

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

**UNIVERSITY OF MASSACHUSETTS**

June 30, 2016 and 2015

# 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 the  
**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, 2016 and 2015, 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 audits. We conducted our audits 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, 2016 and 2015, and the respective changes in financial position and 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 4 through 14 and the Schedules of Funding Progress for the Pension, the Schedules of the University's Proportionate Share of the Net Pension Liability and the University's Contributions for 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, 2016, 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.

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

In accordance with *Government Auditing Standards*, we have also issued our report, dated December 15, 2016, 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 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 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

December 15, 2016

**University of Massachusetts  
Management's Discussion and Analysis (unaudited)  
June 30, 2016**

**Introduction**

This unaudited section of the University of Massachusetts (the "University") Annual Financial Report presents our discussion and analysis of the financial position and performance of the University and its component units during the fiscal year ended June 30, 2016 with comparative information as of June 30, 2015 and June 30, 2014. This discussion and analysis has been prepared by management along with the accompanying financial statements and related footnote disclosures and should be read in conjunction with, and is qualified in its entirety by, the financial statements and footnotes. The accompanying financial statements, footnotes and this discussion are the responsibility of management.

The University of Massachusetts is a state coeducational institution for higher education with separate campuses at Amherst, Boston, Dartmouth, Lowell and Worcester all located in the Commonwealth of Massachusetts (the "Commonwealth"). The University was established in 1863 in Amherst, under the provisions of the 1862 Morrill Land Grant Acts, as the Massachusetts Agricultural College. It became known as the Massachusetts State College in 1932 and in 1947 became the University of Massachusetts. The Boston campus was opened in 1965 and the Worcester campus, Medical School, was opened in 1970. The Lowell and Dartmouth campuses (previously the University of Lowell and Southeastern Massachusetts University, respectively) were made a part of the University by a legislative act of the Commonwealth, effective September 1, 1991.

The University's mission is to provide an affordable and accessible education of high quality and to conduct programs of research and public service that advance knowledge and improve the lives of the people of the Commonwealth, the nation and the world. In the fall of 2015, the University enrolled 63,333 full-time equivalent ("FTE") students. The University is committed to providing, without discrimination, diverse program offerings to meet the needs of the whole of the state's population. The University's five campuses are geographically dispersed throughout Massachusetts and possess unique and complementary missions.

**Financial Highlights**

The University's combined net position increased \$132.75 million from \$2.67 billion in fiscal year 2015 to \$2.80 billion in fiscal year 2016. Net position at June 30, 2014 was \$2.82 billion.

From fiscal year 2015 to fiscal year 2016, the Net Pension Liability increased from \$237.1 million to \$408.4 million. This increase is primarily attributed to changes in the assumptions used to calculate the pension obligations (interest rate of return decreased from 8.0% to 7.5%, impact of an Early Retirement Incentive plan created in May 2015 and changes to mortality rate tables) coupled with decreases in the projected and actual earnings on pension plan investments.

From fiscal year 2015 to fiscal year 2016 the University's operating revenue increased by \$290.7 million and operating expenditures increased \$358.5 million. The increases in operating revenues are primarily attributed to increases in student fees, increased enrollment and increased public service activities. The increases in operating expenditures are primarily attributed to increased salaries and fringe benefit rates and increased public service activities.

From fiscal year 2015 to fiscal year 2016, the University's net non-operating revenues/(expenses) increased \$58.6 million. This increase was primarily attributed to increased State Appropriations (see State Appropriations).

**Using the Annual Financial Report**

One of the most important questions asked about University finances is whether the University as a whole is better off or worse off as a result of the year's activities. The key to understanding this question lies within the Statement of Net Position, Statement of Revenues, Expenses and Changes in Net Position and the Statement of Cash Flows. These statements present financial information in a form similar to that used by private sector companies. 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 is one indicator of the improvement or erosion of an institution's financial health when considered with non-financial facts such as enrollment levels, operating expenses, and the condition of the facilities.

The Statement of Net Position includes all assets and liabilities, as well as deferred inflows and outflows of resources of the University. It is prepared under the accrual basis of accounting, whereby revenues and assets are recognized when the services are provided and expenses and liabilities are recognized when services are incurred, regardless of when cash is exchanged. Net Position is further broken down into three categories: invested in capital assets-net of related debt, restricted and unrestricted. Amounts reported in invested in capital assets-net of related debt represent the historical cost of property and equipment, reduced by the balance of related debt outstanding and depreciation expense charged over the years. Net Position is reported as restricted when constraints are imposed by third parties, such as donors or enabling legislation. Restricted net position is either non-expendable, as in the case of endowment gifts to be held in perpetuity, or expendable, as in the case of funds to be spent on scholarships and research. All other assets are unrestricted; however, they may be committed for use under contract or designation by the Board of Trustees.

The Statement of Revenues, Expenses and Changes in Net Position presents the revenues earned or received and expenses incurred during the year. Activities are reported as either operating or non-operating. 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 (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. That is because the prescribed financial reporting model classifies state appropriations, Pell grants, and gifts as non-operating revenues. 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 statement of cash flows presents information related to cash inflows and outflows summarized by operating, capital and non-capital, financing and investing activities.

The footnotes provide additional information that is essential to understanding the information provided in the external financial statements.

### Reporting Entity

The financial statements report information about the University as a whole using accounting methods similar to those used by private-sector companies. The financial statements of the University are separated between University (including its blended component units) and its discretely presented Component Unit activities. The University's discretely presented Component Units (or Related Organizations) are the University of Massachusetts Foundation, Inc., and the University of Massachusetts Dartmouth Foundation, Inc.

### Condensed Financial Information

<b>University of Massachusetts</b>				
<b>Condensed Statement of Net Position</b>				
<b>As of June 30, 2016, 2015, and 2014</b>				
<b>(in thousands of dollars)</b>				
	<b>University June 30, 2016</b>	<b>University June 30, 2015</b>	<b>FY15-16 Change</b>	<b>University June 30, 2014</b>
<b>ASSETS</b>				
Current Assets	\$ 677,927	\$ 692,679	\$ (14,752)	\$ 592,750
Noncurrent Assets				
Investment in Plant Net of Accumulated Depreciation	4,615,776	4,333,761	282,015	4,064,786
All Other Noncurrent Assets	1,294,028	1,501,421	(207,393)	1,543,391
<b>Total Assets</b>	<b>6,587,731</b>	<b>6,527,861</b>	<b>59,870</b>	<b>6,200,927</b>
<b>DEFERRED OUTFLOWS OF RESOURCES</b>	<b>293,432</b>	<b>178,410</b>	<b>115,022</b>	<b>123,567</b>
<b>LIABILITIES</b>				
Current Liabilities	774,837	856,460	(81,623)	674,330
Noncurrent Liabilities	3,294,183	3,133,710	160,473	2,831,869
<b>Total Liabilities</b>	<b>4,069,020</b>	<b>3,990,170</b>	<b>78,850</b>	<b>3,506,199</b>
<b>DEFERRED INFLOWS OF RESOURCES</b>	<b>12,050</b>	<b>48,753</b>	<b>(36,703)</b>	<b>-</b>
<b>NET POSITION</b>				
Invested in Capital Assets Net of Related Debt	2,013,966	1,887,941	126,025	1,800,767
Restricted				
Nonexpendable	18,384	18,378	6	17,387
Expendable	218,272	169,591	48,681	174,530
Unrestricted	549,471	591,438	(41,967)	825,611
<b>Total Net Position</b>	<b>\$ 2,800,093</b>	<b>\$ 2,667,348</b>	<b>\$ 132,745</b>	<b>\$ 2,818,295</b>

At June 30, 2016, total University net position was \$2.8 billion, an increase of \$132.7 million over the \$2.67 billion in net position for fiscal year 2015. The University's largest asset continues to be its net investment in its physical plant of \$4.62 billion at June 30, 2016, \$4.33 billion at June 30, 2015 and \$4.06 billion in fiscal year 2014.

University liabilities totaled \$4.07 billion at June 30, 2016, an increase of \$78.8 million over fiscal year 2015. Long-term liabilities represent 81.0% of the total liabilities which primarily consist of bonds payable amounting to \$2.65 billion and Net Pension Liability of \$408.4 million at June 30, 2016.

The University's current assets as of June 30, 2016 of \$677.9 million were below the current liabilities of \$774.8 million, and as a result the current ratio was 0.87 dollars in assets to every one dollar in liabilities. Current assets of \$692.7 million at June 30, 2015 were below the current liabilities of \$856.5 million, resulting in a current ratio of 0.81.

The unrestricted and restricted expendable net position totaled \$767.7 million in fiscal year 2016, which represents 24% of total operating expenditures of \$3.14 billion for fiscal year 2016. The unrestricted and restricted expendable net position totaled \$761.0 million in fiscal year 2015, which represents 27% of total operating expenditures of \$2.78 billion. The unrestricted and

restricted expendable net position totaled \$1.00 billion in fiscal year 2014, which represents 36% of total operating expenditures of \$2.81 billion.

<b>University of Massachusetts</b>				
<b>Condensed Statement of Net Position for Related Organizations</b>				
<b>As of June 30, 2016, 2015, and 2014</b>				
<b>(in thousands of dollars)</b>				
	<b>University Related Organizations June 30, 2016</b>	<b>University Related Organizations June 30, 2015</b>	<b>FY15-16 Change</b>	<b>University Related Organizations June 30, 2014</b>
<b>ASSETS</b>				
Current Assets	\$ 619	\$ 1,373	\$ (754)	\$ 1,678
Noncurrent Assets				
Investment in Plant Net of Accumulated Depreciation	8,090	8,293	(203)	8,478
All Other Noncurrent Assets	473,954	478,645	(4,691)	454,646
<b>Total Assets</b>	<b>482,663</b>	<b>488,311</b>	<b>(5,648)</b>	<b>464,802</b>
<b>LIABILITIES</b>				
Current Liabilities	29,194	31,421	(2,227)	15,525
Noncurrent Liabilities	3,502	3,505	(3)	3,483
<b>Total Liabilities</b>	<b>32,696</b>	<b>34,926</b>	<b>(2,230)</b>	<b>19,008</b>
<b>NET POSITION</b>				
Invested in Capital Assets Net of Related Debt	8,090	8,293	(203)	8,477
Restricted				
Nonexpendable	374,566	330,301	44,265	309,718
Expendable	46,275	90,413	(44,138)	101,195
Unrestricted	21,035	24,378	(3,343)	26,404
<b>Total Net Position</b>	<b>\$ 449,966</b>	<b>\$ 453,385</b>	<b>\$ (3,419)</b>	<b>\$ 445,794</b>

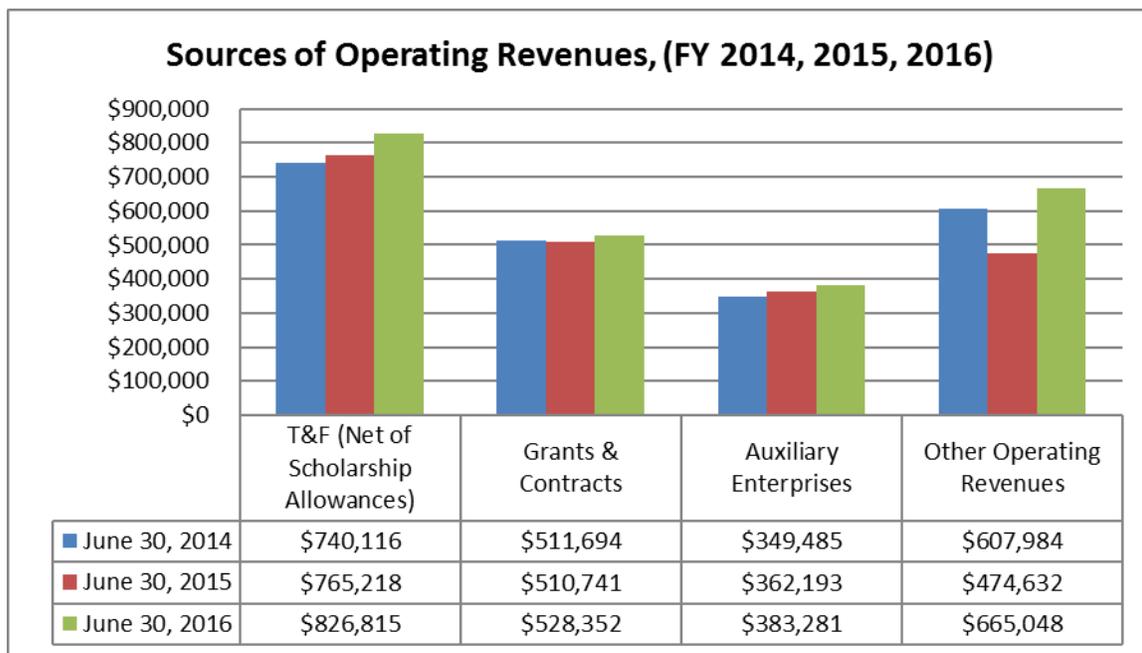
**University of Massachusetts**  
**Condensed Statement of Revenues, Expenses, and Changes in Net Position**  
**For the Year Ended June 30, 2016, 2015 and 2014**  
(in thousands of dollars)

	University June 30, 2016	University June 30, 2015	FY15-16 Change	University June 30, 2014
<b>Operating Revenues</b>				
Tuition and Fees (net of scholarship allowances)	\$ 826,815	\$ 765,218	\$ 61,597	\$ 740,116
Grants and Contracts	528,352	510,741	17,611	511,694
Auxiliary Enterprises	383,281	362,193	21,088	349,485
Other Operating Revenues	665,048	474,632	190,416	607,984
<b>Total Operating Revenues</b>	<b>2,403,496</b>	<b>2,112,784</b>	<b>290,712</b>	<b>2,209,279</b>
<b>Operating Expenses</b>	<b>3,140,753</b>	<b>2,782,297</b>	<b>358,456</b>	<b>2,809,900</b>
<b>Operating Loss</b>	<b>(737,257)</b>	<b>(669,513)</b>	<b>(67,744)</b>	<b>(600,621)</b>
<b>Nonoperating Revenues / (Expenses)</b>				
Federal Appropriations	6,827	6,619	208	7,020
State Appropriations	669,748	621,200	48,548	570,618
Interest on Indebtedness	(105,276)	(100,332)	(4,944)	(89,496)
Other Nonoperating Income	90,443	74,892	15,551	133,386
Nonoperating Federal Grants	75,743	76,539	(796)	74,279
<b>Net Nonoperating Revenues</b>	<b>737,485</b>	<b>678,918</b>	<b>58,567</b>	<b>695,807</b>
<b>Income Before Other Revenues, Expenses, Gains and Losses</b>	<b>228</b>	<b>9,405</b>	<b>(9,177)</b>	<b>95,186</b>
Capital Appropriations, Grants and Other Sources	172,557	118,405	54,152	134,369
Disposal of Plant Facilities	(10,462)	(12,120)	1,658	(6,198)
Other Additions / (Deductions)	(29,578)	(27,731)	(1,847)	(19,418)
<b>Total Other Revenues, Expenses, Gains, and Losses</b>	<b>132,517</b>	<b>78,554</b>	<b>53,963</b>	<b>108,753</b>
<b>Total Increase in Net Position</b>	<b>132,745</b>	<b>87,959</b>	<b>44,786</b>	<b>203,939</b>
<b>Net Position</b>				
Net Position at the Beginning of the Year	2,667,348	2,818,295	(150,947)	2,614,356
<i>Cummulative effect of change in accounting principle **</i>	-	(238,849)	(238,849)	-
<i>Net Position at the Beginning of the Year, adjusted</i>	2,667,348	2,579,389	87,959	2,614,356
<b>Net Position at the End of the Year</b>	<b>\$ 2,800,093</b>	<b>\$ 2,667,348</b>	<b>\$ (106,161)</b>	<b>\$ 2,818,295</b>

\*\* Adoption of GASB 68 for the year ended 6/30/2015

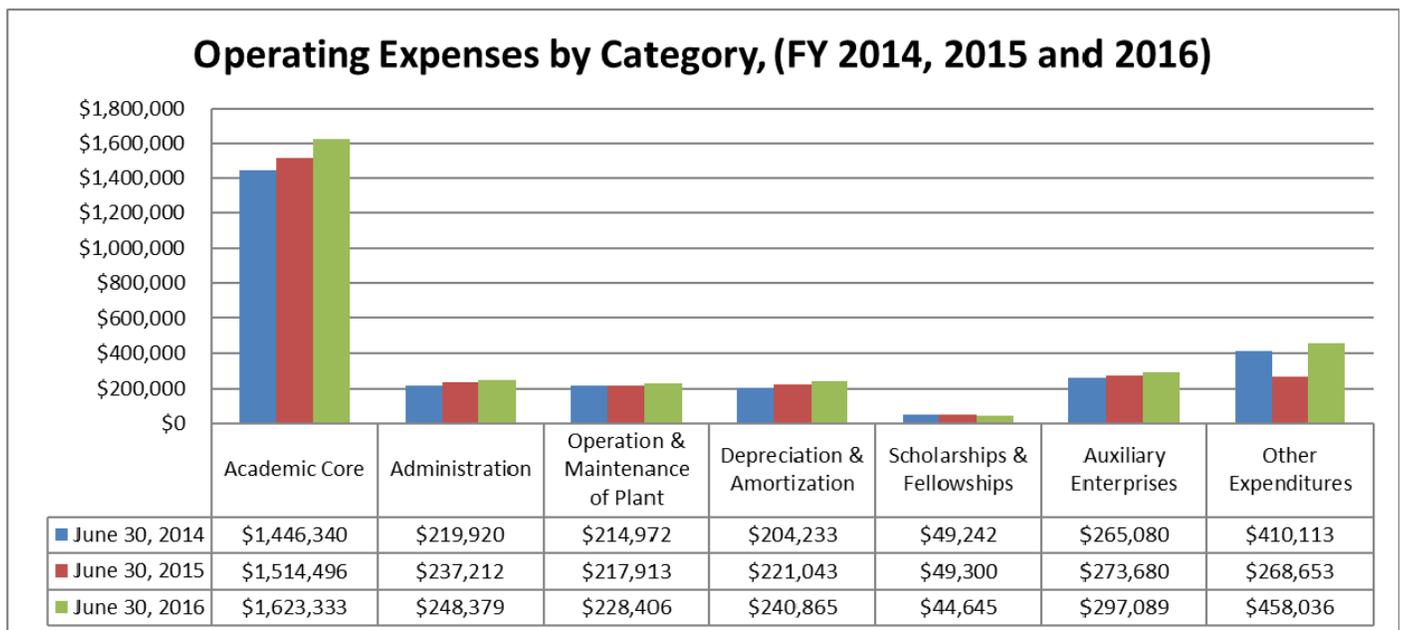
**University of Massachusetts**  
**Condensed Statement of Revenues, Expenses, and Changes in Net Position for University Related Organizations**  
**For the Years Ended June 30, 2016, 2015 and 2014**  
(in thousands of dollars)

	University Related Organizations June 30, 2016	University Related Organizations June 30, 2015	FY15-16 Change	University Related Organizations June 30, 2014
<b>Operating Expenses</b>				
<b>Operating Loss</b>	<b>\$ 17,068</b>	<b>\$ 16,709</b>	<b>\$ 359</b>	<b>\$ 11,443</b>
<b>Nonoperating Revenues / (Expenses)</b>				
Other Nonoperating Income	20,351	18,480	1,871	54,982
<b>Net Nonoperating Revenues</b>	<b>20,351</b>	<b>18,480</b>	<b>1,871</b>	<b>54,982</b>
<b>Income Before Other Revenues, Expenses, Gains and Losses</b>	<b>3,283</b>	<b>1,771</b>	<b>1,512</b>	<b>43,539</b>
Additions to Permanent Endowments	25,864	21,618	4,246	17,566
Other Additions / Deductions	(32,566)	(15,798)	(16,768)	(1,523)
<b>Total Other Revenues, Expenses, Gains, and Losses</b>	<b>(6,702)</b>	<b>5,820</b>	<b>(12,522)</b>	<b>16,043</b>
<b>Total Increase in Net Position</b>	<b>(3,419)</b>	<b>7,591</b>	<b>(11,010)</b>	<b>59,582</b>
<b>Net Position</b>				
Net Position at the Beginning of the Year	453,385	445,794	7,591	386,212
<b>Net Position at the End of the Year</b>	<b>\$ 449,966</b>	<b>\$ 453,385</b>	<b>\$ (3,419)</b>	<b>\$ 445,794</b>



Total operating revenues for fiscal year 2016 were \$2.40 billion. This represents a \$290.7 million increase from the \$2.11 billion in operating revenues in fiscal year 2015. The most significant sources of operating revenue for the University are tuition and fees, grants and contracts, auxiliary services and public service activities at the Worcester Medical School campus categorized in the chart above as “Other Operating Revenues”. 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 in a section below, is used almost exclusively to fund payroll for University employees.

In fiscal year 2016, operating expenditures, including depreciation and amortization, totaled \$3.14 billion. Of this total, \$1.62 billion or 52% was used to support the academic core activities of the University, including \$434.2 million in research. In fiscal year 2015 operating expenditures, including depreciation and amortization totaled \$2.78 billion. The chart below displays fiscal years 2016, 2015 and 2014 operating spend.



#### Public Service Activities

Other operating revenues includes Public Service Activities and consists largely of sales and services provided to third parties by the UMass Medical School campus through 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 \$283.8 million and \$268.7 million for the years ended June 30, 2016 and 2015, respectively. Included in expenditures are CWM expenditures of \$244.1 million and \$227.7 million for the years ended June 30, 2016 and 2015, respectively.

In addition to CWM activities, Public Service Activities also includes payments received by the Medical School 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. Educational services revenues included in public service revenues were \$209.9 million and \$43.8 million for the years ended June 30, 2016 and 2015, respectively. Finally, Public Service Activity expenditures also include payments made to the Commonwealth of Massachusetts of \$166.0 million for the year ended June 30, 2016, pursuant to requirements of legislation enacted by the State Legislature of Massachusetts.

### State Appropriations

In fiscal year 2016, state appropriations represent approximately 21% 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.

The net state appropriation for the University increased by \$48.55 million from fiscal year 2015, with the increase attributable to a higher level of State Appropriation and related fringe benefit support.

During the year ended June 30, 2016, the University reported \$30.6 million of tuition revenues remitted to the State Treasurer's Office for the general fund of the Commonwealth of Massachusetts. Through fiscal year 2016, the University is required to remit tuition revenue received to the Commonwealth. Therefore, the University collects student tuition on behalf of the Commonwealth and remits it to the Commonwealth's General Fund. The amount of tuition remitted to the Commonwealth was \$31.1 million in fiscal year 2015 and \$34.3 million in fiscal year 2014. There is no direct connection between the amount of tuition revenues collected by the University and the amount of state funds appropriated in any given year.

