics and Space Administration Contracts	-	10,118
Space Telescope Science Institute	43.U14	HST-GO-13743.004-A	National Aeronautics and Space Administration Contracts	-	6,002
Space Telescope Science Institute	43.U15	HST-GO-13688.002-A	National Aeronautics and Space Administration Contracts	-	5,509
<b>National Aeronautics and Space Administration Total</b>				<b>891,245</b>	<b>6,716,056</b>
<b>National Endowment for the Arts</b>					
New England Foundation for The Arts	45.025	17-33556	Promotion of the Arts-Partnership Agreements	-	700
<b>National Endowment for the Arts Total</b>				<b>-</b>	<b>700</b>
<b>National Endowment for the Humanities</b>					
National Endowment for the Humanities	45.149	Direct	Promotion of the Humanities-Division of Preservation and Access	-	78,771
National Endowment for the Humanities	45.161	Direct	Promotion of the Humanities-Research	-	93,774
National Endowment for the Humanities	45.163	Direct	Promotion of the Humanities-Professional Development	-	145,944
<b>National Endowment for the Humanities Total</b>				<b>-</b>	<b>318,489</b>
<b>National Science Foundation</b>					
National Science Foundation	47.041	Direct	Engineering Grants	300,185	6,567,644
First RF Corporation	47.041	T14249	Engineering Grants	-	1,671
Georgia Institute of Technology	47.041	RJ378-GI	Engineering Grants	-	24,255
Glauconix Bioscience Inc	47.041	1660131	Engineering Grants	-	37,713
Smart Material Solutions	47.041	IIP-1738387	Engineering Grants	-	2,839
University of California	47.041	#00008613-02	Engineering Grants	-	137,891
University of Illinois	47.041	20 15-04326-0200	Engineering Grants	-	186,545
University of New Hampshire	47.041	13-027	Engineering Grants	-	1,151
Washington State University	47.041	120239 G003229-2	Engineering Grants	-	99,965
<b>Total Engineering Grants</b>				<b>300,185</b>	<b>7,059,674</b>
National Science Foundation	47.049	Direct	Mathematical and Physical Sciences	892,251	7,441,076
American Physical Society	47.049	19333	Mathematical and Physical Sciences	-	5,310

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<b>National Science Foundation, continued</b>						
Brandeis University	47.049	(NSF)//DMR- 1420382		Mathematical and Physical Sciences	\$ -	\$ 41
Brandeis University	47.049	402430-1		Mathematical and Physical Sciences	-	73,990
Kansas State University	47.049	SubAward Agreement# S16117		Mathematical and Physical Sciences	-	2,551
Smithsonian Astrophysical Observatory	47.049	SAO SV5-85007 AMEND 2		Mathematical and Physical Sciences	-	198,523
University of Pittsburgh	47.049	005794 1 (012021-3)		Mathematical and Physical Sciences	-	17,524
Total Mathematical and Physical Sciences					892,251	7,739,015
National Science Foundation	47.050	Direct		Geosciences	268,669	4,430,220
Columbia University	47.050	111-1227		Geosciences	-	42,030
Columbia University	47.050	14(0G009393-01)-4		Geosciences	-	49,200
Marine Biological Laboratory	47.050	OCE-1637630 / 52682		Geosciences	-	53,094
Southern California Earthquake Center	47.050	SCEC 91268180		Geosciences	-	24,764
State University of New York at Albany	47.050	I#14-02 RF 1111514-2-65 131 Mod I		Geosciences	-	8,663
The Broad Institute	47.050	5400000052		Geosciences	-	(47)
University of Arizona	47.050	125160-Mod 5		Geosciences	-	16,239
University of Minnesota	47.050	A003176711		Geosciences	-	19,109
University of Texas at Austin	47.050	17-000314		Geosciences	-	6,568
Woods Hole Oceanographic Institution	47.050	A101063		Geosciences	-	2,281
Woods Hole Oceanographic Institution	47.050	Project# 85850300/ Sub# A101282		Geosciences	-	46,321
Total Geosciences					268,669	4,698,442
National Science Foundation	47.070	Direct		Computer and Information Science and Engineering	449,968	12,832,714
Brown University	47.070	#00000685 amend #3		Computer and Information Science and Engineering	-	40,099
Cornell University	47.070	72954-10599-01		Computer and Information Science and Engineering	-	55,049
New York University	47.070	F7298-01		Computer and Information Science and Engineering	-	32,060
Raytheon BBN Technologies Corp	47.070	BBN Ref # 14564		Computer and Information Science and Engineering	-	16,699
University of Texas at Arlington	47.070	I 26100536620-003		Computer and Information Science and Engineering	-	70,943
University of Utah	47.070	10045119-UMAmherst		Computer and Information Science and Engineering	-	17,581
University of Utah	47.070	I 0034358-AMHRST-001		Computer and Information Science and Engineering	-	100,074
Total Computer and Information Science and Engineering					449,968	13,165,219
National Science Foundation	47.074	Direct		Biological Sciences	183,997	5,765,930
Arizona State University	47.074	ASU 17-139-01		Biological Sciences	-	5,067