The amount of tuition retained by the University during 2016, 2015, and 2014 for out-of-state students was \$85.1 million, \$82.0 million, and \$75.8 million, respectively. Beginning in fiscal year 2017, the University has been granted the Legislative authority to retain all tuition in-state and out-of-state.

The following table details the Commonwealth operating appropriations received by the University for fiscal years ending June 30, 2016, 2015 and 2014:

	FY2016	FY2015	FY2014
Gross Commonwealth Appropriations	\$ 546,952	\$ 516,794	\$ 486,656
Plus: Fringe Benefits*	178,032	159,403	141,881
	<b>724,984</b>	<b>676,197</b>	<b>628,537</b>
Less: Mandatory Waivers	(24,653)	(23,942)	(23,594)
Less: Tuition Remitted	(30,583)	(31,055)	(34,325)
<b>Net Commonwealth Support</b>	<b>\$ 669,748</b>	<b>\$ 621,200</b>	<b>\$ 570,618</b>

\*The Commonwealth pays the fringe benefits for University employees paid from Commonwealth operating appropriations. Therefore, such fringe benefit support is added to the "State Appropriations" financial statement line item as presented in the above table. The University pays the Commonwealth for the fringe benefit cost of the employees paid from funding sources other than Commonwealth operating appropriations.

### Capital Appropriations from the Commonwealth

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 investment. In fiscal year 2016, there was \$121.3 million of capital support provided to the University through appropriations and grants from the Commonwealth. This funding is attributed to the Commonwealth's Division of Capital Asset Management ("DCAM") which funded several large capital projects in fiscal year 2016 through the State's Higher Education Bond Bill and Life Sciences Bond Bill, which were passed in 2008 and have projects funded on each of the campuses. The completion of major construction projects managed by DCAM are underway at all five of the University's campuses and current bond support continues for key projects in the plan.

### Grant and Contract Revenue

Collectively, the University's Amherst Campus and Medical School in Worcester account for approximately 76% of University grant and contract activity. The Boston, Dartmouth, and Lowell campuses continue to have significant sponsored research activity.

The following table details the University's grant and contract revenues (in thousands) for the fiscal years ended June 30, 2016, 2015 and 2014:

	FY2016	FY2015	FY2014
Federal Grants and Contracts	\$ 329,403	\$ 313,754	\$ 322,047
State Grants and Contracts	75,306	70,871	74,996
Local Grants and Contracts	2,445	1,717	2,223
Private Grants and Contracts	121,198	124,399	112,428
<b>Total Grants and Contracts</b>	<b>\$ 528,352</b>	<b>\$ 510,741</b>	<b>\$ 511,694</b>

### Discretely Presented Component Units

#### University of Massachusetts Foundation, Inc.

The combined University and Foundation endowment has decreased to approximately \$734.2 million at June 30, 2016 from \$768.4 million at June 30, 2015 and from \$757.5 million at June 30, 2014.

The Foundation utilizes the pooled investment concept whereby all invested funds are in one investment pool, except for investments of certain funds that are otherwise restricted. Pooled investment funds will receive an annual distribution of 4% of the endowment fund's average market value for the preceding twelve quarters on a one-year lag. Only quarters with funds on deposit shall be included in the average. In addition, a prudence rule will be utilized to limit spending from a particular endowment fund to no lower than 93% of its book value. The Foundation distributed \$27.3 million (4%) and \$24.6 million (4%) in fiscal year 2016 and 2015, respectively.

The total investment loss of the Foundation for fiscal year 2016 was \$39.1 million as compared to 2015, which, including realized and unrealized investment activity, was a net loss of approximately \$5.7 million. This is consistent with investment return performance at other institutions.

#### University of Massachusetts Dartmouth Foundation, Inc.

Total marketable securities for the Dartmouth Foundation were \$52.7 million at June 30, 2016 down from \$54.8 million at June 30, 2015, which are held by the University of Massachusetts Foundation, Inc. The Dartmouth Foundation total investment loss for fiscal year 2016, including realized and unrealized investment activity, was a net loss of \$1.9 million as compared to a net gain of \$.4 million in 2015.

### Tuition and Fees

For academic years 2013-2014 and 2014-2015, the Board of Trustees voted to freeze the mandatory curriculum fee for in state undergraduate students based on the increase to the State appropriation. For academic year 2015-2016, tuition was raised on average 7.2% which included a new mandatory technology fee at each of the campuses. For academic year 2016-2017, tuition was raised an average 5.6% for in-state undergraduate students. Affordability will continue to be a priority of the University and increases in fees will be considered in conjunction with State support on an annual basis.

### Enrollment

Admission to the University is open to residents of the Commonwealth and non-residents on a competitive basis. In the fall 2015 semester, Massachusetts residents accounted for approximately 81.4% and 52.5% of the University's total undergraduate and graduate enrollment, respectively. Total enrollment in the fall of 2015 was 63,333 FTE (73,744 headcount students). Enrollments at the University have shown significant increases over the last five years (58,564 FTE in fall 2010). The 8% enrollment 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.

### Degrees Awarded

The University awards four levels of degrees, as follows: associate, bachelors, masters and doctoral/professional degrees. A total of 17,851 degrees were awarded in the 2014-2015 academic year reflecting a 3.9% increase from the previous year. Of these awards, 66.5% were at the undergraduate level and 21.9% were at the graduate level. The remaining were associates degrees and undergraduate certificates.

### Bonds Payable

As of June 30, 2016, the University had outstanding bonds of approximately \$2.98 billion representing \$2.83 billion of University of Massachusetts Building Authority bonds (the "Building Authority Bonds"), \$56.5 million of University of Massachusetts bonds financed through the Massachusetts Health and Educational Facilities Authority which has been merged into MassDevelopment (the "UMass HEFA Bonds"), and \$93.2 million of bonds financed through the Worcester City Campus Corporation (the "WCCC Bonds"). Bonds payable is the University's largest liability at June 30, 2016. The Building Authority's active projects include residence hall construction and renovation, renovation of general education buildings, replacement of core infrastructure, and construction of academic, laboratory, and research facilities. The proceeds from the UMass HEFA Bonds were used to create a revolving loan program and to fund the construction of two new campus centers at the Boston and Lowell campuses (funded jointly with the Commonwealth).

On July 3, 2014, the Building Authority issued \$67.4 million of Refunding Revenue Bonds, Senior Series 2014-3 (the "2014-3 Bonds"). The 2014-3 Bonds included a premium of \$12.0 million. The 2014-3 Bonds are tax-exempt and mature at various dates through 2029. The interest on the bonds is payable semi-annually each November 1<sup>st</sup> and May 1<sup>st</sup> and the interest rates on the bonds range from 2.0% to 5.0%. The 2014-3 Bonds were issued to refinance a portion of the Massachusetts Health and Educational Facilities Authority's Revenue Bonds, Worcester City Campus Corporation Issue (University of Massachusetts Project), Series D (2005).

On March 25, 2015, the Building Authority issued \$298.8 million of Project Revenue Bonds, Senior Series 2015-1 (the "2015-1 Bonds") and \$191.8 million of Refunding Revenue Bonds, Senior Series 2015-2 (the "2015-2 Bonds"). The 2015-1 Bonds included a premium of \$35.7 million. The 2015-1 Bonds are tax-exempt and mature at various dates through 2045. The interest on the 2015-1 Bonds is payable semi-annually each November 1<sup>st</sup> and May 1<sup>st</sup> and the interest rates on the 2015-1 Bonds range from 4.0% to 5.0%. The 2015-2 Bonds included a premium of \$34.0 million. The 2015-2 Bonds are tax-exempt and mature at various dates through 2036. The interest on the 2015-2 Bonds is payable semi-annually each November 1<sup>st</sup> and May 1<sup>st</sup> and the interest rates on the 2015-2 Bonds range from 3.0% to 5.0%. The 2015-2 Bonds were issued to refinance a portion of the Massachusetts Health and Educational Facilities Authority's Revenue Bonds, Worcester City Campus Corporation Issue (University of Massachusetts Project), Series E & F (2007).

**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.

**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. However, the University may request that the Building Authority issue additional indebtedness not payable from all available funds of the University provided that the additional indebtedness is secured by certain pledged revenues and the maximum annual debt service on all revenue indebtedness does not exceed 8% of the University's available revenues.

The Building Authority is authorized by its enabling act to issue bonds with the unconditional guarantee of the Commonwealth of Massachusetts 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 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, 2016 and 2015 was \$117.4 million and \$121.6 million, respectively.

**Capital Plan**

In September 2016, the University's Trustees approved a five-year (fiscal years 2017-2021) update to its capital plan with \$2.30 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 University of Massachusetts Building Authority and MassDevelopment, Commonwealth appropriations, and private fundraising. The execution of certain projects from the University's capital plan is due to funding from the Commonwealth through the Higher Education and Life Sciences Bond Bills.

<b>Campus</b>	<b>Total Approved Capital Projects (in millions and as of September 2016)</b>
<b>Amherst</b>	\$739,650
<b>Boston</b>	\$889,150
<b>Dartmouth</b>	\$94,746
<b>Lowell</b>	\$357,000
<b>Worcester</b>	\$216,314
<b>TOTAL</b>	<b>\$2,296,860</b>
<b># of Projects</b>	78

The University's five-year capital plan for fiscal years 2017-2021 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. 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.

In spite of investing more than \$3.5 billion on capital improvements over the last decade, the University's FY17-22 capital plan projects spending another \$2.2 billion over the next five years. The commitment of operating funds for servicing debt and/or funding capital expenditures has an ongoing impact on the overall financial position of the University. In order to support the University's capital plan, the University of Massachusetts Building Authority will be issuing new bonds for renovations, new construction, and deferred maintenance projects at the Amherst, Boston, Dartmouth, Lowell, and Worcester campuses in support of the capital plan.

The University, as well as Legislative and Executive Leadership in the Commonwealth, understand that despite the significant level of capital activity being financed through University debt, a much higher level of state support needs to be dedicated to higher education facilities. As such, the Massachusetts Legislature passed a higher education bond bill in August 2008. The Higher Education Improvement Act authorized \$2.2 billion for capital improvement spending over the next ten years at community colleges, state universities, and the University. More than \$1 billion of these funds are directed to University projects exclusively. Although the financial challenges faced by the Commonwealth have slowed down the pace of this funding, the University continues to work to ensure that critical needs are met.

In addition, a major state effort to assist the Commonwealth in increasing its competitive position in the Life Sciences Industry was signed into law by the Governor on June 16, 2008. The \$1 billion Life Sciences Industry Investment Act authorized \$500 million of capital funding over ten years. It is anticipated that some portion of this funding, possibly as much as \$242 million, will be used to support facility improvements at the University. \$90 million has already been dedicated to partially fund the Sherman Center at the University's Medical School in Worcester. Additionally, \$95 million has been provided for a research facility at the Amherst Campus and significant capital investments in collaborative facilities and programs involving the Boston, Dartmouth, and Lowell campuses.

In addition to capital funding, the life sciences initiative provides a number of opportunities for the University to participate in the planning and program implementation of this important economic development effort.

The University is working with UMBA on a Public-Private Partnership with Capstone Development Partners, LLC, for the development and management of the first residential facility to be located on the University's Boston campus. The \$115.6M project will include living-learning space, approximately 1,082-beds, and 263,000 gross square feet. The project will also contain a 1<sup>st</sup> floor commons that includes a University-wide dining facility, which will be separately funded by the University. The project is expected to be completed for use in the Fall 2018 semester.

Research funding for the University of Massachusetts was strong despite Federal sequestration of funds. For the University, research expenditures were \$628.8 million in fiscal year 2015 and \$603 million in fiscal year 2014. 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 sources. Among Massachusetts colleges and universities, UMass ranks third in research and development expenditures, behind only MIT and Harvard. The University, as well as most major public research universities across the United States, is closely monitoring the potential reduction in federal funding for research and development programs.

In recent years 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 throughout this important sector of the higher education market. UMassOnline provides marketing and technology support for UMass' online offerings that enable students, professionals, and lifelong learners to take courses anywhere, anytime. With over 150 undergraduate and graduate degree, certificate and professional development programs and more than 1,500 courses available from University faculty, UMassOnline is one of the largest accredited online programs available.

For fiscal year 2016, UMassOnline and the Continuing Education units at the five campuses collaboratively generated tuition revenue in excess of \$96 million and supported 70,864 course enrollments, an increase of 7.2% for revenue and an increase of 6.1% for course enrollments as compared to fiscal year 2015.

The fiscal year 2015 budget approved in July 2014 provided for a base state appropriation of \$519.0 million. This investment, along with the additional fringe support, allowed the University to freeze the mandatory curriculum fee for the second consecutive year for in state undergraduate students. However, the State did not fund the first year of collective bargaining contracts to date that cost approximately \$13.1 million in State support. Although \$2.2 million of the collective bargaining costs were received in fiscal year 2015, the University did not receive the remaining \$10.9 million until the next fiscal year. Additionally, the University was issued a 9C budget reduction in February 2015 totaling \$7.8 million which was absorbed into operations.

The fiscal year 2016 budget approved in July 2015 totaled \$531.8 million. The additional \$10.6 million provided for a portion of the fiscal year 2016 collective bargaining agreement costs however did not support the full costs or the amount not funded in fiscal year 2015. In late fiscal year 2016 supplemental funding totaling \$10.9 million was provided to support the outstanding fiscal year 2015 collective bargaining costs. Unfortunately, this was not carried into the University's base funding for fiscal year 2017.

In July 2016 the State approved the FY17 budget for the University totaling \$508.3 million. While this is a reduction of \$3.5

million below the FY16 total available spending it appears much larger as the State also adjusted the appropriation to account for the University retaining all tuition in FY17. Last year, the State passed legislation to allow the University to retain all tuition. While the University was granted the ability to retain out of State Tuition in FY12, in state tuition continued to be remitted to the State annually. The FY17 budget is the first year that all tuition will be retained by the University resulting in an approximately \$31 million reduction in State appropriation to make the change have a net zero impact on both the State and University.

### **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, you can contact the University by calling the University Controller, Sarah Mongeau, at (774) 455-7520 or by email at [smongeau@umassp.edu](mailto:smongeau@umassp.edu).

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University of Massachusetts  
Consolidated Statements of Net Position  
As of June 30, 2016 and 2015  
(in thousands of dollars)

	University	University Related	University	University Related
	June 30, 2016	June 30, 2016	June 30, 2015	June 30, 2015
<b>ASSETS</b>				
<b>Current Assets</b>				
Cash and Cash Equivalents	\$101,207		\$89,965	
Cash Held By State Treasurer	8,888		27,597	
Accounts, Grants and Loans Receivable, net	244,178		249,517	
Pledges Receivable, net	7,464	\$371	10,620	\$500
Short Term Investments	206,266		265,248	
Inventories, net	18,006		17,472	
Accounts Receivable from UMass Memorial	35,724		17,463	
Due From Related Organizations	69	193	59	203
Other Assets	56,125	55	14,738	670
<b>Total Current Assets</b>	<b>677,927</b>	<b>619</b>	<b>692,679</b>	<b>1,373</b>
<b>Noncurrent Assets</b>				
Cash and Cash Equivalents		1,475		2,018
Cash Held By State Treasurer	8,342		5,403	
Cash and Securities Held By Trustees	486,015		707,061	
Accounts, Grants and Loans Receivable, net	38,526		38,382	
Pledges Receivable, net	17,595	1,690	6,275	293
Investments	734,205	468,260	737,788	476,272
Other Assets	9,345	2,528	6,512	62
Investment In Plant, net	4,615,776	8,090	4,333,761	8,293
<b>Total Noncurrent Assets</b>	<b>5,909,804</b>	<b>482,043</b>	<b>5,835,182</b>	<b>486,938</b>
<b>Total Assets</b>	<b>\$6,587,731</b>	<b>\$482,662</b>	<b>\$6,527,861</b>	<b>\$488,311</b>
<b>DEFERRED OUTFLOWS OF RESOURCES</b>				
Deferred Change in Fair Value of Interest Rate Swaps	\$65,428		\$51,059	
Loss on Debt Refunding	80,851		80,312	
Pensions	147,153		47,039	
<b>Total Deferred Outflows of Resources</b>	<b>\$293,432</b>		<b>\$178,410</b>	
<b>LIABILITIES</b>				
<b>Current Liabilities</b>				
Accounts Payable	\$105,652	\$64	\$120,090	\$691
Accrued Salaries and Wages	112,521		127,341	
Accrued Compensated Absences	80,730		76,634	
Accrued Workers' Compensation	3,252		3,495	
Accrued Interest Payable	21,976		22,650	
Bonds Payable	332,996		398,015	
Capital Lease Obligations	169		170	
Accelerated variable rate debt, current	5,000		6,000	
Assets Held on behalf of Others		27,837		29,284
Accounts Payable to UMass Memorial	3,707		2,787	
Due To Related Organizations	193	69	203	59
Unearned Revenues and Credits	44,041	1,224	45,530	1,387
Advances and Deposits	6,712		6,191	
Other Liabilities	57,888		47,354	
<b>Total Current Liabilities</b>	<b>774,837</b>	<b>29,194</b>	<b>856,460</b>	<b>31,421</b>
<b>Noncurrent Liabilities</b>				
Accrued Compensated Absences	35,671		31,813	
Accrued Workers' Compensation	12,160		10,886	
Bonds Payable	2,646,626		2,685,235	
Capital Lease Obligations	429		562	
Derivative Instruments, Interest Rate Swaps	90,478		71,054	
Net Pension Liability	408,418		237,135	
Unearned Revenues and Credits	23,936		26,821	
Advances and Deposits	27,705		28,621	
Other Liabilities	48,760	3,502	41,583	3,505
<b>Total Noncurrent Liabilities</b>	<b>3,294,183</b>	<b>3,502</b>	<b>3,133,710</b>	<b>3,505</b>
<b>Total Liabilities</b>	<b>\$4,069,020</b>	<b>\$32,696</b>	<b>\$3,990,170</b>	<b>\$34,926</b>
<b>DEFERRED INFLOWS OF RESOURCES</b>				
Pensions	\$12,050		\$48,753	
<b>Net Position:</b>				
Invested in Capital Assets Net of Related Debt	\$2,013,966	\$8,090	\$1,887,941	\$8,293
Restricted				
Nonexpendable	18,384	374,566	18,378	328,226
Expendable	218,272	46,275	169,591	92,488
Unrestricted	549,471	21,035	591,438	24,378
<b>Total Net Position</b>	<b>\$2,800,093</b>	<b>\$449,966</b>	<b>\$2,667,348</b>	<b>\$453,385</b>

The accompanying notes are an integral part of the financial statements.

**University of Massachusetts**  
**Consolidated Statements of Revenues, Expenses, and Changes in Net Position**  
**For The Years Ended June 30, 2016 and 2015**  
(in thousands of dollars)

	University Related		University Related	
	University June 30, 2016	Organizations June 30, 2016	University June 30, 2015	Organizations June 30, 2015
<b>REVENUES</b>				
<b>Operating Revenues</b>				
Tuition and Fees (net of scholarship allowances of \$244,025 at June 30, 2016 and \$212,469 at June 30, 2015)	\$826,815		\$765,218	
Federal Grants and Contracts	329,403		313,754	
State Grants and Contracts	75,306		70,871	
Local Grants and Contracts	2,445		1,717	
Private Grants and Contracts	121,198		124,399	
Sales and Service, Educational	27,500		25,601	
Auxiliary Enterprises	383,281		362,193	
Other Operating Revenues:				
Sales and Service, Independent Operations	47,613		48,368	
Sales and Service, Public Service Activities	476,831		295,429	
Other	113,104		105,234	
<b>Total Operating Revenues</b>	<b>2,403,496</b>		<b>2,112,784</b>	
<b>EXPENSES</b>				
<b>Operating Expenses</b>				
<i>Educational and General</i>				
Instruction	794,691		712,430	
Research	434,213		433,586	
Public Service	71,457	\$16,502	72,910	\$16,359
Academic Support	181,057		167,582	
Student Services	141,915		127,988	
Institutional Support	248,379		237,212	
Operation and Maintenance of Plant	228,406		217,913	
Depreciation and Amortization	240,865	202	221,043	201
Scholarships and Fellowships	44,645	364	49,300	149
<i>Auxiliary Enterprises</i>	297,089		273,680	
<i>Other Expenditures</i>				
Independent Operations	47,930		40,961	
Public Service Activities	410,106		227,692	
<b>Total Operating Expenses</b>	<b>3,140,753</b>	<b>17,068</b>	<b>2,782,297</b>	<b>16,709</b>
<b>Operating Loss</b>	<b>(737,257)</b>	<b>(17,068)</b>	<b>(669,513)</b>	<b>(16,709)</b>
<b>NONOPERATING REVENUES/(EXPENSES)</b>				
Federal Appropriations	6,827		6,619	
State Appropriations	669,748		621,200	
Gifts	42,415	18,783	30,351	17,111
Investment Income	29,381	182	29,579	(18)
Unrealized Loss on Investments	(7,633)		(11,327)	
Endowment Income Distributed for Operations	24,740	1,386	23,362	1,387
Interest on Indebtedness	(105,276)		(100,332)	
Nonoperating Federal Grants	75,743		76,539	
Other Nonoperating Income	1,540		2,927	
<b>Net Nonoperating Revenues</b>	<b>737,485</b>	<b>20,351</b>	<b>678,918</b>	<b>18,480</b>
<b>Income Before Other Revenues, Expenses, Gains, and Losses</b>	<b>228</b>	<b>3,283</b>	<b>9,405</b>	<b>1,771</b>
<b>OTHER REVENUES, EXPENSES, GAINS, AND LOSSES</b>				
Capital Appropriations	121,298		62,582	
Capital Grants and Contracts	51,259		55,823	
Endowment Loss, net of amount used for operations	(28,958)	(36,524)	(13,086)	(16,057)
Additions to Permanent Endowments		25,864	920	21,618
Capital Contribution	2,985			
Disposal of Plant Facilities	(10,462)		(12,120)	
Other Additions/(Deductions)	(3,605)	3,958	(15,565)	259
<b>Total Other Revenues, Expenses, Gains, and Losses</b>	<b>132,517</b>	<b>(6,702)</b>	<b>78,554</b>	<b>5,820</b>
<b>Total Increase in Net Position</b>	<b>132,745</b>	<b>(3,419)</b>	<b>87,959</b>	<b>7,591</b>
<b>NET POSITION</b>				
Net Position at Beginning of Year	2,667,348	453,385	2,579,389	445,794
<b>Net Position at End of Year</b>	<b>\$2,800,093</b>	<b>\$449,966</b>	<b>\$2,667,348</b>	<b>\$453,385</b>

The accompanying notes are an integral part of the financial statements.