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		Number			Through to Subrecipients	Total Federal Expenditures
<b>National Science Foundation, continued</b>						
BioXFEL	47.074	BioXFEL/6224- 2 Mod #1		Biological Sciences	\$ -	\$ 56,942
Cold Spring Harbor Laboratory	47.074	525 70115-1		Biological Sciences	-	172,031
Harvard Forest	47.074	31716-5097576-02		Biological Sciences	-	115,282
University of California Davis	47.074	201302983-01		Biological Sciences	-	8,601
University of Cincinnati	47.074	0 10754-002		Biological Sciences	-	24,352
University of Georgia	47.074	RC3 71-289/S001134 -2		Biological Sciences	-	124,527
Total Biological Sciences					183,997	6,272,732
National Science Foundation	47.075	Direct		Social, Behavioral, and Economic Sciences	83,260	1,840,896
Harvard University	47.075	136375-5096339		Social, Behavioral, and Economic Sciences	-	84,105
University of Florida	47.075	UFDSP00010946		Social, Behavioral, and Economic Sciences	-	74,100
University of Minnesota	47.075	PO# A005162201		Social, Behavioral, and Economic Sciences	-	26,409
Total Social, Behavioral, and Economic Sciences					83,260	2,025,510
National Science Foundation	47.076	Direct		Education and Human Resources	1,283,748	8,850,477
Black Hills State University	47.076	BP1100005		Education and Human Resources	-	16,428
Cast, Inc.	47.076	UMASSO91516-20		Education and Human Resources	-	114,559
Education Development Center, Inc.	47.076	72954-10599-01		Education and Human Resources	-	13,324
Education Development Center, Inc.	47.076	CNS-1339300		Education and Human Resources	-	17,670
Holyoke Community College	47.076	DUE 1400500UM		Education and Human Resources	-	29,287
Smith College	47.076	SC 636522 Amend #2		Education and Human Resources	-	10,922
State University of New York at Cortland	47.076	Sub# 1141641-79013		Education and Human Resources	-	9,239
Tufts University	47.076	Sub# NS7218		Education and Human Resources	-	76,016
University of Connecticut	47.076	116-0727		Education and Human Resources	-	36,273
University of Connecticut	47.076	SB: 135339		Education and Human Resources	-	37,755
University of Maryland	47.076	29983-Z4602002-B		Education and Human Resources	-	22,336
University of Wisconsin	47.076	490K770 Mod 2		Education and Human Resources	-	26,961
Worcester Polytechnic Institute	47.076	12-202930-01-00		Education and Human Resources	-	12,623
Total Education and Human Resources					1,283,748	9,273,870
National Science Foundation	47.078	Direct		Polar Programs	-	5,048

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		Number			Through to Subrecipients	Total Federal Expenditures
<b>National Science Foundation, continued</b>						
National Science Foundation	47.079	Direct		Office of International Science and Engineering	\$ -	\$ 34,378
Civilian Research & Development Foundation	47.079	N/A		Office of International Science and Engineering	-	136,134
Civilian Research & Development Foundation	47.079	OISE-9531011		Office of International Science and Engineering	-	21,398
Total Office of International Science and Engineering					-	191,910
Association of Public & Land-Grant Universities	47.U01	115-0977		National Science Foundation Contracts	-	116,818
Genoverde Biosciences	47.U02	I 16-0877		National Science Foundation Contracts	-	66,702
National Science Foundation	47.U03	Direct - CSE-1523309-003		National Science Foundation Contracts	-	382,927
National Science Foundation	47.U04	Direct - CBET-1619792		National Science Foundation Contracts	-	312,671
National Science Foundation	47.U05	Direct - (NSF)/CNS- 1740558		National Science Foundation Contracts	-	295,472
National Science Foundation	47.U06	Direct - AST-1517503		Miscellaneous National Science Foundation	-	54,491
Uniqarta, Inc.	47.U07	IIP 1632387		National Science Foundation Contracts	-	(4,157)
<b>National Science Foundation Total</b>					<b>3,462,078</b>	<b>51,656,344</b>
<b>Nuclear Regulatory Commission</b>						
U.S. Nuclear Regulatory Commission	77.008	Direct		U.S. Nuclear Regulatory Commission Scholarship and Fellowship Program	-	411,650
<b>Nuclear Regulatory Commission Total</b>					<b>-</b>	<b>411,650</b>
<b>Social Security Administration</b>						
U.S. Social Security Administration	96.008	Direct		Social Security - Work Incentives Planning and Assistance Program	-	225,784
Mathematica Policy Research	96.007	MPR/SSA DRC12000001-01-00		Social Security-Research and Demonstration	-	244,581
<b>Social Security Administration Total</b>					<b>-</b>	<b>470,365</b>
<b>Research and Development Cluster Total</b>					<b>44,531,393</b>	<b>371,532,614</b>
<b>Student Financial Assistance Cluster:</b>						
<b>Department of Education</b>						
U.S. Department of Education	84.038	Direct		Federal Perkins Loan Program	-	46,336,030
U.S. Department of Education	84.268	Direct		Federal Direct Student Loans	-	334,309,872
U.S. Department of Education	84.007	Direct		Federal Supplemental Educational Opportunity Grants	-	3,111,808
U.S. Department of Education	84.033	Direct		Federal Work-Study Program	-	4,979,002