**University of Massachusetts**  
**Consolidated Statements of Cash Flows**  
**For The Years Ended June 30, 2016 and 2015**  
(in thousands of dollars)

	University June 30, 2016	University June 30, 2015
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Tuition and Fees	\$829,654	\$802,554
Grants and Contracts	791,533	778,001
Payments to Suppliers	(1,295,707)	(1,046,986)
Payments to Employees	(1,444,036)	(1,352,448)
Payments for Benefits	(354,120)	(295,584)
Payments for Scholarships and Fellowships	(44,635)	(49,294)
Loans Issued to Students and Employees	(5,596)	(5,899)
Collections of Loans to Students and Employees	7,099	8,668
Auxiliary Enterprises Receipts	369,715	354,192
Sales and Service, Educational	24,328	22,720
Sales and Service, Independent Operations	57,451	54,621
Sales and Service, Public Service Activities	493,461	317,039
<b>Net Cash Used for Operating Activities</b>	<b>(570,853)</b>	<b>(412,417)</b>
<b>CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES</b>		
State Appropriations	724,985	676,197
Tuition Remitted to the State	(30,583)	(31,055)
Federal Appropriations	6,827	6,619
Gifts and Grants for Other Than Capital Purposes	26,831	27,106
Nonoperating Federal Grants	75,743	76,539
Student Organization Agency Transactions	527	(431)
<b>Net Cash Provided by Noncapital Financing Activities</b>	<b>804,330</b>	<b>754,975</b>
<b>CASH FLOWS FROM CAPITAL AND OTHER FINANCING ACTIVITIES</b>		
Proceeds from Capital Debt	8,668	365,501
Bond Issuance Costs Paid	2	(789)
Capital Appropriations	121,297	62,497
Capital Grants and Contracts	58,759	50,199
Purchases of Capital Assets and Construction	(191,039)	(152,369)
Principal Paid on Capital Debt and Leases	(78,287)	(161,296)
Interest Paid on Capital Debt and Leases	(113,746)	(106,625)
Use of Debt Proceeds on Deposit with Trustees	(321,964)	(330,330)
<b>Net Cash Used for Capital Financing Activities</b>	<b>(516,310)</b>	<b>(273,212)</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Proceeds from Sales and Maturities of Investments	1,138,588	876,156
Interest on Investments	8,862	8,651
Purchase of Investments	(1,090,191)	(928,361)
<b>Net Cash Provided by (Used for) Investing Activities</b>	<b>57,259</b>	<b>(43,554)</b>
<b>NET INCREASE/(DECREASE) IN CASH AND CASH EQUIVALENTS</b>	<b>(225,574)</b>	<b>25,792</b>
<b>Cash and Cash Equivalents - Beginning of the Year</b>	<b>830,026</b>	<b>804,234</b>
<b>Cash and Cash Equivalents - End of Year</b>	<b>\$604,452</b>	<b>\$830,026</b>
<b>RECONCILIATION OF OPERATING LOSS TO NET CASH USED BY OPERATING ACTIVITIES</b>		
Operating Loss	(\$737,257)	(\$669,513)
<i>Adjustments to reconcile loss to net cash used by Operating Activities:</i>		
Depreciation and Amortization Expense	240,865	221,043
<i>Changes in Assets and Liabilities:</i>		
Receivables, net	(2,969)	(15,355)
Inventories	(534)	(1,174)
Due to/from Related Organizations		(273)
Accounts Receivable/Payable UMass Memorial	(17,341)	22,267
Other Assets	(44,077)	(5,067)
Accounts Payable (non-capital)	(17,821)	3,419
Accrued Liabilities	(5,835)	18,671
Deferred Revenue	(4,374)	10,185
Advances and Deposits	(395)	(194)
Other Liabilities	18,885	3,574
<b>Net Cash Used for Operating Activities</b>	<b>(570,853)</b>	<b>(412,417)</b>
<b>SUPPLEMENTAL DISCLOSURE OF NONCASH ACTIVITIES:</b>		
Bonds to refund existing debt		302,388
Assets acquired and included in accounts payable and other liabilities	63,109	\$59,726

The accompanying notes are an integral part of the financial statements.

**University of Massachusetts**  
**Notes to Consolidated Financial Statements**  
**June 30, 2016 and 2015**

**1. SUMMARY OF ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES**

ORGANIZATION

The consolidated 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 Amherst, Boston, Dartmouth, Lowell and Worcester Medical School campuses, and the Central Administration 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 ("the Building Authority").

The Building Authority is a public instrumentality of the Commonwealth created by Chapter 773 of the Acts of 1960 (referred to as the "Enabling Act"), whose purpose is to provide dormitories, dining commons, and other buildings and structures for use by the University. WCCC is a tax exempt organization founded to support research and real property activities for the University. The UMass Amherst Foundation was established in 2003 as a tax exempt organization founded to foster and promote the growth, progress, and general welfare of the University. 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 Related Organizations column in the accompanying financial statements includes the financial information of the University's discretely presented component units. The University of Massachusetts Foundation, Inc. ("Foundation") and the University of Massachusetts Dartmouth Foundation, Inc. ("Dartmouth Foundation") are related tax exempt organizations founded to foster and promote the growth, progress and general welfare of the University, and are reported in a separate column to emphasize that they are Massachusetts not-for-profit organizations legally separate from the University. These component units are included as part of the University's financial statements because of the nature and the significance of their financial relationship with the University. The financial statement presentation of the discretely presented component units has been reclassified to conform to the University presentation. The financial reports of all above mentioned component units are available upon request from the University.

The University is an enterprise fund of the Commonwealth of Massachusetts ("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 accounting principles generally accepted in the United States of America 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 consolidated basis, and all intra-University transactions are eliminated.

Operating revenues consist of tuition and fees, grants and contracts, sales and services of educational activities (including royalties from licensing agreements) and auxiliary enterprise revenues. Operating expenses include salaries, wages, fringe benefits, utilities, subcontracts on grants and contracts, supplies and services (including independent operations and public service activities), and depreciation and amortization. All other revenues and expenses of the University are reported as non-operating revenues and expenses including state general appropriations, federal appropriations, non-capital gifts, short term investment income, endowment income used in operations, interest expense, and capital additions and deductions. Other revenues, expenses, gains and losses represent all capital items, other changes in long term plant, and changes in endowment net position. 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. Contributions, including unconditional promises to give (pledges) for non-endowment or non-capital purposes, are recognized as revenues in the period received. Pledges to restricted non-expendable endowments are recognized as revenues in the period received. Conditional promises to give are not recognized until they become unconditional, that is when the conditions on which they depend are substantially 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.

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, and disclosures of contingencies at the date of the financial statements, revenues and expenditures recognized during the reporting period. Significant estimates include the accrual for employee compensated absences, and workers' compensation liability, the allowance for doubtful accounts, valuation of certain investments, amounts recorded in connection with the pension obligation and the related defined inflows and outflows. Actual results could differ from those estimates.

The University reports its financial statements as a "business-type activity" ("BTA") under GASB Statement No. 35, *Basic Financial Statements – and Management's Discussion and Analysis – for Public Colleges and Universities* (GASB 35). BTAs are defined as activities are financed in whole or in part by fees charged to external parties for goods or services.

In order to ensure observance of limitations and restrictions placed on the use of available resources, the accounts of the University are maintained internally in accordance with the principles of fund accounting. This is the procedure by which resources for

various purposes are maintained in separate funds in accordance with the activities or objectives specified. 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:** Resources that are not subject to externally imposed stipulations. Substantially all unrestricted net assets are designated to support academic, research, auxiliary enterprises or unrestricted funds functioning as endowments, or are committed to capital construction projects.

Revenues are reported net of discounts and allowances. As a result, student financial aid expenditures are reported as an allowance against tuition and fees revenue while stipends and other payments made directly to students are recorded as scholarship and fellowship expenditures on the statements of revenues, expenses, and changes in net position. Discounts and allowances for tuition and fees and auxiliary enterprises are calculated using the Alternate Method which reports tuition and fee revenue net of scholarship allowances.

#### ADOPTION OF ACCOUNTING PRONOUNCEMENTS

For the year ended June 30, 2016, the University adopted the provisions of GASB Statement No.72, "Fair Value measurements and Application" ("GASB 72"). This statement addresses the accounting and financial reporting issues related to fair value measurements, as well as requires certain disclosures to be made about fair value measurements, the level of fair value hierarchy, and valuation techniques. GASB 72 defines fair value as 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. This statement also provides guidance for determining a fair value measurement for financial reporting purposes, as well as for applying fair value to certain investments and swap counterparties at the measurement date. The University assessed the impact of GASB No. 72 on its financial statements and has added required disclosures of assets and liabilities reported at fair value in accompanying financial statements. The determination of fair value as it relates to the interest rate swaps was also impacted by the adoption of GASB 72. As the amounts were immaterial, the University did not adjust the fair value of this liability at June 30, 2015. Implementation of GASB 72 did not have any impact on the net position of the University.

#### NEW GASB PRONOUNCEMENTS

In June 2015 the GASB released Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. The primary objective of this Statement is to improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions (other postemployment benefits or OPEB). It also improves information provided by state and local governmental employers about financial support for OPEB that is provided by other entities. This Statement replaces the requirements of Statements No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, as amended, and No. 57, *OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans*. Management is evaluating the impact this pronouncement will have on the University.

#### CLASSIFICATION OF ASSETS AND LIABILITIES

The University presents current and non-current assets and liabilities in the statements of net position. Assets and liabilities are considered current if they mature in one year or less, or are expected to be received, used, or paid within one year or less. Investments with a maturity of greater than one year and balances that have externally imposed restrictions as to use are considered non-current. Cash Held by State Treasurer includes balances with restrictions as to use and balances that may be rolled forward for use toward the restricted purposes in future years, and such balances are classified as non-current. Cash held by trustees is presented based upon its expected period of use and the restrictions imposed on the balances by external parties.

#### CASH AND CASH EQUIVALENTS AND INVESTMENTS

Cash and cash equivalents consist primarily of petty cash, demand deposit accounts, savings accounts, and money market accounts with a maturity of three months or less when purchased.

Investments are reported at their respective fair values. 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.

Private equity and certain other non-marketable securities held by the Foundation are valued using current estimates of fair value by management based on information provided by the general partner or investment manager for the respective securities. The Foundation believes that the carrying amounts of these investments are a reasonable estimate of fair value, however, their estimated value is subject to uncertainty and therefore may differ from the value that would have been used had a ready market for such

investment existed. Venture capital investments represent initial investments made to certain funds and are reported at fair value based on company stock price.

Investment securities are exposed to various risks, such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the accompanying financial statements.

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.

#### RESTRICTED 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 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, 2016 and 2015 was \$119.0 million and \$112.2 million, respectively, and is a component of grants and contracts revenue. The costs, both direct and indirect, charged to these grants and contracts are subject to audit by the granting agency. The University believes that any audit adjustments would not have a material effect on the University's financial statements.

#### PLEDGES AND ENDOWMENT SPENDING

Pledges for non-endowment purposes are presented net of amounts deemed uncollectible, and after discounting to the present value of the expected future cash flows. Because of uncertainties with regard to whether they are realizable, bequests and intentions and other conditional promises are not recognized as assets until the specified conditions are met.

The Foundation utilizes the pooled investment concept whereby all invested funds are in one investment pool, except for investments of certain funds that are otherwise restricted. Pooled investment funds will receive an annual distribution of 4% of the endowment fund's average market value for the preceding twelve quarters on a one year lag. Only quarters with funds on deposit shall be included in the average. In addition, a prudence rule will be utilized limiting spending from a particular endowment fund to no lower than 93% of its book value. The actual spending rate approved was 4% for 2016 and 2015. Future utilization of gains is dependent on market performance. Deficiencies for donor-restricted endowment funds resulting from declines in market value would be offset by an allocation from unrestricted net position to restricted expendable net position, and would be recorded in realized and unrealized gains (losses) on sale of investments. In fiscal years 2016 and 2015, the deficiencies were \$3.2 million and \$0.1 million respectively. The Foundation believes that these adjustments are temporary and will not require permanent funding.

#### INVENTORIES

The University's 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.

#### INVESTMENT IN PLANT

Capital assets are stated at cost or fair value upon receipt as a gift. 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 property and equipment. Depreciation of capital assets is provided on a straight-line basis over the estimated useful lives of the respective assets. The University records a full year of depreciation in the year of acquisition. Land is not depreciated. The University does not capitalize works of art, historical treasures or library books.

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

Buildings	20-50 years
Building Improvements	3-20 years
Equipment, Furniture and IT Infrastructure	3-15 years
Software	5 years
Land Improvements	20 years

## COMPENSATED ABSENCES

Employees earn the right to be compensated during absences for annual vacation leave and sick leave. The accompanying statements of net position reflect an accrual for the amounts earned and ultimately payable for such benefits as of the end of the fiscal year. The accrual equates to the entire amount of vacation time earned and an actuarially determined liability for the sick leave component of compensated absences. Employees are only entitled to 20% of their sick leave balance upon retirement. The actuarial calculation utilized the probability of retirement for this estimate.

## UNEARNED REVENUE

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

## ADVANCES AND DEPOSITS

Advances from the U.S. Government for Federal Perkins Loans to students are reported as part of advances and deposits. Future loans to students are made available only from repayments of outstanding principal amounts plus accumulated interest received thereon. Funding for the low-interest Federal Perkins Loan program will expire September 30, 2017. Universities and colleges are not allowed to make Federal Perkins Loans to new borrowers after this date.

## TUITION AND STATE APPROPRIATIONS

The accompanying financial statements for the years ended June 30, 2016 and 2015 present as tuition revenue approximately \$30.6 million and \$31.1 million, respectively, of in-state tuition received by the University and remitted to the State Treasurer's Office for the general fund of the Commonwealth of Massachusetts. The amount of tuition retained by the University related to out-of-state students during 2016 and 2015 was \$85.1 million and \$82.0 million, respectively. The recorded amount of State Appropriations received by the University has been reduced by a corresponding amount of tuition remitted as shown below (in thousands):

	2016	2015
Gross Commonwealth Appropriations	\$546,953	\$516,794
Plus: Fringe Benefits	178,032	159,403
	<u>724,985</u>	<u>676,197</u>
Less: Tuition Remitted	(30,583)	(31,055)
Less: Mandatory Waivers	(24,654)	(23,942)
Net Commonwealth support	<u>\$669,748</u>	<u>\$621,200</u>

## 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. For the years ended June 30, 2016 and 2015, the University recognized Auxiliary Enterprise revenue of \$383.3 million and \$362.2 million, respectively.

## 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 campus 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 Commonwealth Medicine revenues of \$283.8 million and \$268.7 million for the years ended June 30, 2016 and 2015, respectively. Included in expenditures are Commonwealth Medicine expenditures of \$244.1 million and \$227.7 million for the years ended June 30, 2016 and 2015, respectively.

Public Service Activities also include payments received by the Medical School for educational services it provides to its clinical affiliate, UMass Memorial, as required by the enabling legislation enacted by the Commonwealth in 1997. Educational services revenues included in public service revenues were \$209.9 million and \$43.8 million for the years ended June 30, 2016 and 2015, respectively. Finally, Public Service Activity expenditures include payments made to the Commonwealth of Massachusetts of \$166.0 million for the year ended June 30, 2016, pursuant to requirements of legislation enacted by the State Legislature of Massachusetts.

## FRINGE BENEFITS FOR CURRENT EMPLOYEES AND POST EMPLOYMENT OBLIGATIONS – PENSION AND NON-PENSION

The University participates in the Commonwealth's Fringe Benefit programs, including active employee and post – employment 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.

In addition to providing pension benefits, under Chapter 32A of the Massachusetts General Laws, the Commonwealth is required to provide certain health care and life insurance benefits for retired employees of the Commonwealth, housing authorities, redevelopment authorities, and certain other governmental agencies. 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 is comparable to contributions required from employees. The Commonwealth is reimbursed for the cost of benefits to retirees of the eligible authorities and non-state agencies.

The Commonwealth's Group Insurance Commission ("GIC") was established by the Legislature in 1955 to provide and administer health insurance and other benefits to the Commonwealth's employees and retirees, and their dependents and survivors. The GIC also covers housing and redevelopment authorities' personnel, certain authorities and other offline agencies, retired municipal teachers from certain cities and towns and municipalities as an agent multiple employer program, accounted for as an agency fund activity of the Commonwealth, not the University.

The GIC administers a plan included within the State Retiree Benefits Trust Fund, an irrevocable trust. Any assets accumulated in excess of liabilities to pay premiums or benefits or administrative expenses are retained in that fund. The GIC's administrative costs are financed through Commonwealth appropriations and employee investment returns. The Legislature determines employees' and retirees' contribution ratios.

The GIC is a quasi-independent state agency governed by an eleven-member body ("the Commission") appointed by the Governor. The GIC is located administratively within the Executive Office of Administration and Finance, and is responsible for providing health insurance and other benefits to the Commonwealth's employees and retirees and their survivors and dependents. During the fiscal years that ended on June 30, 2016 and June 30, 2015, respectively, the GIC provided health insurance for its members through indemnity, PPO, and HMO plans. The GIC also administered carve-outs for the pharmacy benefit and mental health and substance abuse benefits for certain of its health plans. In addition to health insurance, the GIC sponsors life insurance, long-term disability insurance (for active employees only), dental and vision coverage for employees not covered by collective bargaining, a retiree discount vision plan and retiree dental plan, and finally, a pre-tax health care spending account and dependent care assistance program (for active employees only).

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 of Massachusetts 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.

#### INCOME TAX STATUS

The University and the Building Authority are component units of the Commonwealth of Massachusetts 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.

The Worcester City Campus Corporation (WCCC), and the University Related Organizations 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 and the University Related Organizations are required to assess uncertain tax positions and have determined that there were no such positions that are material to the financial statements.

#### COMPARATIVE INFORMATION AND RECLASSIFICATIONS

The University's financial statements include prior year comparative information. Certain reclassifications were made in prior year to conform to current year presentation.

Beginning in fiscal year 2016, in an effort to increase the transparency of activity that flowed through Investment Income and Endowment Returns, management decided to distinguish between Investment Return, Unrealized Gains and Losses on Investments, Endowment Distributed for Operations and Endowment Return, net of amounts used in operations. Fiscal year 2015 was reclassified to conform to this new presentation.

## **2. CASH AND CASH EQUIVALENTS AND INVESTMENTS**

The University's investments are made in accordance with the Investment Policy and Guidelines Statement Operating Cash Portfolio adopted in May 2005 and later amended in June 2009 by the Board of Trustees (the "Investment Policy") and the Statement of Investment and Spending Policies of the University of Massachusetts Foundation, Inc. The goals of these documents are to preserve capital, provide liquidity, and generate investment income. The University of Massachusetts has statutory authority under Massachusetts General Laws Chapter 75 to collect, manage, and disburse trust funds of the University.

Investments are reported at their respective fair values. The values of publicly traded fixed income and equity securities are based upon quoted market prices at the close of business on the last day of the fiscal year. Private equities and certain other non-marketable securities are valued using current estimates in fair value by management based on information provided by the general partner or investment manager for the respective securities. Investments in units of non-publicly traded pooled funds are valued at the unit value determined by the fund's administrator based on quoted market prices of the underlying investments. Private equities and other non-marketable securities represent approximately 23.5% and 24.4% of the University's investments at June 30, 2016 and 2015, respectively.

**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, investments or collateral securities that were in the possession of an outside party. The University does not have a formal policy related to mitigation of custodial credit risk. Deposits are exposed to custodial risk if they are uninsured and uncollateralized. 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. As of June 30, 2016 and 2015, all cash and investment accounts were held on behalf of the University by the Trustees, in the Trustees' 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.

At June 30, 2016 and 2015, the carrying amounts, bank balances and FDIC insured amounts were as follows (in thousands):

	2016			2015		
	Book Balance	Bank Balance	FDIC Insured	Book Balance	Bank Balance	FDIC Insured
Depository Accounts	\$ 102,155	\$ 85,605	\$ 999	\$ 90,691	\$ 70,176	\$ 1,052
Certificates of Deposit	20,650	20,650	20,400	650	650	400
Money Market	164,505	164,505	2,501	233,305	233,305	2,501
Total	\$ 287,310	\$ 270,760	\$ 23,900	\$ 324,646	\$ 304,131	\$ 3,953

At June 30, 2016, the University held a carrying and fair market value of \$737.3 million in non-money market investments compared to a carrying and fair market value of \$713.7 million at June 30, 2015. In the event of negligence due to the University's custodian and/or investment manager(s), it is expected that investment balances of \$737.3 million and \$713.7 million at June 30, 2016 and 2015, respectively, would be fully recovered. However, these amounts are subject to both interest rate risk and credit risk.

**Concentration of Credit Risk** - Concentration of credit risk is assumed to arise when the amount of investments that the University has with one issuer exceeds 5% or more of the total value of the University's investments. The University does not have a formal policy for concentration of credit risk.

As of June 30, 2016 and June 30, 2015, there is no concentration of investments with one issuer of the University portfolio, excluding U. S. Government guaranteed obligations, which exceed 5% of the portfolio.

**Credit Risk** - Credit risk is the risk that the University will lose money because of the default of the security issuer or investment counterparty. 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.

The table below presents the fair value (in thousands) and average credit quality of the fixed income component of the University's investment portfolio as of June 30, 2016 and 2015, respectively:

Asset Class	June 30, 2016		June 30, 2015	
	Fair Value	Average Credit Quality	Fair Value	Average Credit Quality
Short Duration	\$ 270,117	AAA	\$ 314,081	AAA
Intermediate Duration	239,218	A	231,382	A

The table below presents the fair value (in thousands) by credit quality of the rated debt investments component, which includes cash and cash equivalents, of the University's investment portfolio as of June 30, 2016 and 2015, respectively:

**Rated Debt Investments - 2016**

(in thousands)

	S&P Quality Ratings								
	Fair Value	AAA	AA	A	BBB	BB	B	<B	Unrated
U.S. Agencies	\$ 535	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 535
U.S. Government	34,641	-	-	-	-	-	-	-	34,641
Certificates of Deposit	20,500	-	-	-	-	-	-	-	20,500
Corporate Debt	107,428	20,736	7,017	28,393	38,718	-	-	-	12,564
Municipal/Public Bonds	5,455	442	1,875	2,040	1,098	-	-	-	
Bond Mutual Funds	151,385	65,982	19,627	14,766	23,002	13,016	6,717	1,592	6,683
Money Market Funds	189,391	21,038	-	-	-	-	-	-	168,353
	<u>\$ 509,335</u>	<u>\$ 108,198</u>	<u>\$ 28,519</u>	<u>\$ 45,199</u>	<u>\$ 62,818</u>	<u>\$ 13,016</u>	<u>\$ 6,717</u>	<u>\$ 1,592</u>	<u>\$ 243,276</u>

**Rated Debt Investments - 2015**

(in thousands)

	S&P Quality Ratings								
	Fair Value	AAA	AA	A	BBB	BB	B	<B	Unrated
U.S. Agencies	\$ 1,313	\$ -	\$ 582	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 731
U.S. Government	34,856	-	48	-	-	-	-	-	34,808
Certificates of Deposit	500	500	-	-	-	-	-	-	
Corporate Debt	100,192	22,117	6,662	25,797	26,957	-	-	-	18,659
Municipal/Public Bonds	4,767	439	2,899	312	1,117	-	-	-	
Bond Mutual Funds	113,655	44,137	3,159	12,754	18,835	14,590	8,667	2,986	8,527
Money Market Funds	290,180	290,067	-	-	-	-	-	-	113
	<u>\$ 545,463</u>	<u>\$ 357,260</u>	<u>\$ 13,350</u>	<u>\$ 38,863</u>	<u>\$ 46,909</u>	<u>\$ 14,590</u>	<u>\$ 8,667</u>	<u>\$ 2,986</u>	<u>\$ 62,838</u>

**Interest Rate Risk** - Interest rate risk is the risk that changes in interest rates will adversely affect the fair market value of an investment. 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 table below shows the allocation for each asset class and the fair value (in thousands) for each as of June 30, 2016 and 2015, respectively:

<u>Asset Class</u>	<u>6/30/2016</u>		<u>6/30/2015</u>	
	<u>Allocation</u>	<u>Fair Value</u>	<u>Allocation</u>	<u>Fair Value</u>
Short Duration	29%	\$ 270,117	32%	\$ 314,081
Intermediate Duration	25%	239,218	23%	231,382
Alternatives	23%	220,543	24%	244,456
Commodities	1%	9,108	18%	182,880
Equities	20%	183,027	2%	18,704
Real Estate	2%	18,458	1%	11,533
	<u>100%</u>	<u>\$ 940,471</u>	<u>100%</u>	<u>\$ 1,003,036</u>

The table below presents the fair value (in thousands) by investment maturity of the rated debt investments component, which includes cash and cash equivalents, of the University's investment portfolio as of June 30, 2016 and 2015, respectively:

**INVESTMENTS - 2016**  
(in thousands)

Investment Type:	Investment Maturity (in Years)				
Debt Securities	Fair Value	Less than 1	1 to 5	6 to 10	More than 10
U.S. Agencies	\$ 535	\$ 343	\$ 192	-	-
U.S. Government	34,641	1,180	29,935	\$ 3,526	-
Certificates of Deposit	20,500	20,500	-	-	-
Corporate Debt	107,428	34,560	67,054	5,814	-
Municipal/Public Bonds	5,455	5,455	-	-	-
Bond Mutual Funds	151,385	18,688	82,901	36,419	\$ 13,377
Money Market Funds	189,391	189,391	-	-	-
<b>Sub Total Debt</b>	<b>\$ 509,335</b>	<b>\$ 270,117</b>	<b>\$ 180,082</b>	<b>\$ 45,759</b>	<b>\$ 13,377</b>

**Other Investments**

Alternative Assets	\$ 220,543
Equity Securities - International	106,102
Equity Securities - Domestic	76,925
Commodities	9,108
Real Estate	18,458
<b>Grand Total</b>	<b>\$ 940,471</b>

**INVESTMENTS - 2015**  
(in thousands)

Investment Type:	Investment Maturity (in Years)				
Debt Securities	Fair Value	Less than 1	1 to 5	6 to 10	More than 10
U.S. Agencies	\$ 1,313	-	\$ 1,313	-	-
U.S. Government	34,856	-	33,862	\$ 994	-
Certificates of Deposit	500	500	-	-	-
Corporate Debt	100,192	1,284	93,411	5,097	\$ 400
Municipal/Public Bonds	4,767	3,407	1,360	-	-
Bond Mutual Funds	113,655	18,710	46,479	33,791	14,675
Money Market Funds	290,180	290,180	-	-	-
<b>Sub Total Debt</b>	<b>\$ 545,463</b>	<b>\$ 314,081</b>	<b>\$ 176,425</b>	<b>\$ 39,882</b>	<b>\$ 15,075</b>

**Other Investments**

Alternative Assets	\$ 244,456
Equity Securities - International	110,903
Equity Securities - Domestic	71,977
Commodities	18,704
Real Estate	11,533
<b>Grand Total</b>	<b>\$ 1,003,036</b>

**Fair Value Measurements** - GASB No. 72, "Fair Value measurements and Application" sets forth the framework for measuring fair value. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy under GASB No. 72 are described as follows:

Level 1 – Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the University has the ability to access.

Level 2 – Inputs other than Level 1 that are observable, either directly or indirectly and 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 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value measurement. Unobservable inputs are developed based on the best information available in the circumstances and may include the University's own data.

The following table presents the investments carried at fair value, as of June 30, 2016, by the GASB 72 valuation hierarchy defined above:

**Investments and Derivative Instruments Measured at Fair Value**  
(in thousands)

	6/30/2016	Fair Value Measurements Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Investments by fair value level</b>				
<b>Debt Securities</b>				
US Treasury securities	\$ 31,873	\$ 31,873		
Government agency bonds	535		\$ 535	
Asset backed securities	23,951		23,951	
Commerical mortgage-backed securities	11,552		11,552	
Government issued commercial mortgage-backed securities	421		421	
Government mortgage-backed securities	3,911		3,911	
Non Government Backed CMO's	404		404	
Corporate bonds	71,756		71,598	\$ 158
Municipal and provincial bonds	5,455		5,455	
Other fixed income	151,384	137,608	13,776	
<b>Total debt securities</b>	<b>301,242</b>	<b>169,481</b>	<b>131,603</b>	<b>158</b>
<b>Equity Securities</b>				
Dometic equities	76,924	76,074		850
International equities	106,106	106,106		
<b>Total Equity Securities</b>	<b>183,030</b>	<b>182,180</b>	<b>-</b>	<b>850</b>
<b>Other Securities</b>				
Commodities	9,108	9,108		
REITS	18,458	18,458		
<b>Total Other Securities</b>	<b>27,566</b>	<b>27,566</b>	<b>-</b>	<b>-</b>
<b>Total investments by fair value level</b>	<b>\$ 511,838</b>	<b>\$ 379,227</b>	<b>\$ 131,603</b>	<b>\$ 1,008</b>
<b>Investments measured at the net asset value (NAV)</b>				
Multi Strategy hedge funds				
Equity	\$ 41,970			
Long/short	28,614			
Fixed income	59,131			
Absolute return	59,139			
Real assets	12,055			
Private equity	1,147			
Private debt	14,989			
Private real estate	3,497			
<b>Total investments measured at the NAV</b>	<b>220,542</b>			
<b>Total Investments measured at fair value</b>	<b>\$ 732,380</b>			
Cash and Cash Equivalents	208,091			
<b>Total Investments Per Financial Statements</b>	<b>\$ 940,471</b>			

The following table presents the investments carried at fair value, as of June 30, 2015, by the GASB 72 valuation hierarchy defined above:

**Investments and Derivative Instruments Measured at Fair Value**  
(in thousands)

	6/30/2015	Fair Value Measurements Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Investments by fair value level</b>				
<b>Debt Securities</b>				
US Treasury securities	\$ 29,345	\$ 29,345		
Government agency bonds	1,313		\$ 1,313	
Asset backed securities	27,851		27,851	
Commerical mortgage-backed securities	17,464		17,464	
Government issued commercial mortgage-backed securities	1,319		1,319	
Government mortgage-backed securities	4,192		4,192	
Corporate bonds	55,003		54,985	\$ 17
Municipal and provincial bonds	4,767		4,767	
Other fixed income	113,655	113,655		
<b>Total debt securities</b>	<b>254,909</b>	<b>143,000</b>	<b>111,891</b>	<b>17</b>
<b>Equity Securities</b>				
Dometic equities	72,477	71,577		900
International equities	110,903	110,903		
<b>Total Equity Securities</b>	<b>183,380</b>	<b>182,480</b>	<b>-</b>	<b>900</b>
<b>Other Securities</b>				
Commodities	18,704	18,704		
REITS	11,533	11,533		
<b>Total Other Securities</b>	<b>30,237</b>	<b>30,237</b>	<b>-</b>	<b>-</b>
<b>Total investments by fair value level</b>	<b>\$ 468,526</b>	<b>\$ 355,717</b>	<b>\$ 111,891</b>	<b>\$ 917</b>
<b>Investments measured at the net asset value (NAV)</b>				
Multi Strategy hedge funds				
Equity	\$ 42,205			
Long/short	40,981			
Fixed income	71,753			
Absolute return	62,163			
Real assets	12,329			
Private equity	493			
Private debt	14,532			
<b>Total investments measured at the NAV</b>	<b>244,456</b>			
<b>Total Investments measured at fair value</b>	<b>\$ 712,982</b>			
Cash and Cash Equivalents	290,054			
<b>Total Investments Per Financial Statements</b>	<b>\$ 1,003,036</b>			

### 3. CASH HELD BY STATE TREASURER

Accounts payable, accrued salaries and outlays for future capital projects to be funded from state-appropriated funds totaled \$17.3 million at June 30, 2016 and \$33.0 million at June 30, 2015. 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.

### 4. CASH AND SECURITIES HELD BY TRUSTEES

Cash and securities held by 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, 2016 and June 30, 2015, there was \$9 million and \$6.2 million, respectively, available from the Revolving Loan Fund established with 2000 Series A bond proceeds issued to acquire and implement enterprise resource planning technology along with other projects (see Note 8) and \$485.1 million and \$700.9 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 (approximately \$486.0 million at June 30, 2016 and \$707.1 million at June 30, 2015) shall be continuously maintained for the benefit of the Building Authority and Registered owners of the Bonds. All investments shall be (a) held with a bank or trust company approved by the Trustees and the Building Authority, as custodians, or (b) in such other manner as may be required or permitted by applicable state and Federal laws and regulations. Investments shall consist of (a) 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 (b) 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.

**Cash Deposits – Custodial Credit Risk** 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. The Building Authority's cash and cash equivalents consisted of the following as of June 30 (in thousands):

	2016	2015
Cash	\$ 4,577	\$ 3,580
Permitted money market accounts ("MMA")	475,240	692,194
Total cash and cash equivalents	<u>\$ 479,817</u>	<u>\$ 695,774</u>

Custodial credit risk is the risk that, in the event of a bank failure, the University will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. The University does not have a deposit policy for custodial credit risk. As of June 30, 2016 and June 30, 2015, the bank balances of uninsured deposits totaled \$4,077 million and \$3,261 million, respectively. For purposes of disclosure under GASB Statement No. 40, *Deposit and Investment Risk Disclosures*, money market accounts investing in debt securities are considered investments and therefore, are included in the investment disclosures that follow.

### Investments

As of June 30, 2016, the Building Authority's investments consisted of the following:

Investment type	Fair value	Investment Maturities (in Years)		
		Less than 1	1 to 5	6 to 10
<b>Debt Securities</b>				
Repurchase Agreements	\$ 5,318	\$ -	\$ 5,318	\$ -
Money Market funds	475,239	475,239	-	-
Total	<u>\$ 480,557</u>	<u>\$ 475,239</u>	<u>\$ 5,318</u>	<u>\$ -</u>

As of June 30, 2015, the Building Authority's investments consisted of the following:

Investment type	Investment Maturities (in Years)			
	Fair value	Less than 1	1 to 5	6 to 10
<b>Debt Securities</b>				
Repurchase Agreements	\$ 5,318	\$ -	\$ -	\$ 5,318
Money Market funds	692,194	692,194	-	-
<b>Total</b>	<b>\$ 697,512</b>	<b>\$ 692,194</b>	<b>\$ -</b>	<b>\$ 5,318</b>

Because money market funds are highly liquid, they are presented as investments with maturities of less than one year.

**Interest Rate Risk** 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.

**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.

The Enabling Act specifies the permitted investments of the Building Authority. These permitted investments include direct obligations of or obligations which are unconditionally guaranteed by the United States of America ("Treasuries"), obligations of an agency or organization created pursuant to an act of Congress of the United States as an agency or instrumentality thereof ("Agencies"), time deposits or certificate of deposits fully secured by Treasuries or Agencies, and Treasuries and Agencies subject to repurchase agreements. Other legislation allows the Building Authority to invest in the Massachusetts Municipal Depository Trust (the "MMDT"), a money market account sponsored by the Treasurer of the Commonwealth and managed by Federated Investors, Inc. Additionally, the Building Authority's Bond Trustee invests some of the Building Authority's funds in money market accounts that are permitted and collateralized by Treasuries.

No credit risk disclosures are required under GASB 40 relating to the Building Authority's investment in Treasuries. The Building Authority's investments in repurchase agreements are not rated but are fully collateralized by Treasuries and Agencies. MMDT is unrated.

**Custodial Credit Risk** The Building Authority's Enabling Act does not contain legal or policy requirements that would limit the exposure to custodial credit risk except that interest-bearing time deposits or certificates of deposit of banking institutions or trust companies must be continuously and fully secured by Treasuries or Agencies.

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 MMDT. 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.

**Concentrations of Credit Risk** The Building Authority places no limit on the amount it may invest in any one issuer. As of June 30, 2016, the Building Authority had 98.0% of its investments in MMDT. As of June 30, 2015, the Building Authority had 98.7% of its investments in MMDT.

## 5. ACCOUNTS, GRANTS AND LOANS RECEIVABLE

Accounts, grants and loans receivable as of June 30, 2016 and 2015 are as follows (in thousands):

	<u>2016</u>	<u>2015</u>
Student Accounts Receivable	\$ 56,661	\$ 54,295
Less allowance for uncollectible accounts	<u>(23,077)</u>	<u>(23,955)</u>
	<u>33,584</u>	<u>30,340</u>
Grants and Contracts Receivable	98,383	94,929
Less allowance for uncollectible accounts	<u>(2,108)</u>	<u>(2,124)</u>
	<u>96,275</u>	<u>92,805</u>
Student Loans Receivable	44,760	45,362
Less allowance for uncollectible accounts	<u>(303)</u>	<u>(296)</u>
	<u>44,457</u>	<u>45,066</u>
Commonwealth Medicine	69,489	66,894
Less allowance for uncollectible accounts	<u>(500)</u>	<u>(822)</u>
	<u>68,989</u>	<u>66,072</u>
Other	39,996	54,763
Less allowance for uncollectible accounts	<u>(597)</u>	<u>(1,147)</u>
	<u>39,399</u>	<u>53,616</u>
Total, net	282,704	287,899
Less current portion, net	<u>(244,178)</u>	<u>(249,517)</u>
Long-term, net	<u>\$ 38,526</u>	<u>\$ 38,382</u>

## UMASS MEMORIAL

The University and UMass Memorial have the following ongoing agreements:

- UMass Memorial has been granted the right to occupy portions of the University's Worcester Medical School campus for a period of 99 years and UMass Memorial has agreed to share responsibility for various capital and operating expenses relating to the occupied premises. UMass Memorial has also agreed to contribute to capital improvements to shared facilities.
- UMass Memorial has agreed to make certain payments to the University and its related organizations, including: 1) an annual fee of \$12.0 million (plus an inflation adjustment), for 99 years as long as the University continues to operate a medical school; and 2) a participation payment based on a percentage of net operating income of UMass Memorial for which revenue is recognized by the University when the amounts 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, 2016 and 2015, the reimbursements for services provided to UMass Memorial were \$125.2 million and \$156.3 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 \$71.3 million and \$96.2 million for fiscal years 2016 and 2015, respectively. At June 30, 2016 and 2015, the University has recorded a receivable in the amount of \$35.7 million and \$17.5 million, respectively from UMass Memorial which includes \$22.9 million and \$9.5 million, respectively, in payroll and related fringe charges. The University has recorded a payable at June 30, 2016 of \$3.6 million primarily for cross-funded payroll. At June 30, 2015, the University had a payable of \$2.8 million primarily for cross-funded payroll.

## 6. RELATED ORGANIZATIONS

Related party activity with the Foundation includes loan agreements and investments of the University's endowment assets and Intermediate Term Investment Fund (ITIF) with the Foundation.

As of June 30, 2016, the net position of the Foundation included as related organization in the accompanying financial statements of the University is \$465.8 million, of which \$438.9 million are restricted funds and \$26.9 million are unrestricted funds. During the fiscal year ended June 30, 2016, the University received \$29.7 million from the Foundation, and transferred \$14.7 million to the Foundation of which \$0.0 million related to the establishment of quasi-endowment. At June 30, 2016, the University's investments include \$309.0 million of endowment funds held in a custodial relationship at the Foundation, and \$283.2 million in ITIF.

As of June 30, 2015, the net position of the Foundation was \$468.4 million, of which \$438.4 million are restricted funds and \$30.0 million are unrestricted funds. During the fiscal year ended June 30, 2015, the University received \$28.5 million from the Foundation, and transferred \$14.1 million to the Foundation of which \$3.8 million related to the establishment of quasi-endowment. At June 30, 2015, the University's investments include \$333.3 million of endowment funds held in a custodial relationship at the Foundation, and \$291.4 million in ITIF.

The University leases office space from the Foundation for an annual rent of approximately \$0.4 million.

The Building Authority and the Commonwealth have entered into various lease agreements under which the Commonwealth leases to the Building Authority certain property for nominal amounts.

Through July 31, 2015, the University of Massachusetts Club (the "Club") was managed by UMass Club Management, LLC, a wholly owned subsidiary of ClubCorp USA. The Authority provided operating support for the Club of approximately \$102,000 in fiscal year 2016. On August 1, 2015 management of the Club was transitioned to the not-for-profit organization University Services, Inc. The Authority did not provide additional operating support in fiscal year 2016 once University Services, Inc. took over management of the Club. The Authority provided \$187,700 in operating support to ClubCorp USA in fiscal 2015.

## 7. INVESTMENT IN PLANT

Investment in plant activity for the year ended June 30, 2016 is comprised of the following (in thousands):

### University:

	Beginning Balance	Additions	Retirements	Ending Balance
Buildings and Improvements	\$5,447,343	\$251,688	(\$8,031)	\$5,691,000
Equipment and Furniture	634,270	59,330	(34,632)	658,968
Software	136,570	1,052	(1,119)	136,503
Library Books	74,576	-	(8,598)	65,978
	6,292,759	312,070	(52,380)	6,552,449
Accumulated Depreciation	(2,494,718)	(240,957)	38,462	(2,697,213)
Sub-Total	3,798,041	71,113	(13,918)	3,855,236
Land	71,579	12,582	-	84,161
Construction in Progress	464,142	428,789	(216,552)	676,379
Sub-Total	535,721	441,371	(216,552)	760,540
Total	\$4,333,762	\$512,484	(\$230,470)	\$4,615,776

### University Related Organizations:

	Beginning Balance	Additions	Retirements	Ending Balance
Buildings and Improvements	\$ 7,942	\$ -	\$ -	\$7,942
Equipment and Furniture	168	-	-	168
	8,110	-	-	8,110
Accumulated Depreciation	(1,238)	(201)	-	(1,439)
Sub-Total	6,872	(201)	-	6,671
Land	1,419	-	-	\$1,419
Total	\$8,291	\$ (201)	\$ -	\$8,090

Investment in plant activity for the year ended June 30, 2015 is comprised of the following (in thousands):

**University:**

	Beginning Balance	Additions	Retirements	Ending Balance
Buildings and Improvements	\$4,694,649	\$762,310	(\$9,616)	\$5,447,343
Equipment and Furniture	609,786	53,085	(28,601)	634,270
Software	136,904	737	(1,071)	136,570
Library Books	84,315	-	(9,739)	74,576
	5,525,654	816,132	(49,027)	6,292,759
Accumulated Depreciation	(2,309,127)	(220,952)	35,361	(2,494,718)
Sub-Total	3,216,527	595,180	(13,666)	3,798,041
Land	68,852	2,727	-	71,579
Construction in Progress	779,407	415,396	(730,661)	464,142
Sub-Total	848,259	418,123	(730,661)	535,721
Total	\$4,064,786	\$1,013,303	(\$744,327)	\$4,333,762

**University Related Organizations:**

	Beginning Balance	Additions	Retirements	Ending Balance
Buildings and Improvements	\$7,942	\$ -	\$ -	\$7,942
Equipment and Furniture	168	-	-	168
	8,110	-	-	8,110
Accumulated Depreciation	(1,053)	(\$185)	-	(1,238)
Sub-Total	7,057	(185)	-	6,872
Land	1,421	-	-	\$1,421
Total	\$8,478	(\$185)	\$ -	\$8,293

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, 2016 and 2015, the University capitalized net interest costs of \$22.1 million and \$23.6 million, respectively.