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			Number		Through to Subrecipients	Total Federal Expenditures
<b>Department of Education, continued</b>						
U.S. Department of Education	84.063	Direct		Federal Pell Grant Program	\$ -	\$ 78,368,293
U.S. Department of Education	84.379	Direct		Teacher Education Assistance for College and Higher Education Grants (TEACH Grants)	-	246,042
<b>Department of Education Total</b>					-	467,351,047
<b>Department of Health and Human Services</b>						
U.S. Department of Health and Human Services	93.264	Direct		Nurse Faculty Loan Program (NFLP)	-	5,287,125
U.S. Department of Health and Human Services	93.264	Direct		Nurse Faculty Loan Program - ARRA	-	64,863
U.S. Department of Health and Human Services	93.342	Direct		Health Professional Primary Care Loans	-	1,223,397
U.S. Department of Health and Human Services	93.342	Direct		Loans for Disadvantaged Students	-	354,820
U.S. Department of Health and Human Services	93.364	Direct		Nursing Student Loans	-	23,054
<b>Department of Health and Human Services Total</b>					-	6,953,259
<b>Student Financial Assistance Cluster Total</b>					-	474,304,306
<b>Other Clustered Programs:</b>						
<b>Department of Agriculture:</b>						
<b>SNAP Cluster</b>						
U.S. Department of Agriculture	10.561	Direct		State Administrative Matching Grants for the Supplemental Nutrition Assistance Program	-	35,736
MA Department of Transitional Assistance	10.551	CTISAWEL44003064UMS13A		Supplemental Nutrition Assistance Program	12,828	1,014,808
MA Department of Transitional Assistance	10.561	CT ISA 44003064 UMS18A		State Administrative Matching Grants for the Supplemental Nutrition Assistance Program	-	196,628
MA Department of Transitional Assistance	10.561	CTISAWEL44003064UMS13A		State Administrative Matching Grants for the Supplemental Nutrition Assistance Program	10,937	2,722,479
<b>SNAP Cluster Total</b>					23,765	3,969,651
<b>Department of Commerce:</b>						
<b>Economic Development Cluster</b>						
Economic Development Administration	11.307	Direct		Economic Adjustment Assistance	-	(7,065)
<b>Economic Development Cluster Total</b>					-	(7,065)

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<b>Department of Education:</b>					
<b>Special Education Cluster (IDEA)</b>					
MA Department of Elementary & Secondary Education	84.027	17CT6500UMASSAIRCTRN	Special Education-Grants to States	\$ -	\$ (1,171)
Virginia Department of Education	84.027	786-DOE87025-H027AI150107	Special Education-Grants to States	-	3,296
<b>Special Education Cluster (IDEA) Total</b>				<b>-</b>	<b>2,125</b>
<b>TRIO Cluster</b>					
U.S. Department of Education	84.042	Direct	TRIO-Student Support Services	-	831,245
U.S. Department of Education	84.044	Direct	TRIO-Talent Search	-	628,931
U.S. Department of Education	84.047	Direct	TRIO-Upward Bound	188,244	1,483,101
U.S. Department of Education	84.217	Direct	TRIO-McNair Post-Baccalaureate Achievement	-	225,954
<b>TRIO Cluster Total</b>				<b>188,244</b>	<b>3,169,231</b>
<b>Department of Health and Human Services:</b>					
<b>477 Cluster</b>					
MA Department of Housing & Community Development	93.569	Reference Account# 70060	Community Services Block Grant	-	27,159
<b>477 Cluster Total</b>				<b>-</b>	<b>27,159</b>
<b>Department of Housing and Urban Development:</b>					
<b>CDBG - Entitlement Grants Cluster</b>					
City of Springfield	14.218	20170069	Community Development Block Grants/Entitlement Grants	-	22
City of Springfield	14.218	20180242	Community Development Block Grants/Entitlement Grants	-	7,486
<b>CDBG - Entitlement Grants Cluster Total</b>				<b>-</b>	<b>7,508</b>
<b>Department of Labor:</b>					
<b>Employment Service Cluster</b>					
MA Executive Office of Labor & Workforce Development	17.207	CT EOL3250 15DEIIC000000000	Employment Service/Wagner-Peyser Funded Activities	-	214,050
MA Executive Office of Labor & Workforce Development	17.207	CT EOL325015DEIWWL000000000	Employment Service/Wagner-Peyser Funded Activities	-	44,863
Masshire Brockton Workforce Board	17.207	FY 17 BAWIB WAGNER PEYSER	Employment Service/Wagner-Peyser Funded Activities	-	57,302
Masshire Brockton Workforce Board	17.207	SB: 10SCC10	Employment Service/Wagner-Peyser Funded Activities	-	255,058
Masshire Brockton Workforce Board	17.801	SB: 10SCC10	Disabled Veterans' Outreach Program (DVOP)	-	16,720
<b>Employment Service Cluster Total</b>				<b>-</b>	<b>587,993</b>

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<b>WIOA Cluster, Department of Labor</b>					
Greater New Bedford Workforce Investment Area	17.278	245-327-17	WIOA Dislocated Worker Formula Grants	\$ -	\$ 9,682
Greater New Bedford Workforce Investment Area	17.278	245-372-17-01	WIOA Dislocated Worker Formula Grants	-	(16)
Masshire Brockton Workforce Board	17.258	FY 17 BAWIB ADULT	WIOA Adult Program	-	89,951
Masshire Brockton Workforce Board	17.258	SB: 10SCC10	WIOA Adult Program	-	291,081
Masshire Brockton Workforce Board	17.278	FY 17 BAWIB DISLOCATED WORKER	WIOA Dislocated Worker Formula Grants	-	87,975
Masshire Brockton Workforce Board	17.278	SB: 10SCC10	WIOA Dislocated Worker Formula Grants	-	370,397
Regional Employment Board of Hampden County	17.258	SB: 28814	WIOA Adult Program	-	6,540
<b>WIOA Cluster Total</b>				<b>-</b>	<b>855,610</b>
<b>Department of Transportation:</b>					
<b>Highway Planning and Construction Cluster, Department of Transportation</b>					
MA Department of Transportation	20.205	INTF00X02015A0081923	Highway Planning and Construction	-	90,428
MA Department of Transportation	20.205	INTF00X0218A91905	Highway Planning and Construction	-	96,107
MA Department of Transportation	20.205	INTF00X02018H0100519	Highway Planning and Construction	-	114,604
MA Department of Transportation	20.205	INTFOOXOZOI8AOIO32O6	Highway Planning and Construction	-	13,774
MA Department of Transportation	20.205	SB: 83190	Highway Planning and Construction	-	60,303
MA Department of Transportation	20.205	SPR-SPR-A-018-X00	Highway Planning and Construction	-	3,715
<b>Highway Planning and Construction Cluster Total</b>				<b>-</b>	<b>378,931</b>
<b>Highway Safety Cluster, Department of Transportation</b>					
MA Executive Office of Public Safety & Security	20.616	CTUMASSD2018SBSURVEY	National Priority Safety Programs	-	687
MA Executive Office of Public Safety & Security	20.616	CTXUMASS2018SEATBELT	National Priority Safety Programs	-	29,997
MA Executive Office of Public Safety & Security	20.616	ISACT2016UMASSCRDATA	National Priority Safety Programs	-	82,564
MA Executive Office of Public Safety & Security	20.616	ISACTEPSUMSCRASHFY15	National Priority Safety Programs	-	19,792
<b>Highway Safety Cluster Total</b>				<b>-</b>	<b>133,040</b>
<b>Transit Services Programs Cluster, Department of Transportation</b>					
MA Department of Transportation	20.513	INTF00X02016P0092758	Enhanced Mobility of Seniors and Individuals with Disabilities	-	164,121
<b>Transit Services Programs Cluster Total</b>				<b>-</b>	<b>164,121</b>

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<b>Other Programs</b>					
<b>Agency For International Development</b>					
U.S. Agency International Development	98.001	Direct	USAID Foreign Assistance for Programs Overseas	\$ 48,272	\$ 259,320
<b>Agency For International Development Total</b>				<b>48,272</b>	<b>259,320</b>
<b>Department of Agriculture</b>					
National Institute of Food and Agriculture	10.500	Direct	Cooperative Extension Service	-	412,910
U.S. Department of Agriculture	10.001	Direct	Agricultural Research-Basic and Applied Research	-	14,661
U.S. Department of Agriculture	10.500	Direct	Cooperative Extension Service	70,800	3,162,353
Kansas State University	10.500	KANSAS S18089	Cooperative Extension Service	-	13,586
Kansas State University	10.500	KSU/S17096 4-H MILITARY	Cooperative Extension Service	-	5,645
<b>Department of Agriculture Total</b>				<b>70,800</b>	<b>3,609,155</b>
<b>Department of Defense</b>					
National Security Agency	12.900	Direct	Language Grant Program	-	93,764
<b>Department of Defense Total</b>				<b>-</b>	<b>93,764</b>
<b>Department of Education</b>					
U.S. Department of Education	84.031	Direct	Higher Education-Institutional Aid	-	289,184
U.S. Department of Education	84.129	Direct	Rehabilitation Long-Term Training	-	410,143
U.S. Department of Education	84.200	Direct	Graduate Assistance in Areas of National Need	-	11,110
U.S. Department of Education	84.264	Direct	Rehabilitation Training-Continuing Education	923,156	2,410,123
U.S. Department of Education	84.299	Direct	Indian Education -- Special Programs for Indian Children	-	120,811
U.S. Department of Education	84.324	Direct	Research in Special Education	151,294	485,691
U.S. Department of Education	84.325	Direct	Special Education - Personnel Development to Improve Services and Results for Children with Disabilities	-	782,547
U.S. Department of Education	84.327	Direct	Special Education Educational Technology Media, and Materials for Individuals with Disabilities	-	338,149
U.S. Department of Education	84.365	Direct	English Language Acquisition State Grants	-	(2,347)
U.S. Department of Education	84.382	Direct	Strengthening Minority-Serving Institutions	-	335,762
Boston Plan for Excellence	84.336	9U336S140088 YR2	Teacher Quality Partnership Grants	-	30,078
Boston Plan for Excellence	84.336	U336S140088	Teacher Quality Partnership Grants	-	343,052
Brockton Public Schools	84.002	359-014-0044R	Adult Education - Basic Grants to States	-	1,017
Brockton Public Schools	84.002	359-137700-2018-004R	Adult Education - Basic Grants to States	-	1,029