## 8. BONDS PAYABLE

Amounts Outstanding at June 30, 2016 are as follows (in thousands)

Issue Borrowing	Original Borrowing	Maturity Date	Interest Rate	Amount Outstanding
<b>University of Massachusetts Building Authority:</b>				
Series 2004-1	\$ 183,965	2016	5.25%	\$ 1,515
Series 2008-A	26,580	2038	variable	20,105
Series 2008-1	232,545	2038	variable	179,425
Series 2008-2	120,560	2038	4.00-5.00%	63,025
Series 2009-1	247,810	2039	3.00-5.00%	108,365
Series 2009-2	271,855	2039	6.42-6.57%	271,855
Series 2009-3	28,570	2039	5.28-6.17%	26,235
Series 2010-1	118,985	2020	5.00%	72,310
Series 2010-2	430,320	2040	3.80-5.45%	430,320
Series 2010-3	3,005	2040	5.75%	2,785
Series 2011-1	135,040	2034	variable	128,245
Series 2011-2	101,700	2034	variable	97,265
Series 2013-1	212,585	2043	2.00%-5.00%	203,420
Series 2013-2	71,790	2043	.43-2.69%	67,335
Series 2013-3	24,640	2043	4.00% - 5.00%	24,640
Series 2014-1	293,890	2045	3.00% - 5.00%	293,465
Series 2014-2	14,085	2020	.44%-2.10%	11,330
Series 2014-4	157,855	2026	.20% - 3.38%	149,975
Series 2014-3	67,365	2029	2.00%-5.00%	64,470
Series 2015-1	298,795	2036	4.00% - 5.00%	298,795
Series 2015-2	191,825	2036	3.00% - 5.00%	191,825
				<u>2,706,705</u>
			Unamortized Bond Premium	<u>122,146</u>
			SUBTOTAL	<u>2,828,851</u>
<b>University of Massachusetts HEFA/MDFA:</b>				
2000 Series A	\$ 20,000	2030	variable	20,000
2007 Series D	10,435	2031	3.50-4.25%	8,645
Series 2011	29,970	2034	2.50-4.00%	26,940
				<u>55,585</u>
			Unamortized Bond Premium	<u>949</u>
				<u>56,534</u>
<b>WCCC HEFA/MDFA:</b>				
Series 2005-D	\$ 99,325	2029	5.00-5.25%	1,335
Series 2007-E	118,750	2036	3.50-5.00%	31,250
Series 2007-F	101,745	2036	4.00-5.00%	51,890
Series 2011	10,495	2023	2.00-5.00%	7,495
				<u>91,970</u>
			Unamortized Bond Premium	<u>1,215</u>
			SUBTOTAL	<u>93,185</u>
<b>MDFA:</b>				
Clean Renewable Energy Bonds	\$ 1,625	2027	3.50%	<u>1,052</u>
			TOTAL	<u>\$ 2,979,622</u>

**Bond Payable activity for the year ended June 30, 2016 is summarized as follows (in thousands):**

	<u>Beginning Balance</u>	<u>Additions/ Amortization</u>	<u>Retirements/ Repayments</u>	<u>Ending Balance</u>
University of Massachusetts Building Authority:				
Series 2004-A	\$ 2,340		\$ (2,340)	\$ -
Series 2004-1	8,300		(6,785)	1,515
Series 2005-1	2,805		(2,805)	-
Series 2005-2	16,005		(16,005)	-
Series 2008-A	21,035		(930)	20,105
Series 2008-1	187,125		(7,700)	179,425
Series 2008-2	65,835		(2,810)	63,025
Series 2009-1	120,575		(12,210)	108,365
Series 2009-2	271,855		-	271,855
Series 2009-3	26,755		(520)	26,235
Series 2010-1	84,775		(12,465)	72,310
Series 2010-2	430,320		-	430,320
Series 2010-3	2,835		(50)	2,785
Series 2011-1	129,690		(1,445)	128,245
Series 2011-2	98,220		(955)	97,265
Series 2013-1	208,060		(4,640)	203,420
Series 2013-2	69,570		(2,235)	67,335
Series 2013-3	24,640		-	24,640
Series 2014-1	293,890		(425)	293,465
Series 2014-2	14,085		(2,755)	11,330
Series 2014-4	153,800		(3,825)	149,975
Series 2014-3	67,365		(2,895)	64,470
Series 2015-1	298,795		-	298,795
Series 2015-2	191,825		-	191,825
Plus: unamortized bond premium	133,429		(11,283)	122,146
Subtotal	2,923,929		(95,078)	2,828,851
UMass HEFA/MDFA:				
2000 Series A	20,000		-	20,000
2007 Series D	9,025		(380)	8,645
Series 2011	27,925		(985)	26,940
Plus: unamortized bond premium	895		54	949
Subtotal	57,845		(1,311)	56,534
WCCC HEFA/MDFA:				
WCCC 2005 Series D	1,785		(450)	1,335
WCCC 2007 Series E	33,945		(2,695)	31,250
WCCC 2007 Series F	54,830		(2,940)	51,890
Series 2011	8,270		(775)	7,495
Plus: unamortized bond premium	1,499		(284)	1,215
Subtotal	100,329		(7,144)	93,185
MDFA:				
Clean Renewable Energy Bonds	1,147		(95)	1,052
Total	\$ 3,083,250		\$ (103,628)	\$ 2,979,622

Principal and interest, which is estimated using rates in effect at June 30, 2016, on bonds payable for the next five fiscal years and in subsequent five-year periods are as follows (in thousands):

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>
2017	\$ 94,586	\$ 114,869
2018	94,991	112,464
2019	99,976	109,248
2020	103,321	105,600
2021	108,108	101,307
2022-2026	503,361	448,094
2027-2031	505,120	348,576
2032-2036	499,610	246,334
2037-2041	545,790	127,121
2042-2046	300,450	27,901
2047-2051		
Total	\$ 2,855,313	\$ 1,741,514

The 2011-1 variable rate bonds have an outstanding principal balance of \$128.2 million and are classified as a current debt obligation as a result of the liquidity facilities expiring in June 2017. The Authority expects to redeem these variable rate bonds on their original principal amortization schedule. The 2011-2 window bonds with a principal outstanding balance of \$97.3 million have no supporting liquidity facility and therefore are classified as a current debt obligation. Consistent with prior years, the Authority expects to redeem this bond based on its original amortization schedule and based on annual maturities on that schedule.

**Bond payable activity for the year ended June 30, 2015 is summarized as follows (in thousands):**

	<u>Beginning Balance</u>	<u>Additions/ Amortization</u>	<u>Retirements/ Repayments</u>	<u>Ending Balance</u>
University of Massachusetts Building Authority:				
Series 2003-1	\$ 6,155		\$ (6,155)	\$ -
Series 2004-A	4,575		(2,235)	2,340
Series 2004-1	16,600		(8,300)	8,300
Series 2005-1	5,480		(2,675)	2,805
Series 2005-2	25,200		(9,195)	16,005
Series 2008-A	21,930		(895)	21,035
Series 2008-1	194,530		(7,405)	187,125
Series 2008-2	105,725		(39,890)	65,835
Series 2009-1	198,670		(78,095)	120,575
Series 2009-2	271,855			271,855
Series 2009-3	27,250		(495)	26,755
Series 2010-1	96,645		(11,870)	84,775
Series 2010-2	430,320			430,320
Series 2010-3	2,880		(45)	2,835
Series 2011-1	131,090		(1,400)	129,690
Series 2011-2	99,135		(915)	98,220
Series 2013-1	212,585		(4,525)	208,060
Series 2013-2	71,790		(2,220)	69,570
Series 2013-3	24,640			24,640
Series 2014-1	293,890			293,890
Series 2014-2	14,085			14,085
Series 2014-4	157,855		(4,055)	153,800
Series 2014-3		\$ 67,365		67,365
Series 2015-1		298,795		298,795
Series 2015-2		191,825		191,825
Plus: unamortized bond premium	64,807	81,639	(13,017)	133,429
Subtotal	2,477,692	639,624	(193,387)	2,923,929
UMass HEFA/MDFA:				
2000 Series A	20,000			20,000
2007 Series D	9,395		(370)	9,025
Series 2011	28,880		(955)	27,925
Plus: unamortized bond premium	1,056		(161)	895
Subtotal	59,331		(1,486)	57,845
WCCC HEFA/MDFA:				
WCCC 2005 Series D	78,676		(76,891)	1,785
WCCC 2007 Series E	105,659		(71,715)	33,944
WCCC 2007 Series F	84,416		(29,585)	54,831
Series 2011	9,030		(760)	8,270
Plus: unamortized bond premium	8,398		(6,899)	1,499
Subtotal	286,179		(185,850)	100,329
MDFA:				
Clean Renewable Energy Bonds	1,242		(95)	1,147
Total	\$ 2,824,444	\$ 639,624	\$ (380,818)	\$ 3,083,250

**University of Massachusetts Building Authority**

The bond agreements related to the Building Authority bonds generally provide that the net revenues of the Building Authority are pledged as collateral on the bonds and also provide for the establishment of bond reserve funds, bond funds, and maintenance reserve funds.

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

Pursuant to the authority given by the Building Authority's enabling act, the Commonwealth, acting by and through the Trustees of the University, has guaranteed the payment of principal and interest on the Building Authority's bonds. (The guarantee is a general obligation of the Commonwealth to which the full faith and credit of the Commonwealth are pledged. As is generally the case with other general obligations of the Commonwealth, funds with which to honor the guarantee, should it be called upon, will be provided by Commonwealth appropriation). The Building Authority's enabling act provides that the outstanding principal amount of notes and bonds of the Building Authority guaranteed by the Commonwealth cannot exceed \$200 million. The amount of bond obligations guaranteed by the Commonwealth was \$117.4 million and \$121.6 million at June 30, 2016 and June 30, 2015, respectively.

When the Building Authority no longer has any bonds outstanding, its properties revert to the Commonwealth, and all its funds (other than funds pledged to bondholders) are required to be paid into the Treasury of the Commonwealth.

**Variable Rate Bonds** On April 15, 2016, the Building Authority entered into a standby purchase agreement with Barclays Bank PLC ("Barclays") which requires Barclays to purchase bonds that are tendered and not remarketed. Under the terms of the Barclays standby bond purchase agreement, the Building Authority is required to pay Barclays in quarterly installments a facility fee in the amount of 29 basis points (or higher, under certain circumstances) of the commitment amount. In fiscal year 2016 the Building Authority incurred fees in connection with the Barclays agreement in the amount of \$123,205. The agreement expires on April 22, 2019 and may be extended if a mutual interest exists between the Building Authority and Barclays. Previously, the 2008-1 bonds were supported with a standby purchase agreement with J.P. Morgan Chase Bank, N.A. ("J.P. Morgan"). Fees incurred by the Building Authority in connection with J.P. Morgan totaled \$.4 million and \$.5 million for the year ended June 30, 2016 and June 30, 2015, respectively.

The 2008-A bonds are supported by a standby bond purchase agreement with Barclays Bank PLC ("Barclays") which requires Barclays to purchase bonds that are tendered and not remarketed. Under the terms of the Barclays standby bond purchase agreement, the Building Authority is required to pay Barclays in quarterly installments a facility fee in the amount of 32.5 basis points (or higher, under certain circumstances) of the commitment amount. The agreement expired in April 2016. The Building Authority and Barclays executed a first amendment to the agreement and extended the agreement until April 15, 2019. Under the first amendment to the standby purchase agreement, the Building Authority is required to pay Barclays in quarterly installments a facility fee in the amount of 27.5 basis points (or higher, under certain circumstances) of the initial commitment and may be extended if a mutual interest exists between both the Building Authority and Barclays. Fees incurred by the Building Authority in connection with the Barclays agreement totaled \$84,230 and \$87,072 for the years ended June 30, 2016 and June 30, 2015, respectively.

The 2011-1 bonds are supported by a standby bond purchase agreement with Wells Fargo Bank, N.A. ("Wells") which requires Wells to purchase bonds tendered and not remarketed in an amount not to exceed the principal on the bonds plus accrued interest up to 185 days at an annual interest rate not to exceed 12 percent. Under the agreement, the Building Authority was required to pay Wells in quarterly installments a facility fee in the amount of 40 basis points (or higher, under certain circumstances) of the initial commitment. The initial commitment under the agreement was set at \$143.3 million and was subject to adjustment from time to time in accordance with the provisions of the agreement. The standby bond purchase agreement expired on June 9, 2014. The Building Authority and Wells executed a first amendment to the standby bond purchase agreement to extend the agreement until June 9, 2017. Under the first amendment to the standby purchase agreement, the Building Authority is required to pay Wells in quarterly installments a facility fee in the amount of 25 basis points (or higher, under certain circumstances) of the initial commitment. The initial commitment under the first amendment to the standby bond purchase agreement was set at \$139.1 million and is subject to adjustment from time to time in accordance with the provisions of the agreement. Fees incurred by the Building Authority in connection with the Wells agreement totaled \$0.4 million and \$0.4 million for the years ended June 30, 2016 and 2015, respectively.

**Window Bonds** In fiscal year 2011, the Building Authority issued its 2011-2 bonds in a variable rate Window Bond mode. As with the Building Authority's other variable rate bonds, the Window Bondholders can tender the bonds at any time. However, unlike the Building Authority's other variable rate bonds, where the bondholders will receive payment on any tendered bonds 7 days from the tender, Window Bondholders are not required to receive funds for the tender until after a 30 day remarketing period and an additional 180 day funding window period. Due to this 210 day funding period, the Building Authority is not required to obtain any type of liquidity support for the 2011-2 bonds and the bonds are considered supported with self-liquidity. Window Bondholders receive an interest rate on the Window Bonds at a fixed spread over the Securities Industry and Financial Markets Association Municipal Swap Index™ ("SIFMA"). The initial spread to the SIFMA index is 9 basis points.

**Bond Refundings** There were no refunding of bonds in the fiscal year 2016.

In Fiscal year 2015, the Building Authority issued \$191.8 million of Refunding Revenue Senior Series 2015-2 Bonds which advance refunded \$104.5 million for WCCC bonds series, \$37.2 million of the Building Authority's 2008-2 bonds and \$66.7 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 payable 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 \$95.4 million. This balance is being reported as a component of deferred outflows, loss on debt refunding, and will be amortized as an increase in interest expense over remaining term of the original life of the refunded bonds. These refundings reduced the Building Authority's debt service payments in future years by \$73.8 million and resulted in an economic gain (the present value of the savings) of \$56.2 million.

**Bond Premium and Issuance Expenses** There were no new bond issues in the fiscal year 2016, thus no bond premiums were recorded in the current year. In fiscal year 2015, the Building Authority received premiums at issuance totaling \$190.6 million. The Building Authority amortizes the premiums received as a reduction in interest expense over the life of the respective bond issue.

In connection with the Building Authority's bond issues, the Building Authority incurred certain issuance costs associated with the bond offerings. In fiscal year 2015 these costs amounted to \$3.5 million, respectively, and were expensed in accordance with the provisions of GASB Statement No. 65, *Items Previously Reported as Assets and Liabilities*.

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

The Building Authority's contracts are evaluated pursuant to GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments* ("GASB No. 53") to determine whether they meet the definition of derivative instruments, and if so, whether they effectively hedge the expected cash flows associated with interest rate risk exposures. The Building Authority applies hedge accounting for derivative instruments that are deemed effective hedges and under GASB No. 53 are referred to as hedging derivative instruments. Under hedge accounting, changes in the fair value of a hedging derivative instrument are reported as a deferred inflow or deferred outflow in the statement of net position until the contract is settled or terminated.

All settlement payments or receipts for hedging derivative instruments are recorded as interest expense in the period settled.

The Building Authority's hedging derivative instruments at June 30, 2016 and 2015 were as follows:

	Derivative Instruments		Derivative Instruments			Financial Statement
	Liability	Net Change	Liability	Type of	Classification for	
	6/30/2015	in Liability	6/30/2016	Hedge	Changes in Liability	
Series 2008-1 Swap	\$ (29,349)	\$ (8,878)	\$ (38,227)	Cash Flow	Non-current Liability	
Series 2008-A Swap	(3,367)	(971)	(4,338)	Cash Flow	Non-current Liability	
Series 2006-1 Swap	(38,338)	(9,575)	(47,913)	Cash Flow	Non-current Liability	
Total	\$ (71,054)	\$ (19,424)	\$ (90,478)			

The terms of the Building Authority's financial derivative instruments that were outstanding at June 30, 2016 are summarized in the table below:

	Type	Effective Date	Termination Date	Authority Pays	Authority Receives	Value (000's)
Series 2008-1 Swap	Synthetic Fixed	May 1, 2008	May 1, 2038	3.388%	70% of 1-Month LIBOR	\$ 232,545
Series 2008-A Swap	Synthetic Fixed	Nov 13, 2008	May 1, 2038	3.378%	70% of 1-Month LIBOR	\$ 26,580
Series 2006-1 Swap	Synthetic Fixed	Apr. 20, 2006	Nov. 1, 2034	3.482%	60% of 3-Month LIBOR + .18%	\$ 243,830

**Fair Values** - The Building Authority implemented GASB No 72, *Fair Value measurements and Application* in fiscal year 2016. GASB 72 defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between swap counterparties at the measurement date, which includes the non-performance risk. The Building Authority engaged an independent party to perform the valuations. The expected swap cash flows are calculated using the zero-coupon discounting method which takes into consideration the prevailing interest rate environment, the specific terms and conditions of a given transaction, and assumes that the current forward rates implied by the yield curve are the market's best estimate of future spot interest rates. The income approach is then used to obtain the fair value of the swaps, where future amounts (the expected swap cash flows) are converted to a single current (discounted) amount, using a rate of return that takes into account the relative risk of nonperformance associated with the cash flows, and time value of money. Where applicable under the income approach, the option pricing model technique, such as the Black-Derman-Toy model, or other appropriate option pricing model is used. As the interest rate swaps are valued using the LIBOR swap rate observed at commonly quoted intervals for the full term of the swaps, the measurement results in the swap fair values being categorized as Level 2.

As of June 30, 2016 and 2015, the Building Authority's swaps had a negative fair value of \$90.5 million and \$71.1 million, respectively, and as such are presented as noncurrent liabilities.

*Credit risk* - As of June 30, 2016, the Building Authority was not exposed to credit risk on the swaps as the fair value was negative. Since changes in interest rates affect the fair values of swap agreements, it is possible that the swap agreements with negative fair values become positive which would expose the Authority to credit risk. To mitigate the potential for credit risk, when a swap position has a positive fair value and if the counterparty's credit quality falls below A3/A/A, the fair value of the swap will be fully collateralized by the counterparty with U.S. Government Securities or US Government Agency Securities. Collateral posted by the counterparty will be held by a third-party custodian.

The credit ratings for the Authority's counterparties at June 30, 2016 are as follows:

	Credit Ratings		
	Moody's	S&P	Fitch
UBS AG	A1	A	A
Deutsche Bank AG	Baa2	BBB+	A-
Citibank NA	A1	A	A+

*Basis risk* - The Building Authority is exposed to basis risk on its pay-fixed interest rate swaps because the variable-rate payment received by the Building Authority (a percent of LIBOR) on these hedging derivative instruments is based on indexes other than the actual interest rates the Authority pays on its hedged variable rate debt. Should the relationship between LIBOR and the actual variable rate interest payments on the bonds converge, the expected cost savings may not materialize.

*Termination risk* - The Building Authority's swaps are governed under the International Swap Dealers Association Master Agreement (the "Master Agreement"), which includes standard termination events, such as failure to pay and bankruptcy. Additionally, the Master Agreement was amended so that the swap may be terminated by the Building Authority if the counterparty's credit quality rating falls below certain levels or the counterparty fails to have a rating. Further, the swap may be terminated by the counterparties if the long-term, unsecured, unenhanced senior debt rating of any bonds issued by the Building Authority is withdrawn, suspended or falls below certain levels or the Authority fails to have a rating. The Building Authority or the counterparties may terminate the swaps if the other party fails to perform under the terms of the contract. The A Building Authority may also terminate the swaps at its option. If the swap is terminated, the variable-rate bonds would no longer carry a synthetic fixed interest rate and the Building Authority's interest payment will be based solely upon the rate required by the related bonds as issued. When a termination event occurs, a mark-to-market (or "fair market value") calculation is performed to determine whether the Building Authority is owed or must pay cash to close out the swap position. A negative fair value means the Building Authority would incur a loss and need to make a termination payment to settle the swap position. A positive fair value means the Authority would realize a gain and receive a termination payment in settlement of the swap position.

*Contingencies* - All of the Building Authority's swaps include provisions that require the Building Authority to post collateral in the event its credit rating falls below certain levels. In the event the Building Authority is rated A2 by Moody's Investors Service or A by Standard & Poor's, the Building Authority would need to post collateral equal to amounts above the fair value of its swaps in liability positions above \$10.0 million. In the event the Building Authority is not rated or rated below A3 by Moody's Investors Service or below A- by Standard & Poor's, the Building Authority must post collateral in the amount of the fair value of the swaps in liability positions. The collateral posted is to be in the form of cash obligations guaranteed by the U.S. Treasury, or negotiable debt obligations issued by the Federal Home Loan Mortgage Association or the Federal National Mortgage Association. If the Building Authority does not post collateral, the derivative instrument may be terminated by the counterparty. The Building Authority's credit rating is Aa2 from Moody's Investors Service, AA from Fitch Ratings, and AA- from Standard and Poor's at June 30, 2016; therefore, no collateral was required to be posted.

*Termination of hedge accounting* - In June of 2011, the Building Authority undertook an advance refunding of the 2008-3 and 2008-4 variable rate bonds hedged by the Series 2006-1 Swap. As part of the refunding, the Series 2006-1 swap was re-assigned to a new underlying notional (the 2011-1 and 2011-2 Bonds) with identical terms. This refunding and reassignment effectively terminated the original hedge. At June 30, 2011, the Series 2006-1 Swap was considered a hedging derivative instrument. In accordance with GASB No. 53, at the time of a termination event related to an advance refunding of the hedged debt, the balance of the amounts in deferred outflows is to be included in the net carrying amount of the refunded debt for the purposes of calculating the deferred loss on refunding. The balance of the deferred outflows that was included in the net carrying amount of the refunded debt at the time of the refunding was \$22.2 million. The change in fair value of the Series 2006-1 Swap from the refunding date to June 30, 2016 is reported as a deferred outflow as the swap was determined to be effective at June 30, 2016.

*Swap payments and associated debt.* Using rates as of June 30, 2016, 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:

Fiscal Year Ending June 30,	Principal	Interest	Interest Rate Swaps, Net	Total
2017	\$ 11,625	\$ 387	\$ 12,601	\$ 24,613
2018	11,770	378	12,270	24,418
2019	12,215	370	11,912	24,497
2020	12,720	359	11,522	24,601
2021	17,955	227	5,987	24,169
2022-2026	151,915	1,221	39,466	192,602
2027-2031	138,310	571	19,336	158,217
2032-2036	54,235	109	3,687	58,031
2037-2041	1,620	13	504	2,137
Total	\$ 412,365	\$ 3,635	\$ 117,285	\$ 533,285

As actual rates vary, variable-rate bond interest payments and net swap payments will vary.

### MassDevelopment

#### **University of Massachusetts Series A, D and 2011**

The University, through the Massachusetts Development Finance Agency ("MassDevelopment"), has issued bonds in order to construct new student centers on the Boston and Lowell campuses; to create a pool of funds to acquire telecommunications, electronics, computer, office, research, equipment and administrative systems; and to fund the related renovation costs and to refund previously issued bonds.