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<b>Department of Education, continued</b>								
MA Department of Elementary & Secondary Ed	84.002	CTDOE-1678UMASSAMHERSTMAPT		Adult Education - Basic Grants to States	\$ -	\$	429,585	
MA Department of Elementary & Secondary Ed	84.002	FY 18 ABE		Adult Education - Basic Grants to States	-		83,394	
MA Department of Elementary & Secondary Ed	84.002	SB: 25393		Adult Education - Basic Grants to States	-		23,011	
MA Department of Elementary & Secondary Ed	84.366	CTDOE 1247UMASSDONAHUE0293		Mathematics and Science Partnerships	-		138,637	
Maine Department of Labor	84.421	PO# CT12A 20170221000000002436		Disability Innovation Fund (DIF)	-		205,466	
National Writing Project	84.367	#2A/92-MA01-SEED2012 NWP 2014-2016		Supporting Effective Instruction State Grants (formerly Improving Teacher Quality State Grants)	-		7,227	
National Writing Project	84.367	SB: 03-MA04-SEED2016-ILI		Supporting Effective Instruction State Grants (formerly Improving Teacher Quality State Grants)	-		455	
Salus University	84.325	UMB 88403 17-18		Special Education - Personnel Development to Improve Services and Results for Children with Disabilities	-		40,049	
Special Olympics, Inc.	84.128	Project Unify		Rehabilitation Services-Service Projects	-		433,846	
University of Connecticut	84.325	Sub# UCHC7-98699674		Special Education - Personnel Development to Improve Services and Results for Children with Disabilities	-		12,112	
<b>Department of Education Total</b>							<b>1,074,450</b>	<b>6,930,131</b>
<b>Department of Health and Human Services</b>								
Health Resources & Service Administration	93.178	Direct		Nursing Workforce Diversity	66,228		329,530	
U.S. Department of Health and Human Services	93.048	Direct		Special Programs for the Aging-Title IV-and Title II-Discretionary Projects	-		256,314	
U.S. Department of Health and Human Services	93.297	Direct		Teenage Pregnancy Prevention Program	27,086		48,240	
U.S. Department of Health and Human Services	93.433	Direct		ACL National Institute on Disability, Independent Living, and Rehabilitation Research	23,029		613,688	
U.S. Department of Health and Human Services	93.464	Direct		ACL Assistive Technology	172,799		313,654	
U.S. Department of Health and Human Services	93.600	Direct		Head Start	1,112,927		6,804,298	
U.S. Department of Health and Human Services	93.631	Direct		Developmental Disabilities Projects of National Significance	-		223,329	
U.S. Department of Health and Human Services	93.U45	Direct - HHSP233201500006C		Department of Health and Human Services Contracts	-		2,946,716	
Administrative Office of The Trial Court	93.243	1-TI026677-01		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-		(124)	
Administrative Office of The Trial Court	93.243	20179100092916UM		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-		1,022	
Administrative Office of The Trial Court	93.243	201810011117UMASS1		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-		80,600	

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<b>Department of Health and Human Services, continued</b>					
Administrative Office of The Trial Court	93.243	201810011117UMASS2	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	\$ -	\$ 44,920
Administrative Office of The Trial Court	93.243	H79-TI080277	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	5,182
Community Transportation Association of America	93.631	90DN0001-01-00	Developmental Disabilities Projects of National Significance	-	65,868
Florida Development Disabilities Council	93.630	1003EM17F	Developmental Disabilities Basic Support and Advocacy Grants	-	92,501
Florida Development Disabilities Council	93.630	983EM16E	Developmental Disabilities Basic Support and Advocacy Grants	8,000	37,387
Georgetown University	93.632	412687_GR412564-UMB	University Centers for Excellence in Developmental Disabilities Education, Research, and Service	-	27,922
Holyoke Health Center Inc	93.289	Lets Move Holyoke Cntrct Svcs 2/1/15	President's Council on Fitness, Sports, and Nutrition	-	7,989
MA Department of Mental Health	93.104	821014080220000	Comprehensive Community Mental Health Services for Children with Serious Emotional Disturbances (SED)	16,564	107,977
MA Department of Mental Health	93.104	SCDMH8210180H6990	Comprehensive Community Mental Health Services for Children with Serious Emotional Disturbances (SED)	-	83,001
MA Department of Mental Health	93.243	SC DMH 822015081490000	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	(763)
MA Department of Mental Health	93.243	SCDMH822015081490000	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	140,142
MA Department of Public Health	93.243	INTF2330MM3W16007103	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	2,925
MA Department of Public Health	93.243	INTF2400HH2706811198	Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	(5)
MA Department of Public Health	93.757	4120HH250024053	State and Local Public Health Actions to Prevent Obesity, Diabetes, Heart Disease and Stroke (PPHF)	-	15,000
MA Department of Public Health	93.918	INTF4943MM3200120038	Grants to Provide Outpatient Early Intervention Services with Respect to HIV Disease	-	174,258
MA Department of Public Health	93.918	INTF4944MM3181926039	Grants to Provide Outpatient Early Intervention Services with Respect to HIV Disease	-	446,719
MA Department of Public Health	93.994	INTF3054M03182122021	Maternal and Child Health Services Block Grant to the States	-	28,825
MA Department of Public Health	93.994	INTF7900M03180627598	Maternal and Child Health Services Block Grant to the States	-	91,923
MA Department of Public Health	93.994	INTF7900MM3701516150	Maternal and Child Health Services Block Grant to the States	-	71
MA Department of Public Health	93.U43	INTF5291HH4300522026	Department of Health and Human Services Contracts	-	26,610

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			Number		Through to Subrecipients		
<b>Department of Health and Human Services, continued</b>							
MA Department of Public Health	93.U44	INTF5291HH4300522027		Department of Health and Human Services Contracts	\$ -	\$ -	7,953
MA Department of Developmental Services	93.631	17UMSICIGRANTEMPLY1		Developmental Disabilities Projects of National Significance	-	-	177,938
MA Bureau of Substance Abuse Services	93.184	INTF3042HH2500224047		Disabilities Prevention	-	-	38,300
MA Bureau of Substance Abuse Services	93.243	INTF2400H78500224220		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	-	21,574
MA Bureau of Substance Abuse Services	93.243	INTF2400HH2500224348		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	-	41,908
MA Developmental Disabilities Council	93.630	1100-1702		Developmental Disabilities Basic Support and Advocacy Grants	-	-	17,240
MA Executive Office of Elder Affairs	93.051	MA EOEA/AoA/Alzheimers/Cragin		Alzheimer's Disease Demonstration Grants to States	-	-	76,978
MA Executive Office of Health & Human Services	93.624	CMS-1G1-12-001		ACA - State Innovation Models: Funding for Model Design and Model Testing Assistance	-	-	171,339
MA Department of Revenue	93.597	CTDOR2017JMBHH4		Grants to States for Access and Visitation Programs	-	-	2,007
Policy Research Associates	93.239	1101-0001-004-001		Policy Research and Evaluation Grants	-	-	4,123
Policy Research Associates	93.243	1101-0002-006-001		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	-	2,273
Seven Hills Foundation	93.243	Contract for Services dated 9/30/15		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	-	53,278
WA State Department of Social & Health Services	93.243	1665-79606		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	-	6,510
WA State Department of Social & Health Services	93.243	1765-16812		Substance Abuse and Mental Health Services-Projects of Regional and National Significance	-	-	24,701
<b>Department of Health and Human Services Total</b>					<b>1,426,633</b>		<b>13,661,841</b>
<b>Department of Justice</b>							
U.S. Department of Justice	16.525	Direct		Grants to Reduce Domestic Violence, Dating Violence, Sexual Assault, and Stalking on Campus	6,477		8,161
U.S. Department of Justice	16.726	Direct		Juvenile Mentoring Program	326,105		557,392
Administrative Office of The Trial Court	16.812	20180311ACCBJAUMASS1		Second Chance Act Reentry Initiative	-		36,779
Administrative Office of The Trial Court	16.812	20189100120417UMJDC		Second Chance Act Reentry Initiative	-		10,616
Administrative Office of The Trial Court	16.812	MA TRC/DOJ/Juv Drug Ct-17		Second Chance Act Reentry Initiative	-		1,546
Administrative Office of The Trial Court	16.812	MA TRC/DOJ/Juv Drug Ct-FY19		Second Chance Act Reentry Initiative	-		1,877

See accompanying notes to Schedule of Expenditures of Federal Awards

**UNIVERSITY OF MASSACHUSETTS**  
**Schedule of Expenditures of Federal Awards**  
**Year Ended June 30, 2018**

Federal Grantor/Pass Through Grantor/Cluster Title	CFDA No.	Direct Award or Pass Through Entity Identifying		Program Title	Amounts Passed	
			Number		Through to Subrecipients	Total Federal Expenditures
<b>Department of Justice, continued</b>						
MA Department of Mental Health	16.812	SC DMH 822016083280000		Second Chance Act Reentry Initiative	\$ -	\$ 188,325
MA Office for Victim Assistance	16.575	MOVA-VOCA/FY2017		Crime Victim Assistance	-	74
MA Office for Victim Assistance	16.575	MOVA-VOCA/FY2018		Crime Victim Assistance	-	275,397
<b>Department of Justice Total</b>					<b>332,582</b>	<b>1,080,167</b>
<b>Department of Labor</b>						
MA Division of Career Services	17.245	SB: 93512		Trade Adjustment Assistance	-	5,569
MA Executive Office of Labor & Workforce Development	17.283	CT EOL 3250 17ICIDEIVII000000000		Workforce Innovation Fund	-	96,943
MA Executive Office of Labor & Workforce Development	17.283	CT EOL 325017WWLDEIVII000000000		Workforce Innovation Fund	-	106,948
Massasoit Community College	17.282	Navigator - TAACCCT IV		Trade Adjustment Assistance Community College and Career Training (TAACCCT) Grants	-	337
Masshire Brockton Workforce Board	17.225	CY 17 BAWIB RESEA		Unemployment Insurance	-	116,578
Masshire Brockton Workforce Board	17.225	FY 18 BAWIB DUA		Unemployment Insurance	-	14,997
Masshire Brockton Workforce Board	17.225	SB: 10SCC10		Unemployment Insurance	-	86,086
Masshire Brockton Workforce Board	17.245	SB: 10SCC10		Trade Adjustment Assistance	-	97,320
Masshire Brockton Workforce Board	17.277	BAWIB NDWG: Garber		WIOA National Dislocated Worker Grants / WIA National Emergency Grants	-	65,750
Masshire Brockton Workforce Board	17.277	Master Agreement # RT-002		WIOA National Dislocated Worker Grants / WIA National Emergency Grants	-	2,850
Masshire Brockton Workforce Board	17.277	SB: 10SCC10		WIOA National Dislocated Worker Grants / WIA National Emergency Grants	-	313,333
Masshire Brockton Workforce Board	17.285	AP-30080-16-60-A-25		Apprenticeship USA Grants	-	2,744
<b>Department of Labor Total</b>					<b>-</b>	<b>909,455</b>
<b>Department of State</b>						
U.S. Department of State	19.009	Direct		Academic Exchange Programs - Undergraduate Programs	-	748,390
U.S. Department of State	19.401	Direct		Academic Exchange Programs - Scholars	-	278,473
U.S. Department of State	19.501	Direct		Public Diplomacy Programs for Afghanistan and Pakistan	-	525,512
Association of University Centers on Disabilities	19.415	Sub# 21-16-8100		Professional and Cultural Exchange Programs - Citizen Exchanges	-	91,982
Association of University Centers on Disabilities	19.415	Sub# 32-17-8150		Professional and Cultural Exchange Programs - Citizen Exchanges	-	31,148