**Variable Rate Debt** In March 2000, the University issued \$40.0 million of MHEFA Variable Rate Demand Revenue Bonds, University of Massachusetts Issue, Series A (the "Series A Bonds") to create a pool of funds from which the University could finance and refinance the acquisition of certain equipment and related renovation costs at the various University campuses on a revolving basis throughout the term of the Series A Bonds. The Series A Bonds were remarketed on April 1, 2016 and now bear interest at the long term rate of 1.15%. The newest long term rate period will end on March 31, 2019 and the Remarketed Series A Bonds will be subject to mandatory tender for purchase on April 1, 2019. The purchase price of the bonds will be paid from the remarketing of such bonds. However, if the remarketing proceeds are insufficient, the University will be obligated to purchase the bonds tendered, up to an aggregate principal amount of \$20.0 million. The Remarketed Series A Bonds will mature on November 1, 2030 and are subject to mandatory purchase prior to maturity as described above. Interest on the Remarketed Series A Bonds in the newest long-term rate period is payable on October 1 and April 1. The Remarketed Series A Bonds are considered a reissuance for federal tax purposes. The Remarketed Series A Bonds are not supported by any insurance policy, liquidity facility or other credit enhancement. The Remarketed Series A Bonds are a general obligation of the University payable from all funds of the University permitted to be applied thereto. The University's unrestricted net position secures the obligations of the University with respect to the Remarketed Series A Bonds. The University is required to certify annually that there are sufficient funds in the unrestricted net position to cover the debt service on the Remarketed Series A Bonds.

**Debt covenants** The University of Massachusetts Series A, D, and 2011 bonds include a covenant for the maintenance of a debt service fund as outlined in the related debt agreement. The University is required to make deposits in this debt service fund on or before the twenty-fifth day of each March and September. As of June 30, 2016 and 2015, the university is in compliance with this covenant.

**Refundings** In November 2011, the University issued \$30.0 million of Massachusetts Development Finance Agency Revenue Refunding Bonds (the "Series 2011 Bonds"). The University deposited the proceeds into an irrevocable trust fund to provide for payment of the MHEFA Revenue Bonds, University of Massachusetts Issue, 2002 Series C (the "Series C Bonds"). This payment was made as a lump sum in October 2012. The Series 2011 bonds were issued at a premium of \$1.2 million. These bonds bear interest at various fixed rates ranging from 2.5% to 4.0% and mature on October 1, 2034. As a result of the change in future payments, the University will reduce its aggregate debt service payments by \$4.8 million and achieve an economic gain of \$3.4 million.

In January 2007, the University issued \$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 payable and the assets held to repay the debt have not been included in the University's financial statements.

## **Worcester City Campus Corporation Series D, E, F and 2011**

The Worcester City Campus Corporation (WCCC) through MassDevelopment has issued bonds to finance the construction or acquisition of the Lazare Research Building, South Road parking garage, Ambulatory Care Center (“ACC”), two buildings housing the operations of MassBiologics, One Innovation Drive, 373, 377 and 381 Plantation Street, Worcester and to refund previously issued bonds.

In November 2011, the Corporation issued \$10.5 million of Massachusetts Development Finance Agency Revenue Refunding Bonds (the “Series 2011 Bonds”). The Series 2011 Bonds were issued at a premium of \$1.1 million. The proceeds of the Series 2011 Bonds were used to refund the Massachusetts Health and Education Facilities Authority (MHEFA) Series B Bonds, which were used to finance the construction of a parking garage, the acquisition and installation of equipment at the Lazare Research Building, and the financing of 373 Plantation Street.

In January 2007, the Corporation issued \$101.7 million of MHEFA Revenue Bonds (the Series F Bonds). The Series F Bonds were issued at a premium of \$2.8 million. These bonds have been partially refunded by Series 2015 bonds.

In January 2007, the Corporation issued \$118.8 million of MHEFA Revenue Bonds (the Series E Bonds). The Series E Bonds were issued at a premium of \$3.9 million. The Corporation deposited \$32.4 million of the proceeds to an irrevocable trust fund to provide for partial advanced refunding of outstanding MHEFA Series B Revenue Bonds. In accordance with the applicable guidance, a portion of the Series B Bonds totaling \$30.8 million and the related irrevocable trust has been derecognized by the Corporation. Approximately \$85.7 million of the Series E Bonds proceeds were used to finance the construction of the Ambulatory Care Center. These bonds have been partially refunded by Series 2015 bonds.

In April 2005, the Corporation issued \$99.3 million of MHEFA Revenue Bonds (the Series D Bonds). The Corporation deposited the proceeds to an irrevocable trust fund to provide for payment of the MHEFA Series A Revenue Bonds. The proceeds from the Series A Bonds were previously used to fund the construction of the Lazare Research Building. In accordance with the applicable guidance, the Series A Bonds and the related irrevocable trust were derecognized by the Corporation. The Series D Bonds have been partially refunded by Series 2014 Bonds. The Series D Bonds were issued at a premium of \$4.1 million.

*Pledged Revenues* WCCC is obligated under the terms of indebtedness to make debt service payments from revenues received from certain facility leases. Total applicable pledged revenues were \$6.5 million and \$6.6 million for fiscal years 2016 and 2015, respectively.

### **Clean Renewable Energy Bonds**

During 2011, the University entered into an Energy Services agreement for Solar Panel construction with the Commonwealth’s Division of Capital Asset Management and Century Bank and Trust Company. The financing arrangement included \$1.6 million in Clean Renewable Energy Bonds. The outstanding principal balance for these bonds was \$1.1 million as of June 30, 2016.

## **9. 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 approximately \$27.1 million and \$25.6 million for the years ended June 30, 2016 and 2015, respectively. The master leases primarily consist of telecommunications, software, and co-generation systems. The University also leases space to third party tenants. During 2016 and 2015, the amount reported as rental income was \$18.3 million and \$18.8 million, respectively.

The following presents a schedule of future minimum payments under non-cancelable operating leases for the next five years and in subsequent five-year periods for the University as of June 30, 2016 (in thousands):

<b>Year</b>	<b>Operating Leases</b>
2017	\$23,082
2018	22,452
2019	22,010
2020	20,836
2021	20,471
2022 and thereafter	148,975
Total Payments	<u>\$257,826</u>

## 10. OTHER LONG-TERM LIABILITIES

During the year ended June 30, 2016, the following changes occurred in long-term liabilities as recorded in the statements of net position (in thousands):

	<u>Beginning Balance</u>	<u>Additions/ Adjustments</u>	<u>Reductions/ Adjustments</u>	<u>Ending Balance</u>
<b>University:</b>				
Capital lease obligations	\$562	\$198	(\$331)	\$ 429
Compensated absences	31,813	3,858	-	35,671
Workers' compensation	10,886	1,274	-	12,160
Unearned revenues and credits	26,822	13,049	(15,935)	23,936
Advances and deposits	28,621	1,056	(1,972)	27,705
Other liabilities	41,583	8,536	(1,359)	48,760
<b>University Related Organization:</b>				
Other liabilities	\$3,505	\$ -	\$ (3)	\$ 3,502

During the year ended June 30, 2015 the following changes occurred in long-term liabilities as recorded in the statement of net position (in thousands):

	<u>Beginning Balance</u>	<u>Additions/ Adjustments</u>	<u>Reductions/ Adjustments</u>	<u>Ending Balance</u>
<b>University:</b>				
Capital lease obligations	\$ -	\$ 562	\$ -	\$ 562
Compensated absences	31,779	34	-	31,813
Workers' compensation	10,811	75	-	10,886
Unearned revenues and credits	21,243	23,585	(18,006)	26,822
Advances and deposits	28,094	758	(231)	28,621
Other liabilities	43,263	-	(1,680)	41,583
<b>University Related Organization:</b>				
Other liabilities	\$3,483	\$ 22	\$ -	\$ 3,505

## 11. FRINGE BENEFITS

Expenditures for the years ended June 30, 2016 and 2015 include \$295.1 million and \$257.8 million, respectively, for the employer portion of fringe benefit costs (pension expense, health insurance for active employees and retirees, and terminal leave) that was paid directly by the Commonwealth of Massachusetts. Of this amount, \$117.1 million for 2016 and \$98.4 million for 2015 was reimbursed to the Commonwealth and \$178.0 million and \$159.4 million, respectively, is included in revenue as state appropriations.

## 12. MEDICAL SCHOOL LEARNING CONTRACTS

The University's Medical School enters into learning contracts with certain medical students. These contracts give students the option of deferring a portion of their tuition until after residency training, and canceling all or a portion of their tuition if they practice primary care medicine for two or four full years (depending on conditions) in the Commonwealth. The University does not record as revenue the portion of tuition deferred under these learning contracts until actual cash repayments are received. The cumulative amount granted under such learning contracts plus accrued interest totaled \$73.2 million and \$70.9 million at June 30, 2016 and 2015, respectively. Cumulative repayments totaled approximately \$56.2 million and \$53.8 million as of June 30, 2016 and 2015, respectively.

## 13. 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 Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans*, covering substantially all employees of the Commonwealth. Management of MSERS is vested in the Massachusetts State Retirement Board (the MSRB) which consists of five members- two elected by current and active MSERS members, one by the remaining members of the MSRB, one who is appointed by the State Treasurer and the State Treasurer, who serves as ex-officio and is the Chair of the MSRB.

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.

Members become vested after ten years of creditable service. A superannuation retirement allowance may be received upon the completion of twenty years of creditable service or upon reaching the age of 55 with ten years of service. Normal retirement for most employees occurs at age 65; for certain hazardous duty and public safety positions, normal retirement is at age 55. Most employees who joined the system after April 1, 2012 cannot retire prior to age 60.

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 to 6/30/1996	8% of regular compensation
7/1/1996-present	9% of regular compensation
1979 to present	An additional 2% of regular compensation in excess of \$30,000

The University makes contributions on behalf of the employees through a fringe benefit charge assessed by the Commonwealth. The fringe benefit charged amounted to \$84.5 million and \$85.7 million for the years ended June 30, 2016 and 2015, respectively. Annual covered payroll was 75.8% and 76.2% for the years ended June 30, 2016 and 2015, respectively of annual total payroll for the University. The amount of pension expense included in the fringe charge was \$25.1 million and \$22.4 million for the years ended June 30, 2016 and 2015, respectively.

**Actuarial Assumptions** The total pension liability for the June 30, 2015 measurement date was determined by an actuarial valuation as of January 1, 2015 rolled forward to June 30, 2015. This valuation used the following assumptions:

1. (a) 7.5% investment rate of return, (b) 3.5% discount rate credited to an annuity savings fund and (c) 3.00% cost of living increase per year.
2. Salary increases are based on analyses of past experience but range from 3.5% to 9.0% depending on group and length of service.
3. In May 2015, Chapter 19 of the Acts of 2015 created an Early Retirement Incentive (ERI) for certain members of SERS who upon election of the ERI retired effective June 30, 2015. As a result, the total pension liability of SERS has increased by approximately \$230 million as of June 30, 2015.
4. Mortality rates were as follows:
  - a) Pre-retirement – reflects RP-2000 Employees table projected generationally with Scale BB and a base year of 2009 (gender distinct)
  - b) Post-retirement – reflects RP-2000 Healthy Annuitant table projected generationally with Scale BB and a base year of 2009 (gender distinct)
  - c) Disability – the mortality rate is assumed to be in accordance with the RP-2000 Healthy Annuitant table projected generationally with Scale BB and a base year of 2015 (gender distinct)

The total pension liability for the June 30, 2014 measurement date was determined by an actuarial valuation as of January 1, 2014 rolled forward to June 30, 2014. This valuation used the following assumptions:

1. (a) 8.0% investment rate of return, (b) 3.5% interest rate credited to an annuity savings fund and (c) 3.0% cost of living increase per year.
2. Salary increases are based on analyses of past experience but range from 3.5% to 9.0% depending on group and length of service.
3. Mortality rates were as follows:
  - a. Pre-retirement – reflects RP-2000 Employees table projected 20 years with Scale AA (gender distinct)
  - b. Post-retirement – reflects Healthy Annuitant table projected 15 years with Scale AA (gender distinct)
  - c. Disability – the mortality rate is assumed to be in accordance with the RP-2000 Table projected 5 years with Scale AA (gender distinct) set forward 3 years for males.

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, 2015 are summarized in the following table:

Asset Class	Target Allocation	Long-term Expected Real Rate of Return
Global Equity	40.00%	6.90%
Core Fixed Income	13.00%	2.40%
Private Equity	10.00%	8.50%
Real Estate	10.00%	6.50%
Value Added Fixed Income	10.00%	5.80%
Hedge Funds	9.00%	5.80%
Portfolio Completion Strategies	4.00%	5.50%
Timber / Natural Resources	4.00%	6.50%
Total	<u>100.00%</u>	

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, 2014 and 2013 are summarized in the following table:

Asset Class	Target Allocation	Long-term Expected Real Rate of Return
		2014
Global Equity	43.00%	7.20%
Core Fixed Income	13.00%	2.50%
Hedge Funds	10.00%	5.50%
Private Equity	10.00%	8.80%
Real Estate	10.00%	6.30%
Value Added Fixed Income	10.00%	6.30%
Timber / Natural Resources	4.00%	5.00%
Total	<u>100.00%</u>	

**Discount Rate** The Discount rate used to measure the total pension liability was 7.5%. The projection of cash flows used to determine the discount rate assumed that plan member's 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 sensitivity of the collective net pension liability to changes in the discount rate as of June 30, 2015. In particular, the table presents the MSERS collective pension liability assuming it was calculated using a single discount rate that is one-percentage-point lower or one-percentage-point higher than the current discount rate (amounts in thousands):

Fiscal Year Ended	1% Decrease to 6.5%	Current Discount Rate 7.5%	1% Increase to 8.5%
June 30, 2016	\$ 606,780	\$ 408,418	\$ 308,037
June 30, 2015	342,861	237,135	145,815

For the year ending June 30, 2016, the University recognized \$34.5 million of pension expense, which is recorded in Operating Expenses. The following table shows the components of pension expense as of June 30, 2016 (amounts in thousands):

	2016	2015
Proportionate Share of Plan Pension Expense	\$ 46,106	17,555
Net Amortization of Deferred Amounts from Change in Proportion	11,224	4,851
2016 Payments	<u>(22,864)</u>	<u>(22,463)</u>
Pension Expense	<u>\$ 34,466</u>	<u>\$ (57)</u>

**Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions** At June 30, 2016 the University reported a liability of \$408.4 million for its proportionate share of MSERS's net pension liability. The net pension liability was measured as of June 30, 2015 and the total pension liability was used to calculate the net pension liability which was determined by an actuarial valuation as of that date. 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. There were no changes of assumptions or other inputs that affected measurement of the total pension liability during the measurement period. There were no changes of benefit terms that affected measurement of the total pension liability during the measurement period.

At June 30, 2016, the University reported its proportionate share of MSERS's deferred outflows of resources and deferred inflows of resources related to pension from the following sources:

	Deferred Inflows of Resources	Deferred Outflows of Resources
Changes of Assumptions		\$ 70,730
Changes in Proportion Due to Internal Allocation		45,965
Employer Contributions after measurement date		22,386
Differences Between Expected and Actual Experience		8,072
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	\$ 11,736	
Changes in Proportion From Commonwealth	314	
	<u>\$ 12,050</u>	<u>\$ 147,153</u>

At June 30, 2015, the University reported its proportionate share of MSERS's deferred outflows of resources and deferred inflows of resources related to pension from the following sources:

	Deferred Inflows of Resources	Deferred Outflows of Resources
Changes of Assumptions		\$ 2,666
Changes in Proportion Due to Internal Allocation		21,910
Employer Contributions after measurement date		22,463
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	\$ 48,672	
Changes in Proportion From Commonwealth	82	
	<u>\$ 48,754</u>	<u>\$ 47,039</u>

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

Year Ended June 30:	
2017	\$ 20,439
2018	20,439
2019	20,439
2020	33,774
2021	17,627
Thereafter	-
	<u>\$ 112,717</u>

Non-vested faculty and certain other employees of the University can opt out of MSERS and participate in a defined contribution plan, the Massachusetts Optional Retirement Program ("ORP"), administered by the Commonwealth's Department of Higher Education. At June 30, 2016 and 2015, there were 3,783 and 4,449 University employees, respectively participating in ORP. Employees contribute at the same rate as members in SERS do and the Commonwealth matches 5% of employee contributions. The Commonwealth contributed \$10.4 million and \$6.2 million in 2016 and 2015, respectively. University employees contributed \$24.4 million and \$28.6 million in 2016 and 2015, 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, administered by the University's Treasury Office. Employees with MSERS or ORP membership dates after January 1, 2011 are eligible employees 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%. At June 30, 2016 and 2015 plan assets totaled approximately \$1.529 million and \$891.4 million, respectively.

#### **14. CONCENTRATION OF CREDIT RISK (Other than Cash and Investments)**

The receivable from UMass Memorial Medical Center (UMMMC) which is uncollateralized represents a potential concentration of credit risk for the university. The receivable from UMass Memorial represents 11.2% and 5.7% of total accounts receivable for the University at June 30, 2016 and 2015, respectively. The University also had uncollateralized receivables one organization comprising approximately 12.0% of the total outstanding receivables at June 30, 2016 and uncollateralized receivables from three other organizations comprising approximately 11.8%, 8.0% and 3.7% of the total outstanding receivables at June 30, 2015.

#### **15. COMMITMENTS AND CONTINGENCIES**

The Building Authority, University, and WCCC have outstanding purchase commitments under construction contracts and real estate agreements in amounts aggregating \$157.3 million and \$205.7 million at June 30, 2016 and 2015, respectively. In connection with the investments in certain limited partnership agreements, the Foundation has \$84.7 million and \$60.1 million in committed calls as of June 30, 2016 and 2015, 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, 2016 and 2015 in the amount of \$28.2 million and \$29.1 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 University of Massachusetts 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. In addition, certain properties owned by other University Related Organizations and leased to the University are insured by the related organization. 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 \$15.4 million as of June 30, 2016 and \$14.4 million as of June 30, 2015. 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.

From time to time the University and/or its affiliated organizations are subject to audits of programs that are funded through either federal and/or state agencies. The University is aware that the Office of the Inspector General for the U.S. Department of Health and Human Services performed an audit of Medicaid Supplemental Revenues ("MSR") received by UMMC, the final report for which was issued December 2009. Portions of this report continue to be contested and the final outcome of this audit is currently unknown. Dependent on the final outcome, UMMC may be required to repay any MSR received deemed to be disallowed as a result of the audit. Dependent on that outcome, the University, consistent with the Agreement for Medical Educational Services, made part of the Definitive Agreement between the University and UMMC, and its subsequent amendments and the indemnification provisions in these Agreements, may be required to indemnify UMMC for a portion of any amounts due. Although the final outcome of this audit is currently unknown, and management believes that as of the date of the financial statements it is not probable that a liability exists, management concludes it is reasonably possible that amounts could be repaid and that those amounts may be material to the University's financial position and results of operations.

Five Universities in the Commonwealth of Massachusetts jointly formed the Massachusetts Green High Performance Computing Center, Inc. (MGHPCC) and MGHPCC Holyoke, Inc. in May 2010 and April 2012, respectively, to construct and operate a research computing center located in Holyoke, Massachusetts. MGHPCC and MGHPCC Holyoke, Inc. are tax-exempt organizations under Internal Revenue Code section 501(c) (3). Each respective university agreed to contribute \$10.0 million and as of June 30, 2016, each university had contributed the required amounts. The University's unamortized \$5.0 million investment is included in its Statement of Financial Position within Other Assets.

## 16. SUBSEQUENT EVENTS

On November 8, 2016, the Building Authority entered into an agreement whereby the Building Authority sub-leased property on the University of Boston campus to Provident Commonwealth Educational Resources Inc., a Massachusetts not-for-profit corporation. The land is leased to the Authority by the Commonwealth. Provident Commonwealth Educational Resources, Inc. will engage a contractor to construct a 1,082 bed student housing facility on the site. The Building Authority will sub-lease the property to Provident Commonwealth Educational Resources Inc. for a term of approximately 40 years. Commencing approximately one year following the completion of the project (estimated completion August 2018), the annual rental amount payable to the Building Authority under the ground lease will be \$1.0 million.

Pursuant to the Dining Facility Sublease dated November 8, 2016 between Provident Commonwealth Education Resources Inc., as sub-lessor and the Building Authority, as sub-lessee, Provident Commonwealth Educational Resources Inc. shall lease the dining facility, located within the residential hall, to the Building Authority and the Building Authority shall operate the Dining Facility.

For purposes of determining the effects of subsequent events on these financial statements, management has evaluated events subsequent to June 30, 2016 through December 7, 2016, the date on which the financial statements were available to be issued and determined that there are no other matters requiring recognition or disclosure to the accompanying financial statements.

**The University of Massachusetts**  
Required Supplementary Information - Unaudited  
June 30, 2016

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

	6/30/2015	6/30/2016
University's proportion of the net pension liability	3.489%	3.922%
University's proportionate share of the net pension liability	\$ 237,134	\$ 408,418
University's covered-employee payroll	\$ 1,061,132	\$ 1,139,719
University's proportionate share of the net pension liability as a percentage of its covered-employee payroll	22.35%	35.83%
Plan fiduciary net position as a percentage of total pension liability	76.32%	67.87%

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

Contractually required contribution	\$ 22,870	\$ 22,386
Contributions in relation to the contractually required contribution	(22,870)	(22,386)
Contribution deficiency (excess)	\$ -	\$ -
University's covered-employee payroll	\$ 1,061,132	\$ 1,139,719
Contributions as a percentage of covered-employee payroll	2.16%	1.96%

**SUPPLEMENTAL INFORMATION**

**UNIVERSITY OF MASSACHUSETTS**  
**Schedule of Expenditures of Federal Awards**  
**Year Ended June 30, 2016**

Federal Grantor/Federal Subdivision or Pass -Through Grantor and Cluster Title	Federal CFDA #	Identifying Information	Subrecipient Expenses	Total Expenses
<b>Research and Development Cluster</b>				
<b>Department Of Agriculture</b>				
AGRICULTURAL RESEARCH SERVICE	10.001		\$ -	\$ 111,483
AGRICULTURAL RESEARCH SERVICE	10.U01	58-8070-5-008	-	7,688
ANIMAL AND PLANT HEALTH INSPECTION SERV	10.025		-	280,857
ANIMAL AND PLANT HEALTH INSPECTION SERV	10.U02	15-8225-0464-CA	-	74,375
ANIMAL AND PLANT HEALTH INSPECTION SERV	10.U03	14-8130-0472-CA	-	14,246
ECONOMIC RESEARCH SERVICE	10.250		-	4,572
NATL INSTITUTE OF FOOD AND AGRICULTURE	10.202		-	309,475
NATL INSTITUTE OF FOOD AND AGRICULTURE	10.203		-	2,699,545
NATL INSTITUTE OF FOOD AND AGRICULTURE	10.207		-	8,145
NATL INSTITUTE OF FOOD AND AGRICULTURE	10.303		5,530	233,936
NATL INSTITUTE OF FOOD AND AGRICULTURE	10.309		594,950	853,096
NATL INSTITUTE OF FOOD AND AGRICULTURE	10.310		106,944	1,675,552
NATL INSTITUTE OF FOOD AND AGRICULTURE	10.U04	2011-51110-30996	1,558	5,627
NATURAL RESOURCES CONSERV SERVICES	10.025		-	4,009
NATURAL RESOURCES CONSERV SERVICES	10.902		-	19,647
NATURAL RESOURCES CONSERV SERVICES	10.903		-	71,548
NATURAL RESOURCES CONSERV SERVICES	10.912		-	486
U.S. DEPARTMENT OF AGRICULTURE	10.001		-	15,413
U.S. DEPARTMENT OF AGRICULTURE	10.025		-	9,811
U.S. DEPARTMENT OF AGRICULTURE	10.310		126,274	424,622
U.S. DEPARTMENT OF AGRICULTURE	10.329		-	215,113
U.S. DEPARTMENT OF AGRICULTURE	10.458		-	85,344
U.S. DEPARTMENT OF AGRICULTURE	10.912		-	14,690
U.S. DEPARTMENT OF AGRICULTURE	10.U05	15-IE-53300-001	52,476	159,056
U.S. DEPARTMENT OF AGRICULTURE	10.U06	FS 14-JV-11242306-117	-	20,263
U.S. FOREST SERVICE	10.652		-	230,295
U.S. FOREST SERVICE	10.664		-	20,338
U.S. FOREST SERVICE	10.680		-	239,733
U.S. FOREST SERVICE	10.693		-	2,103
U.S. FOREST SERVICE	10.U07	FS 15-JV-11242307-097	-	116,547
U.S. FOREST SERVICE	10.U08	FS 12-JV-11221633-128	-	161,606
U.S. FOREST SERVICE	10.U09	FS 12-JV-11242303-111	-	(880)
U.S. FOREST SERVICE	10.U10	FS 13-JV-11242307-075	28,028	278,365
BRIGHAM YOUNG UNIVERSITY	10.310	15-0422	-	67,490
CORNELL UNIVERSITY	10.200	70395-10160	-	255
CORNELL UNIVERSITY	10.200	70395-10169	-	606
CORNELL UNIVERSITY	10.200	73375-10287	-	427
CORNELL UNIVERSITY	10.200	73375-10301	-	3,409
CORNELL UNIVERSITY	10.303	67850-10218	11,418	27,117
CORNELL UNIVERSITY	10.303	67850-10223	-	3,225
CORNELL UNIVERSITY	10.304	67826-9928	-	23,689
CORNELL UNIVERSITY	10.329	PR: NIFA / SB: 73984-10394	4,502	9,432
CORNELL UNIVERSITY	10.U11	73375-10288	-	89

**UNIVERSITY OF MASSACHUSETTS**  
**Schedule of Expenditures of Federal Awards**  
**Year Ended June 30, 2016**

Federal Grantor/Federal Subdivision or Pass -Through Grantor and Cluster Title	Federal CFDA #	Identifying Information	Subrecipient Expenses	Total Expenses
<b>Department Of Agriculture, continued</b>				
CT AGRICULTURAL EXPERIMENT STATION	10.025	CAES-PP-14-03	\$ -	\$ 10,101
CT AGRICULTURAL EXPERIMENT STATION	10.310	CAES-AC-2011-04	-	80,096
CT AGRICULTURAL EXPERIMENT STATION	10.329	2014-70006-22484	-	6,372
LUTHERAN SOCIAL SERVICES	10.225	2012-33800-19931	-	14,252
MA DEPT OF AGRICULTURAL RESOURCES	10.170	112-1473	-	(1,654)
MA DEPT OF AGRICULTURAL RESOURCES	10.170	14SPECUMAFOODSAFETY0	-	48,284
MA DEPT OF CONSERVATION AND RECREATION	10.664	115-1185	-	3,024
MA DEPT OF CONSERVATION AND RECREATION	10.664	4CTDCR3760CUMASSUNIV	46,950	65,140
MA DEPT OF ELEMENTARY & SECONDARY ED	10.560	CT DOE 15CT75UMASSAMHRSTERI	-	333,419
NANO-BIO MANUFACTURING CONSORTIUM	10.U12	Project # 16-10	-	228
PURDUE UNIVERSITY	10.255	59-5000-5-0011	-	4,861
RUTGERS UNIVERSITY	10.200	5735-NER15OHP	-	1,455
RUTGERS UNIVERSITY	10.200	5782-NER15OHP	-	4,237
RUTGERS UNIVERSITY	10.309	4578	-	62,622
SOUTH CAROLINA STATE UNIVERSITY	10.216	0000003248	-	40,132
TENNESSEE STATE UNIVERSITY	10.310	332-77-16-642	-	3,393
UNIVERSITY OF MARYLAND	10.329	30430-Z3750002	-	2,648
UNIVERSITY OF VERMONT	10.215	2014-38640-22161	-	2,097
UNIVERSITY OF VERMONT	10.215	2015-38640-23777	1,850	16,529
UNIVERSITY OF VERMONT	10.215	GNE 13-058	-	(27)
UNIVERSITY OF VERMONT	10.215	GNE 13-061	-	4,171
UNIVERSITY OF VERMONT	10.215	GNE 13-066	-	9,260
UNIVERSITY OF VERMONT	10.215	GNE14-075-27806	-	3,110
UNIVERSITY OF VERMONT	10.215	GNE14-078-27806	-	950
UNIVERSITY OF VERMONT	10.215	GNE14-080-27806	-	8,789
UNIVERSITY OF VERMONT	10.215	LNE 12-316	-	63,870
UNIVERSITY OF VERMONT	10.215	LNE12-315	8,084	16,219
UNIVERSITY OF VERMONT	10.215	LNE15-340-29994	4,119	10,848
UNIVERSITY OF VERMONT	10.215	SARE ONE15-231-29001	-	13,572
UNIVERSITY OF VERMONT	10.215	SNE14-04-29001	-	18,182
UNIVERSITY OF VERMONT	10.215	SNE15-04-29001	-	12,225
UNIVERSITY OF VERMONT	10.310	PR: 51707 / SB: 28976	-	10
UNIVERSITY OF WISCONSIN	10.310	649K950	-	1,307
<b>Department Of Agriculture Total</b>			<b>992,683</b>	<b>9,362,167</b>
<b>Department Of Commerce</b>				
ECONOMIC DEVELOPMENT ADMINISTRATION	11.307		\$ -	\$ 63,173
NATIONAL INSTITUTE OF STANDARDS	11.609		91,499	508,649
NATIONAL INSTITUTE OF STANDARDS	11.619		25,687	188,288
NATIONAL INSTITUTE OF STANDARDS	11.620		-	700
NATIONAL MARINE FISHERIES SERVICE	11.432		-	39,200
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.427		22,826	290,199
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.431		55,289	74,415
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.454		-	61,145
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.459		-	49,809

**UNIVERSITY OF MASSACHUSETTS**  
**Schedule of Expenditures of Federal Awards**  
**Year Ended June 30, 2016**

Federal Grantor/Federal Subdivision or Pass -Through Grantor and Cluster Title	Federal CFDA #	Identifying Information	Subrecipient Expenses	Total Expenses
<b>Department Of Commerce, continued</b>				
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.472		\$ 118,653	\$ 251,030
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.482		-	28,579
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.U01	EE-133F-15-SE-1587	-	45,330
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.U02	WE-133F-15-SE-1480	-	41,801
COLUMBIA UNIVERSITY	11.431	4(GG012355)	-	50,196
COLUMBIA UNIVERSITY	11.431	5-23220	-	20,795
COONAMESSETT FARM FOUNDATION, INC.	11.454	NA15NMF4540059	-	26,018
GLOBAL SCIENCE AND TECHNOLOGY, INC.	11.U03	SA13-UOM01 TASK 002	-	2,520
GLOBAL SCIENCE AND TECHNOLOGY, INC.	11.U04	SA13-UOM01-008-001	-	11,464
GLOBAL SCIENCE AND TECHNOLOGY, INC.	11.U05	SA15-UOM01	-	106,623
GULF OF MAINE RESEARCH INSTITUTE	11.427	NA14NMF4270014	-	4,637
GULF OF MAINE RESEARCH INSTITUTE	11.427	NA14NMF4270085	-	32,424
GULF OF MAINE RESEARCH INSTITUTE	11.427	NA15NMF42702612	-	2,935
HAZEN AND SAWYER, P.C.	11.431	31235-000	-	98,995
MA DEPT OF CONSERVATION AND RECREATION	11.420	F14WBOPSGR	-	6,742
MA DIVISION OF MARINE FISHERIES	11.455	112-1017	-	(2,801)
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	11.417	5710002776	-	(8,692)
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	11.417	NA10OAR4170077	-	32,181
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	11.417	NA10OAR4170086	-	(26)
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	11.417	NA147OAR4170077	12,306	43,831
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	11.417	NA14OAR417007	-	46,308
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	11.417	NA14OAR4170077	-	213,691
MISSISSIPPI STATE UNIVERSITY	11.432	NA11OAR4320199	-	67,594
NATURE CONSERVANCY	11.427	NA14NMF4270027	-	33,647
NE REG ASSOC OF COASTAL OCEAN OBSERV SYS	11.012	NA11NOS0120034	872	198,891
NE REG ASSOC OF COASTAL OCEAN OBSERV SYS	11.483	NA14NOS4830002	2,390	42,386
NEW ENGLAND AQUARIUM	11.427	NA15NMF4270281	-	1,611
NEW ENGLAND AQUARIUM	11.427	NA15NMF4270284	-	11,416
NEW ENGLAND AQUARIUM	11.441	FNA10NMF4410008	-	26,183
NORTHEAST CONSORTIUM	11.441	FMA10NMF4410008	-	65,312
RUTGERS UNIVERSITY	11.012	NA11NOS0120038	-	228,009
UNIVERSITY OF CALIFORNIA DAVIS	11.609	201303493-01	-	104
UNIVERSITY OF MARYLAND	11.472	NA13NMF4720051	-	10,593
UNIVERSITY OF NEW HAMPSHIRE	11.441	PRGM 14-03	-	54,180
UNIVERSITY OF PUERTO RICO	11.417	2104-2015-012	-	10,351
UNIVERSITY OF PUERTO RICO	11.417	NA14OAR4170068	-	6,697
UNIVERSITY OF SOUTHERN MISSISSIPPI	11.432	NA11OAR4320199	-	72,358
WOODSHOLE OCEANOGRAPHIC INSTITUTION	11.417	NA14OAR4170074	-	105,464
WOODSHOLE OCEANOGRAPHIC INSTITUTION	11.417	NA14OAR4170074, Project R/O-52s	-	5,999
WOODSHOLE OCEANOGRAPHIC INSTITUTION	11.417	NA14OAR4170077	-	1,998
WOODSHOLE OCEANOGRAPHIC INSTITUTION	11.432	NA09OAR4320129	-	6,395
WOODSHOLE OCEANOGRAPHIC INSTITUTION	11.432	NA14OAR4320158	-	162,400
WOODSHOLE OCEANOGRAPHIC INSTITUTION	11.483	NA13OAR4830233	-	41,501
<b>Department Of Commerce Total</b>			<b>329,522</b>	<b>3,483,248</b>

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Federal Grantor/Federal Subdivision or Pass -Through Grantor and Cluster Title	Federal CFDA #	Identifying Information	Subrecipient Expenses	Total Expenses
<b>Department Of Defense</b>				
AIR FORCE CIVIL ENGINEER CENTER	12.U01	21695	\$ -	\$ 40,872
AIR FORCE OFFICE OF SCIENTIFIC RESEARCH	12.800		-	985,387
AIR FORCE RESEARCH LABORATORY	12.300		-	945,403
AIR FORCE RESEARCH LABORATORY	12.800		-	14,811
ARMY RESEARCH INSTITUTE	12.U02	W5J9CQ-11-C-0047	139,072	313,323
ARMY RESEARCH LAB	12.431		-	6,525
DEFENSE ADV RESEARCH PROJECTS AGENCY	12.910		714,759	3,835,248
DEFENSE LOGISTICS AGENCY	12.002		-	391,051
DEFENSE THREAT REDUCTION AGENCY	12.351		59,906	298,455
DEPARTMENT OF THE ARMY MEDICAL DIVISION	12.420		80,663	1,178,708
NATIONAL SECURITY AGENCY	12.900		-	169,329
NATIONAL SECURITY AGENCY	12.901		-	3,754
NAVAL RESEARCH LABORATORY	12.300		-	126,958
NAVAL RESEARCH LABORATORY	12.U03	N00173-15-P-1206	-	22,169
NAVAL RESEARCH LABORATORY	12.U04	N00173-16-P-0747	-	28,983
OFFICE OF NAVAL RESEARCH	12.300		23,296	3,093,820
OFFICE OF NAVAL RESEARCH	12.431		-	92,447
OFFICE OF NAVAL RESEARCH	12.630		-	54,054
SPAWAR SYSTEMS CENTER PACIFIC	12.910		114,946	284,625
U.S. ARMY CORPS OF ENGINEERS	12.300		-	73,656
U.S. ARMY CORPS OF ENGINEERS	12.U05	IPA 15-0011	-	69,974
U.S. ARMY CORPS OF ENGINEERS	12.U06	IPA 15-0012	-	23,158
U.S. ARMY CORPS OF ENGINEERS	12.U07	W912HQ-12-C-0035	37,793	129,464
U.S. ARMY CORPS OF ENGINEERS	12.U08	W912HQ-15-C-0052	80,255	183,865
U.S. ARMY CORPS OF ENGINEERS	12.U09	W912HQ-14-C-0035	178,744	410,242
U.S. ARMY MEDICAL RESEARCH	12.420		-	626,798
U.S. ARMY NATICK SOLDIER RD&E CENTER	12.431		-	904,733
U.S. ARMY NATICK SOLDIER RD&E CENTER	12.U10	W81XWH-13-C-0150	61,496	204,550
U.S. ARMY NATICK SOLDIER RD&E CENTER	12.U11	W911QY-13-2-0002	-	125,449
U.S. ARMY NATICK SOLDIER RD&E CENTER	12.U12	W911QY-15-C-0068	1,500	84,662
U.S. ARMY RESEARCH OFFICE	12.431		565,921	1,933,849
U.S. DEPARTMENT OF DEFENSE	12.300		-	1,105
U.S. DEPARTMENT OF DEFENSE	12.420		58,385	1,426,042
U.S. DEPARTMENT OF DEFENSE	12.U13	W911QY-13-C-0015	-	32,300
U.S. DEPARTMENT OF DEFENSE	12.U14	W912HQ-13-C-0067	-	294,539
U.S. DEPARTMENT OF INTERIOR	12.910		-	31,258
U.S. DEPARTMENT OF THE ARMY	12.U15	NAFBA1-13-M-0323	-	4,393
U.S. DEPARTMENT OF THE ARMY	12.U16	W911W5-11-C-0010	-	4,334,240
ACADEMY OF APPLIED SCIENCE	12.U17	REAP	-	4,000
APPLIED NANOFEMTO TECHNOLOGIES LLC	12.U18	FA9550-09-C-0180	-	2,836
APPLIED NANOFEMTO TECHNOLOGIES LLC	12.U19	FA9550-10-C-0095	-	1,542
AURORA FLIGHT SCIENCES CORPORATION	12.U20	NNX15VJ13C	-	55,621
BAE SYSTEMS	12.U21	901131	-	84,191
BAE SYSTEMS	12.U22	BAE PO#906704 PRIME Spawarsyscen	-	175,574

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<b>Department Of Defense, continued</b>				
BALL AEROSPACE & TECHNOLOGIES CORP.	12.U23	FA8650-14-C-6585	\$ -	\$ 4,361
BATTELLE MEMORIAL INSTITUTE	12.U24	PR: US001-0000436747 / SB: 436747	-	57,906
BATTELLE MEMORIAL INSTITUTE	12.U25	W911NF-11-D-0001/DO 0190/TCN 13017	-	20,142
BOSTON ENGINEERING	12.U26	W31P4Q-13-C-0136	-	125,019
BROWN UNIVERSITY	12.431	00000822	-	48,335
CARNEGIE MELLON UNIVERSITY	12.300	1150139-354945	-	45,957
CARNEGIE MELLON UNIVERSITY	12.300	N00014-13-1-0835	-	(62)
CDM SMITH	12.U27	W9126G-11-D-0027 DB01	-	3,467
CHARLES RIVER ANALYTICS	12.U28	FA8750-13-C-0149	-	1,554
CHARLES RIVER ANALYTICS	12.U29	FA8750-14-C-0084	-	(175)
CHARLES STARK DRAPER LABORATORY, INC.	12.U30	#N66001-13-C-4011	-	(2,324)
CHILDREN'S HOSPITAL	12.300	N000014-13-1-0243	-	138
COLORADO SCHOOL OF MINES	12.431	400231	-	290,107
CORNELL UNIVERSITY	12.431	66220-9902	-	279,631
DCS CORP	12.U31	PO 161511	-	23,846
DUKE UNIVERSITY	12.431	313-0589	-	174,852
ENERGY RESEARCH CONSULTANTS	12.U32	FA8650-1 5-M-2587	-	39,870
FTL LABS CORPORATION	12.U33	D15PC00145	-	37,047
FTL LABS CORPORATION	12.U34	FTL LABS PRIME A FORCE	-	2,064
GE GLOBAL RESEARCH	12.U35	401039445	-	15,219
GOVERNMENT OF ISRAEL	12.U36	4440672138	-	32,860
HIGH PERFORMANCE TECHNOLOGIES, INC.	12.U37	14463-PETTT	-	67,057
HYPRES, INC.	12.U38	Hybrid Temperature Heterogenous Technology Data	-	94,979
IBM CORPORATION	12.431	5003856859 #0002 Year 7	-	353,265
IBM CORPORATION	12.910	HR0011-12-C-0015	-	896
INDIANA UNIVERSITY	12.431	W911 NF-12-1-0168/PO# 1127342	-	763
KARAGOZIAN & CASE	12.U39	FA8651-15-M-0229	-	28,002
LAWRENCE LIVERMORE NATL LAB U-CALIFORNIA	12.351	No. B602042	-	149,723
LEIDOS, INC.	12.U40	P010089628	-	140,854
LEIDOS, INC.	12.U41	P010184242	-	77,492
LOWELL DIGISONDE INTERNATIONAL, LLC	12.U42	FA8650-16-C-9104	-	98,100
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	12.800	5710003633	-	161,847
MAYO CLINIC JACKSONVILLE	12.420	PR: W81XWH-14-21-0291 / SB: PO63750963	-	16,749
METAMAGNETICS, INC	12.U43	N00024-15-P-1457	-	19,999
MICROBIOTIX	12.U43	19865	-	48,261
MIT LINCOLN LABORATORY	12.U44	7000262845	-	33,209
MIT LINCOLN LABORATORY	12.U45	7000296667	-	15,992
MIT LINCOLN LABORATORY	12.U46	7000344518	-	26,656
MIT LINCOLN LABORATORY	12.U47	7000344532	-	26,656
MIT LINCOLN LABORATORY	12.U48	FA8721-05-C0002	-	51,266
NCASE	12.431	2015 ECE Capstone Projects	-	(51)
NORTHEASTERN UNIVERSITY	12.431	504062-78051	-	92,070
OPTOELECTRONIC NANODEVICES LLC	12.800	FA9453-14-M-0013	-	(5,181)
PHOTON SPOT, INC	12.U49	702-1	-	32,807

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<b>Department Of Defense, continued</b>				
PRAXIS, INC.	12.U50	N00173-05-C-2084	\$ -	\$ 3,234
PUEBLO ECONOMIC DEVELOPMENT CORPORATION	12.U51	PUEBLO ECONOMIC PRIME ARMY	-	49,982
RADECT CO.	12.U52	FA8051-15-P0010	-	16,955
RAYTHEON BBN TECHNOLOGIES CORP	12.431	13765021	-	120,491
RAYTHEON COMPANY	12.U53	D11PC20152	-	106,112
RIVERSIDE RESEARCH	12.U54	DRC.CO1299P.UMASS.IDIQ.15	-	87,676
SARNOFF CORP.	12.U55	206000031	-	128,217
SI2 TECHNOLOGIES, INC.	12.U56	N00014-14-P-1241	-	20,129
SILICON SPACE TECHNOLOGY	12.U57	FA9453-09-C0029	-	15,090
SOLID STATE SCIENTIFIC CORPORATION	12.116	W911NF-14-P-0024	-	(151)
SOLID STATE SCIENTIFIC CORPORATION	12.800	1504-09	-	111,619
SPECTRAL SCIENCES, INC.	12.U58	PO#10413	-	(1,820)
SRI INTERNATIONAL	12.U59	D11PC20155	-	58,410
STANFORD UNIVERSITY	12.800	FA9453-10-C-0220	-	84,828
STEVENS INSTITUTE OF TECHNOLOGY	12.U60	SIT TO#0039 PRIME DOD	83,340	83,340
SYSTEMS & TECHNOLOGY RESEARCH	12.U61	STR 2014-1047	-	342,576
TRITON SYSTEMS, INC.	12.U62	FA8650-11-C-5119	-	1,351
TRITON SYSTEMS, INC.	12.U63	FA8650-12-C-5198	-	750
TRITON SYSTEMS, INC.	12.U64	SB: TSI-4014-04-003 (SRA dated 3/1/04)	-	1,138
TRITON SYSTEMS, INC.	12.U65	W911QY-13-P-0182	-	981
TRITON SYSTEMS, INC.	12.U66	W911QY-14-C-0078	-	56,526
UES, INC.	12.U67	FA8650-11-D-5801	-	25,805
UNIVERSITY OF CALIFORNIA	12.300	FA8750-15-1-0091	-	100,000
UNIVERSITY OF CALIFORNIA	12.910	W91CRB-10-1-0006	-	99,579
UNIVERSITY OF CALIFORNIA SANTA BARBARA	12.800	REGENTS KKK1235	-	189,583
UNIVERSITY OF MISSOURI	12.431	W911NF-14-1-0359	-	307,946
UNIVERSITY OF TEXAS AT AUSTIN	12.910	FA8750-13-2-0026	-	19,521
UNIVERSITY OF WASHINGTON	12.420	W81XWH-11-1-0588	-	66,516
UNIVERSITY OF WASHINGTON	12.431	UWSC8585	-	71,966
VECTOR CONTROLS, INC.	12.U68	N00014-11-C-0475	-	11,867
VIVONICS, INC.	12.U69	HDTRA1-13-C-0037	-	9,696
WORCESTER POLYTECHNIC INSTITUTE	12.420	PR: W81XWH-12-10541/SB: 14-215700-00	-	147,686
WORCESTER POLYTECHNIC INSTITUTE	12.431	14-215454-02	-	64,280
WORCESTER POLYTECHNIC INSTITUTE	12.431	15-215456-01-00	-	88,500
WORCESTER POLYTECHNIC INSTITUTE	12.431	16-TMP-00-215461	-	228,154
WYSS INST FOR BIOLOGICALLY INSPIRED ENG	12.910	HR0011-13-C-0025	-	272,248
<b>Department Of Defense Total</b>			2,200,076	28,825,969
<b>Department Of Housing And Urban Development</b>				
U.S. DEPT OF HOUSING & URBAN DEVELOPMENT	14.906		\$ 39,839	\$ 217,379
BOSTON HOUSING AUTHORITY	14.878	JOB 3 10D-OC-008	-	(1,314)
CITY OF LOWELL, DIV. OF PLANNING & DEV.	14.900	Docket No. FR-5700-N-04	-	20,625
CITY OF LOWELL, DIV. OF PLANNING & DEV.	14.900	PO# 32750303	-	10,196
MA DEPARTMENT OF PUBLIC HEALTH	14.906	INTF3056HH2500224031	-	10,077
PIONEER VALLEY PLANNING COMMISSION	14.228	114-1264	-	30,662