See accompanying notes to Schedule of Expenditures of Federal Awards

**UNIVERSITY OF MASSACHUSETTS**  
**Schedule of Expenditures of Federal Awards**  
**Year Ended June 30, 2018**

Federal Grantor/Pass Through Grantor/Cluster Title	CFDA No.	Direct Award or Pass Through Entity Identifying Number	Program Title	Amounts Passed Through to Subrecipients	Total Federal Expenditures
<b>Department of State, continued</b>					
Fulbright Commission Argentina	19.402	19-0201-0-1-154	Fulbright-Hays Act of 1961 Professional and Cultural Exchange Programs - International Visitor Leadership Program	\$ -	\$ 65,468
Fulbright Commission Argentina	19.402	Argentina 2018	Professional and Cultural Exchange Programs - International Visitor Leadership Program	-	21,643
Fulbright Commission Argentina	19.U02	19-0201-0-1-154	Fulbright-Hays Act of 1961 Miscellaneous Department of State	-	(686)
Meridian International Center	19.021	SB: IYELP2016	Investing in People in The Middle East and North Africa	-	(428)
World Learning, Inc.	19.021	SB: IYLEP 2017	Investing in People in The Middle East and North Africa	-	110,914
<b>Department of State Total</b>				<b>-</b>	<b>1,872,416</b>
<b>Department of The Interior</b>					
National Park Service	15.945	Direct	Cooperative Research and Training Programs Resources of the National Park System	-	3,886
<b>Department of The Interior Total</b>				<b>-</b>	<b>3,886</b>
<b>National Endowment for the Humanities</b>					
National Endowment for the Humanities	45.163	Direct	Promotion of the Humanities-Professional Development	-	66,755
<b>National Endowment for the Humanities Total</b>				<b>-</b>	<b>66,755</b>
<b>Small Business Administration</b>					
Small Business Administration	59.037	Direct	Small Business Development Centers	1,049,227	2,167,246
<b>Small Business Administration Total</b>				<b>1,049,227</b>	<b>2,167,246</b>
<b>Expenditures of Federal Awards Total</b>				<b>\$ 48,745,366</b>	<b>\$ 885,779,360</b>

See accompanying notes to Schedule of Expenditures of Federal Awards

**UNIVERSITY OF MASSACHUSETTS**  
**Notes to the Schedule of Expenditures of Federal Awards**  
**For the year ended June 30, 2018**

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**1. BASIS OF PRESENTATION**

The accompanying schedule of expenditures of federal awards (the Schedule) presents the direct and indirect expenditures of federal financial assistance programs administered by the University of Massachusetts (the "University") an entity defined in the financial statements except that the federal financial assistance programs, 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., are not included. Accordingly, the accompanying Schedule presents the federal award expenditures administered by the University, as defined above, for the year ended June 30, 2018.

The amounts reported were obtained from the University's general ledger which is the source of the federal financial reports and is maintained on an accrual basis. The Schedule is prepared on the accrual basis of accounting. 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*. Therefore, some amounts presented in the Schedule may differ from amounts presented in, or used in the preparation of, the basic financial statements. Negative amounts that appear on the Schedule represent adjustments made after the closeout process has been completed. CFDA and pass-through numbers are presented when available. Federal loan programs the University administers are represented on the Schedule in accordance with Uniform Guidance Part 200.502, and include the outstanding balance at the beginning of the year, plus loans disbursed in the current year and the administrative cost allowance for the year.

**2. DIRECT AND INDIRECT FEDERAL AWARD EXPENDITURES**

The University applies its predetermined approved facilities and administrative costs to federal awards rather than the 10 percent 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, 2017</b>	<b>Loans Issued</b>	<b>Payments Received</b>	<b>Balance as of June 30, 2018</b>
Perkins Loan program	84.038	\$ 40,905,367	\$ 4,889,534	\$ (7,411,659)	\$ 38,383,242
Health Professions Student Loans	93.342	1,073,397	150,000	(177,790)	1,045,607
Loans for Disadvantaged Students	93.342	279,820	75,000	(132,605)	222,215
Nursing Faculty Loans	93.264	4,180,754	1,171,234	(484,861)	4,867,127
Nursing Student Loans	93.364	23,054	-	(6,553)	16,501
		<b>\$ 46,462,392</b>	<b>\$ 6,285,768</b>	<b>\$ (8,213,468)</b>	<b>\$ 44,534,692</b>

For the year ended June 30, 2018, the University's recovered an administrative cost allowance of \$541,129 under the Federal Perkins Loan Program.

**UNIVERSITY OF MASSACHUSETTS**  
**Notes to the Schedule of Expenditures of Federal Awards**  
**For the year ended June 30, 2018**

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**b) Federal Direct 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, 2018 are summarized as follows:

	<b>Federal CFDA Number</b>	<b>Loans Distributed</b>
Federal Direct Student Loans (FDL)	84.268	\$ 286,154,477
FDL Parent Loans for Undergraduate Students (PLUS)	84.268	<u>48,155,395</u>
Total Federal Direct Student Loans		<u><u>\$ 334,309,872</u></u>

**PART II**

**REPORTS ON INTERNAL CONTROL AND COMPLIANCE**

**REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS ON INTERNAL CONTROL  
OVER FINANCIAL REPORTING AND ON COMPLIANCE AND  
OTHER MATTERS REQUIRED BY *GOVERNMENT AUDITING STANDARDS***

Board of Trustees of the  
**University of Massachusetts**

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the 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, 2018, and the related notes to the financial statements, which collectively comprise the University’s basic financial statements, and have issued our report thereon dated January 8, 2019 .

The financial statements of Worcester City Campus Corporation, the University of Massachusetts Foundation, 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 controls over financial reporting and on compliance and other matters 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 design 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 internal control. Accordingly, we do not express an opinion on the effectiveness of the 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 University’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 the University's 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*.

#### Intended purpose

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 report is not suitable for any other purpose.

A handwritten signature in black ink that reads "Brent Thornton LLP". The signature is written in a cursive, flowing style.

Boston, Massachusetts  
January 8, 2019

**REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS  
ON COMPLIANCE FOR EACH MAJOR FEDERAL PROGRAM  
AND ON INTERNAL CONTROL OVER COMPLIANCE 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 compliance of the University of Massachusetts (the “University”) with the types of compliance requirements described in the U.S. Office of Management and Budget’s *OMB Compliance Supplement* that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2018. The University’s major federal programs are identified in the summary of auditor’s results section of the accompanying schedule of findings and questioned costs.

Our audit of, and opinion on, the University’s compliance for each major federal program does not include the compliance requirements governing student loan repayments under the Student Financial Assistance cluster because the University engaged Heartland ECSI and Unisa to perform these compliance activities. These third-party servicer’s have each obtained a compliance examination from other practitioners for the year ended June 30, 2018 in accordance with the U.S. Department of Education’s, *Guide for Audits of Federal Student Financial Programs at Participating Institution and Institution Servicers*.

**Management’s responsibility**

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

**Auditor’s 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, 2018.

#### **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 compliance requirements that could have a direct and material effect on each major federal program to design audit 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.

As described in our Report on Compliance for Each Major Federal Program above, this Report on Internal Control Over Compliance does not include the results of the other auditors' testing of internal control over compliance that is reported on separately by those auditors.

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. Given these limitations, during our audit we did not identify any deficiencies in the University's 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.

*Grant Thornton LLP*

Boston, Massachusetts

January 8, 2019

**PART III**

**SCHEDULE OF FINDINGS AND QUESTIONED COSTS**

**UNIVERSITY OF MASSACHUSETTS**  
**Schedule of Findings and Questioned Costs**  
**For the year ended June 30, 2018**

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**SECTION I - SUMMARY OF AUDITOR'S RESULTS**

**Financial statements:**

Type of report the auditor issued on whether the financial statements audited were prepared in accordance with GAAP: Unmodified

Internal control over financial reporting:

- Material weakness (es) identified? \_\_ yes    X no
- Significant deficiency (ies) identified? \_\_ yes    X none reported
- Noncompliance material to the financial statements noted? \_\_ yes    X no

**Federal awards:**

Internal control over the major programs:

- Material weakness (es) identified? \_\_ yes    X no
- Significant deficiency (ies) identified that are not considered to be material weakness (es)? \_\_ yes    X none reported

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

Any audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516(a)? \_\_ yes    X no

**Identification of major federal programs:**

<b>Program or Cluster Title</b>	<b>Federal CFDA Number</b>
Multiple Student Financial Assistance Cluster Cooperative Extension Services	Multiple Multiple
Dollar threshold used to distinguish between type A and type B programs:	\$3,000,000
Auditee qualified as low-risk auditee?	<u>X</u> yes    __ no

**UNIVERSITY OF MASSACHUSETTS**  
**Schedule of Findings and Questioned Costs**  
**For the year ended June 30, 2018**

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**SECTION II - FINANCIAL STATEMENT FINDINGS**

None noted

**SECTION III - FEDERAL AWARD FINDINGS AND QUESTIONED COSTS**

None noted

**SECTION IV - SUMMARY SCHEDULE OF PRIOR YEAR AUDIT FINDING**

**Finding: 2017-001: Timeliness of recognition of certain activities**

**Original Corrective Action Plan**

Boston will implement a new process that will install enhanced controls for the monitoring of subrecipient invoices. Starting with all new subrecipient agreements, Office of Research and Sponsored Programs (“ORSP”) will instruct subrecipient institutions to deliver invoices to a new ORSP email box ([orsp-postaward@umb.edu](mailto:orsp-postaward@umb.edu)). After invoices are received, ORSP staff will review each invoice to ensure it has proper institutional certification text and signature (per UG 2CFR 200.415), a subaward number, and current/cumulative costs are listed. Proper invoices will be routed to the department Grants Managers and the PI using an electronic routing and signature software (i.e., Adobe E-Sign). ORSP will track invoices and ensure appropriate billing and timely submission for payment of subrecipient invoices per OMB Uniform Guidance 200.305.

**Status:** Boston’s Office of Research and Sponsored Programs (ORSP) will pilot a new process that will install enhanced controls for the monitoring of subrecipient invoices for one college. Once the pilot has been reviewed and refined, it will be implemented for all new subrecipient agreements issued after June 30, 2018. At that point, the process will instruct subrecipient institutions to deliver invoices electronically to a new ORSP email box ([ORSPsubawards@umb.edu](mailto:ORSPsubawards@umb.edu)). ORSP staff will review each invoice to ensure it has proper institutional certification text and signature (per UG 2CFR 200.415), a subaward number, and current/cumulative costs are listed. Appropriate invoices will be routed electronically using Adobe Sign to the PI and department Grants Manager. ORSP will track invoice processing, ensure appropriate billing, and timely submission for payment of subrecipient invoices per OMB Uniform Guidance 200.305.

**Finding: 2017-002: Timeliness of earmarking controls**

**Original Corrective Action Plan**

The Talent Search program staff has reached an agreement with the BPS that will enable them to again certify low income students, and are already confirming this as students are enrolled in the program. Additionally, the Project Director for TS will report earmarking levels to the Principal Investigator and Associate Vice Provost for Research and Director of ORSP every quarter to provide additional oversight.

**Status:** The University has implemented the corrective action plan noted above.

**UNIVERSITY OF MASSACHUSETTS**  
**Schedule of Findings and Questioned Costs**  
**For the year ended June 30, 2018**

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**Finding: 2017-003: Reporting “Late Reporting”**

**Original Corrective Action Plan:**

The University has updated our internal operating procedures for the consistent treatment of milestone due dates and have included an additional monitoring resource to ensure timely submission

**Status:** The University has implemented the corrective action plan noted above.