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<b>Department Of Housing And Urban Development, continued</b>				
PIONEER VALLEY PLANNING COMMISSION	14.228	115-1241	\$ -	\$ 26,440
PIONEER VALLEY PLANNING COMMISSION	14.704	CTRIP0007-10	-	(54)
RUTGERS UNIVERSITY	14.703	1227550	-	22,577
<b>Department Of Housing And Urban Development Total</b>			<u>39,839</u>	<u>336,588</u>
<b>Department Of The Interior</b>				
BUREAU OF OCEAN ENERGY MANAGEMENT	15.424		\$ -	\$ 124,401
NATIONAL PARK SERVICE	15.945		-	165,642
NATIONAL PARK SERVICE	15.954		-	33,293
U.S. DEPARTMENT OF INTERIOR	15.914		-	21,574
U.S. DEPARTMENT OF INTERIOR	15.945		-	39,036
U.S. DEPARTMENT OF INTERIOR	15.946		-	(62)
U.S. DEPARTMENT OF INTERIOR	15.954		-	450,854
U.S. DEPARTMENT OF INTERIOR	15.U01	M14PC00011	-	143,305
U.S. DEPARTMENT OF INTERIOR	15.U02	Task Agrmt P11AT40672 (Coop Agrmt H1780-07-0004)	-	482
U.S. DEPARTMENT OF INTERIOR	15.U03	Task Agrmt P11AT40829 (Coop Agrmt H1780070004)	-	3,972
U.S. FISH AND WILDLIFE SERVICE	15.650		-	68,179
U.S. FISH AND WILDLIFE SERVICE	15.655		-	223,601
U.S. FISH AND WILDLIFE SERVICE	15.669		-	229,387
U.S. FISH AND WILDLIFE SERVICE	15.672		-	10,022
U.S. FISH AND WILDLIFE SERVICE	15.677		66,733	237,647
U.S. GEOLOGICAL SURVEY	15.805		14,451	184,216
U.S. GEOLOGICAL SURVEY	15.807		-	54,261
U.S. GEOLOGICAL SURVEY	15.808		-	185,288
U.S. GEOLOGICAL SURVEY	15.810		-	52,734
U.S. GEOLOGICAL SURVEY	15.812		-	107,162
U.S. GEOLOGICAL SURVEY	15.814		-	4,761
U.S. GEOLOGICAL SURVEY	15.820		829,208	2,108,087
APPLIED COMMUNICATION SCIENCES	15.U04	20015646 - MOD 5	-	220
ARKANSAS GAME AND FISH COMMISSION	15.634	T41-01	-	3,135
MA DEPARTMENT OF FISH & GAME	15.634	1434-HQ-11-RU-01575	-	2,557
MA DEPARTMENT OF FISH & GAME	15.634	UM16COOP0000000000	-	157,517
MA DEPT OF CONSERVATION AND RECREATION	15.810	115-0139	-	535
MA DIV OF ECOLOGICAL RESTORATION (DER)	15.153	42671 / FC. A062	-	26,812
MA DIVISION OF FISHERIES AND WILDLIFE	15.608	1434-HQ-11-RU-01575	45,645	70,241
MA DIVISION OF FISHERIES AND WILDLIFE	15.634	1434-HQ-11-RU-01575	-	92,093
NATIONAL FISH AND WILDLIFE FOUNDATION	15.663	NFWF45607	-	104,755
NATIONAL WRITING PROJECT	15.954	94-MA02-NPS2015	-	4,173
PORTLAND STATE UNIVERSITY	15.232	L14AC00157	-	5,971
SPERO DEVICES, INC.	15.U05	D16PC0084	-	3,528
UNIVERSITY OF CALIFORNIA DAVIS	15.232	201501679-02	-	9,134
WILDLIFE MANAGEMENT INSTITUTE	15.664	F15AC01052-0001-LCC0	-	8,090
WILDLIFE MANAGEMENT INSTITUTE	15.664	NALCC 2013-02	49,400	75,661
WILDLIFE MANAGEMENT INSTITUTE	15.664	WMI: NALCC 2015-06	-	13,888
<b>Department Of The Interior Total</b>			<u>1,005,437</u>	<u>5,026,152</u>

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<b>Department Of Justice</b>				
FEDERAL BUREAU OF INVESTIGATION	16.U01	FBI DJF-14-1200-D-0001327	\$ -	\$ (183)
FEDERAL BUREAU OF INVESTIGATION	16.U02	FBI DJF-15-1200-D-0000828	-	370,854
FEDERAL BUREAU OF INVESTIGATION	16.U03	FBI DJF-16-1200-D-0001522	-	198
U.S. DEPARTMENT OF JUSTICE	16.525		-	92,622
U.S. DEPARTMENT OF JUSTICE	16.541		-	75,471
U.S. DEPARTMENT OF JUSTICE	16.560		238,643	779,691
U.S. DEPARTMENT OF JUSTICE	16.566		-	58,737
U.S. DEPARTMENT OF JUSTICE	16.726		91,055	222,950
BOSTON PUBLIC HEALTH COMMISSION	16.730	2011-MU-MU_K003 / 14013684	-	27,910
CHILDREN'S HOSPITAL	16.560	2012-ZA-BX-0004	-	11,118
CITY OF LOWELL	16.817	Agreement Dated 12/14/2012	-	23,582
ESSEX COUNTY SHERIFF'S DEPARTMENT	16.812	2014-RW-BX-01	-	32,308
GEORGETOWN UNIVERSITY	16.560	RX 2286-807	-	64,758
MA DEPARTMENT OF PUBLIC HEALTH	16.589	INTF3222M04W40188034	-	24,981
MA EXEC OFC OF PUBLIC SAFETY & SECURITY	16.U04	MAEOPSS: 2015 LARP PRIME DOJ	-	28,707
MA OFFICE FOR VICTIM ASSISTANCE	16.575	VOCA2016EVWC00000000	-	33,387
NATIONAL 4-H COUNCIL	16.726	4-H COUNCIL 2015 FUNDING PRIME DOJ	-	42,514
NATIONAL 4-H COUNCIL	16.726	4-H COUNCIL Y5 PRIME DOJ	-	67,327
SPECTRUM HEALTH SYSTEMS, INC.	16.812	OJDP-2013-3637	-	51,760
TOWN OF AMHERST	16.U05	13001125	-	14,242
TOWN OF AMHERST	16.U06	2610-15	-	73,483
UNIVERSITY OF IOWA HEALTH CARE	16.560	W000630365	-	14,214
<b>Department Of Justice Total</b>			<u>329,698</u>	<u>2,110,631</u>
<b>Department Of Labor</b>				
CITY OF LOWELL	17.270	Lowell Ex-Offender Advancement Program (LEAP)	\$ -	\$ 22,526
SOCIAL DYNAMICS, LLC	17.U01	GS10F0052T	-	(5,959)
WESTAT, INC.	17.002	GS23F8144H	-	11,467
<b>Department Of Labor Total</b>			<u>-</u>	<u>28,034</u>
<b>Department Of State</b>				
U.S. DEPARTMENT OF STATE	19.033		\$ -	\$ 106,579
BEDFORD VA MEDICAL CENTER	19.440	Schutt-IPA	-	16,358
INSTITUTE FOR TRAINING AND DEVELOPMENT	19.U01	S-ECAGD-14CA-1149	-	27,843
INSTITUTE OF INTERNATIONAL EDUCATION	19.021	S-ECAGD-15-CA-1015	-	66,352
<b>Department Of State Total</b>			<u>-</u>	<u>217,132</u>
<b>Department Of Transportation</b>				
FEDERAL AVIATION ADMINISTRATION	20.108		\$ -	\$ 194,088
FEDERAL HIGHWAY ADMINISTRATION	20.215		-	4,975
FEDERAL MOTOR CARRIER SAFETY ADMIN	20.218		-	61,569
FEDERAL MOTOR CARRIER SAFETY ADMIN	20.232		-	37,908
FEDERAL RAILROAD ADMINISTRATION	20.U01	DTFR5315P00028	-	39,637
U.S. DEPARTMENT OF TRANSPORTATION	20.931		78,517	352,882
MA DEPARTMENT OF TRANSPORTATION	20.200	76826 PARS# YM139092P12	27,720	85,492
MA DEPARTMENT OF TRANSPORTATION	20.U02	92801	-	13,344
MA DEPARTMENT OF TRANSPORTATION	20.U03	94445	-	17

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<b>Department Of Transportation, continued</b>				
MA DEPT OF STATE POLICE	20.218	ISAPOL81000212UMSI6A	\$ -	\$ 57,146
MA DEPT OF STATE POLICE	20.218	ISAPOL81002010UMSI5	-	51,124
MA EXEC OFC OF PUBLIC SAFETY & SECURITY	20.614	113-1636	-	5,855
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.701	5700003804	-	27,909
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.701	5710003604	-	82,121
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.701	5710003798	-	61,896
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.701	5710003799	-	101,863
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.701	5710003800	-	13,799
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.701	5710003801	-	39,199
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.701	5710003802	-	46,391
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.701	5710003803	-	94,176
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.U04	5710003186	-	16,763
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.U05	5710003455	-	106,114
OHIO STATE UNIVERSITY	20.701	60040605	-	106,505
PENNSYLVANIA STATE UNIVERSITY	20.U06	4717-UMFRA-0029	-	14,034
RHODE ISLAND DEPT OF TRANSPORTATION	20.200	20642	-	32,846
TRAFFAX, INC.	20.U07	DTRT57-15-C-10029	-	50,000
UNIVERSITY OF IOWA HEALTH CARE	20.701	W000546107	-	194,984
UNIVERSITY OF VERMONT	20.U08	26014SUB51981	-	34,267
ZKXKZ LLC	20.U09	DTRT5715C10014	-	20,000
<b>Department Of Transportation Total</b>			106,237	1,946,904
<b>National Aeronautics And Space Administration</b>				
NASA GODDARD SPACE FLIGHT CENTER	43.001		\$ 57,155	\$ 975,685
NASA GODDARD SPACE FLIGHT CENTER	43.012		-	138,576
NASA LANGLEY RESEARCH CENTER	43.U01	NNX10AT43A	-	8,861
NATIONAL AERO AND SPACE ADMINISTRATION	43.001		576,807	3,040,890
NATIONAL AERO AND SPACE ADMINISTRATION	43.003		-	243,691
NATIONAL AERO AND SPACE ADMINISTRATION	43.006		-	45,247
NATIONAL AERO AND SPACE ADMINISTRATION	43.007		-	153,245
NATIONAL AERO AND SPACE ADMINISTRATION	43.008		-	45,807
NATIONAL AERO AND SPACE ADMINISTRATION	43.U02	21779	-	800
NATIONAL AERO AND SPACE ADMINISTRATION	43.U03	NNX12AO23G	-	66,324
AERODYNE RESEARCH, INC.	43.002	NNX12AG47A	-	18,188
APPLIED NANOFEMTO TECHNOLOGIES LLC	43.U04	NNX13CG44C	-	12,525
BAE SYSTEMS	43.U05	NNX14AG86G	-	5,930
BERMUDA INSTITUTE OF OCEAN SCIENCES	43.001	NNX16AB05G	-	30,404
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.001	109-0558	-	(2,011)
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.001	[JPL]: 44E-1096749	-	11,640
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U06	[JPL]: 1428083	-	(1,282)
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U07	[JPL]: 1472823	-	3,825
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U08	[JPL]: 1472831	-	1,471
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U09	[JPL]: 1472837	-	12
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U10	[JPL]: 1479338	-	4,261
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U11	[JPL]: 1486198	-	76,729

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<b>National Aeronautics And Space Administration, continued</b>				
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U12	[JPL]: 1489384	\$ -	\$ 19,141
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U13	[JPL]: 1509300	-	30,318
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U14	[JPL]: 1539558	-	46,065
COMPUTATIONAL PHYSICS INC.	43.001	NNX13AF41G	-	59,294
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	43.001	SB: 5710003608	-	72,928
MATERIAL ANSWERS LLC	43.U15	NNX14CL25P	-	724
MICHIGAN TECHNOLOGICAL UNIVERSITY	43.001	NNX14AB80G	-	72,847
MIT LINCOLN LABORATORY	43.U16	7000336186	-	49,632
MOUNT HOLYOKE COLLEGE	43.001	GD8861	-	99,780
MOUNT HOLYOKE COLLEGE	43.U17	GD8761	-	72,581
NATL INST OF AEROSPACE	43.008	NNL09AA00A	-	41,106
NORTHEASTERN UNIVERSITY	43.012	NNX16AC48A	-	62,945
SETI INSTITUTE	43.001	SC 3153	-	96
SETI INSTITUTE	43.001	SC3139	-	22,079
SMITHSONIAN ASTROPHYSICAL OBSERVATORY	43.001	NAS8-03060	-	401
SMITHSONIAN ASTROPHYSICAL OBSERVATORY	43.001	TM3-14006X	-	12,868
SPACE TELESCOPE SCIENCE INSTITUTE	43.001	HST-AR-14299.001-A	-	7,942
SPACE TELESCOPE SCIENCE INSTITUTE	43.001	HST-GO 13313.001 A	-	14,252
SPACE TELESCOPE SCIENCE INSTITUTE	43.001	HST-GO-13342.002-A	-	37,988
SPACE TELESCOPE SCIENCE INSTITUTE	43.001	HST-GO-14227.003-A	-	8,850
SPACE TELESCOPE SCIENCE INSTITUTE	43.001	HST-GO-14460.003-A	-	607
SPACE TELESCOPE SCIENCE INSTITUTE	43.001	NAS5-26555	-	7,048
SPACE TELESCOPE SCIENCE INSTITUTE	43.002	HST-AR-13921.001-A	-	17,834
SPACE TELESCOPE SCIENCE INSTITUTE	43.002	HST-AR-13924.003-A	-	5,762
SPACE TELESCOPE SCIENCE INSTITUTE	43.002	HST-GO-12060.16-A	-	59,208
SPACE TELESCOPE SCIENCE INSTITUTE	43.002	HST-GO-12174.02-A	-	1,462
SPACE TELESCOPE SCIENCE INSTITUTE	43.002	HST-GO-12248.02	-	5,380
SPACE TELESCOPE SCIENCE INSTITUTE	43.002	HST-GO-12534.04A	-	10,358
SPACE TELESCOPE SCIENCE INSTITUTE	43.002	HST-GO-13041.03-A - 146090	-	5,122
SPACE TELESCOPE SCIENCE INSTITUTE	43.002	HST-GO-13309.007-A	-	1,471
SPACE TELESCOPE SCIENCE INSTITUTE	43.002	HST-GO-13364.01-A	-	103,201
SPACE TELESCOPE SCIENCE INSTITUTE	43.002	HST-GO-13491.001-A	-	16,542
SPACE TELESCOPE SCIENCE INSTITUTE	43.U18	HST-AR-13894.002-A	-	64,190
SPACE TELESCOPE SCIENCE INSTITUTE	43.U19	HST-GO-13688.002-A	-	14,739
SPACE TELESCOPE SCIENCE INSTITUTE	43.U20	STSI: HST-GO-13846.001-A	-	94,259
SPACE TELESCOPE SCIENCE INSTITUTE	43.U21	STSI: HST-HF2-51368.001 A	-	119,077
TUFTS UNIVERSITY	43.001	NASA90	-	12,733
UNIVERSITY OF CALIFORNIA REGENTS	43.001	NNX14AD86G	-	28,773
UNIVERSITY OF COLORADO	43.001	1551866	-	47,111
UNIVERSITY OF SOUTH FLORIDA	43.001	NNX14AM63G	-	53,015
WOODSHOLE OCEANOGRAPHIC INSTITUTION	43.001	NNX14AR71G	-	24,487
<b>National Aeronautics And Space Administration Total</b>			<b>633,962</b>	<b>6,305,034</b>

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Federal Grantor/Federal Subdivision or Pass -Through Grantor and Cluster Title	Federal CFDA #	Identifying Information	Subrecipient Expenses	Total Expenses
<b>National Endowment For The Arts</b>				
NATIONAL ENDOWMENT FOR THE ARTS	45.024		\$ -	\$ 19,415
<b>National Endowment For The Arts Total</b>			-	19,415
<b>National Endowment For The Humanities</b>				
NATIONAL ENDOWMENT FOR THE HUMANITIES	45.160		\$ -	\$ 43,284
NATIONAL ENDOWMENT FOR THE HUMANITIES	45.161		-	80,187
NATIONAL ENDOWMENT FOR THE HUMANITIES	45.163		-	157,004
NATIONAL ENDOWMENT FOR THE HUMANITIES	45.169		9,093	106,927
AMERICAN COUNCIL OF LEARNED SOCIETIES	45.160	115-1629	-	23,922
<b>National Endowment For The Humanities Total</b>			9,093	411,324
<b>National Science Foundation</b>				
NATIONAL SCIENCE FOUNDATION	47.041		\$ 636,055	\$ 9,277,180
NATIONAL SCIENCE FOUNDATION	47.049		139,072	7,292,798
NATIONAL SCIENCE FOUNDATION	47.050		293,081	4,159,071
NATIONAL SCIENCE FOUNDATION	47.070		537,789	12,080,094
NATIONAL SCIENCE FOUNDATION	47.074		410,726	4,252,845
NATIONAL SCIENCE FOUNDATION	47.075		234,364	2,101,319
NATIONAL SCIENCE FOUNDATION	47.076		2,325,408	10,427,776
NATIONAL SCIENCE FOUNDATION	47.078		-	243,262
NATIONAL SCIENCE FOUNDATION	47.079		10,326	91,772
NATIONAL SCIENCE FOUNDATION	47.U01	HP- 1560913	-	29,759
NATIONAL SCIENCE FOUNDATION	47.U02	IOS-1539803-001	-	216,680
NATIONAL SCIENCE FOUNDATION	47.U03	AST-1517503	-	73,780
NATIONAL SCIENCE FOUNDATION	47.U04	CBET-1619792	-	168,741
NATIONAL SCIENCE FOUNDATION	47.U05	CSE-1523309-002	-	468,608
AMERICAN PHYSICAL SOCIETY	47.049	PHY-0808790	1,550	6,598
ASSOCIATION OF PUBLIC & LAND-GRANT UNIV	47.U06	115-0977	-	93,836
BATES COLLEGE	47.050	PLR-1262932	-	2,248
BLACK HILLS STATE UNIVERSITY	47.076	BP1100005	-	118,193
BRANDEIS UNIVERSITY	47.049	MRSEC	-	88,088
BROWN UNIVERSITY	47.070	CCF-1408745	-	61,165
BROWN UNIVERSITY	47.075	SES-1338751	-	21,989
CENTRAL MICHIGAN UNIVERSITY	47.050	OCE-1230261	-	4,759
CIVILIAN RESEARCH & DEVELOPMENT FDN	47.079	OISE-9531011	-	1,951
CIVILIAN RESEARCH & DEVELOPMENT FDN	47.079	USB1-31149-XX-13	-	161,335
COLUMBIA UNIVERSITY	47.050	111-1227	-	153,736
COLUMBIA UNIVERSITY	47.050	OCE 1450528	-	38,566
CORNELL UNIVERSITY	47.070	CCF1522054	-	4,119
EDUCATION DEVELOPMENT CENTER, INC.	47.076	CNS-1339300	-	38,188
HARVARD UNIVERSITY	47.070	123777-5065147	-	37,720
HARVARD UNIVERSITY	47.075	SES-1430505	-	29,594
HARVARD UNIVERSITY	47.075	SMA1338446	-	4,991
HOLYOKE COMMUNITY COLLEGE HCC	47.076	DUE 1400500	-	44,881
INDIANA UNIVERSITY	47.074	DBI-0820451	-	(2,503)
INNOVATION ACCELERATOR FOUNDATION	47.041	SBIR Phase I	-	2,606

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<b>National Science Foundation, continued</b>				
KANSAS STATE UNIVERSITY	47.049	DMS-1265228	\$ -	\$ 16,322
MICHIGAN TECHNOLOGICAL UNIVERSITY	47.050	ICER-1313755	-	1,547
MISSOURI STATE UNIVERSITY	47.041	12044-001	-	47,401
NORTHEASTERN UNIVERSITY	47.041	CMMI-112039	-	121,394
NORTHEASTERN UNIVERSITY	47.041	EEC-0832785	-	(92,722)
OREGON STATE UNIVERSITY	47.070	1125228-IIS	-	132,969
PURDUE UNIVERSITY	47.070	CNS-1111512	-	18,369
RAYTHEON BBN TECHNOLOGIES CORP	47.070	14059	95,538	99,344
RAYTHEON COMPANY	47.070	CNS 1346688	56,070	140,023
SMITH COLLEGE	47.076	PR: DRL-1223868 / SB: Fund #636522	-	31,990
SMITH COLLEGE	47.076	SC 636522	-	72,285
SMITHSONIAN ASTROPHYSICAL OBSERVATORY	47.049	AST 1440254	-	215,305
SOLARGASOLINE LLC	47.041	1549710	-	22,573
SOUTHERN CALIFORNIA EARTHQUAKE CENTER	47.050	Y86198	-	26,478
STATE UNIVERSITY OF NY AT ALBANY	47.050	AGS-1303828	-	27,157
UNIVERSITY OF ARIZONA	47.050	EAR-1338553	-	27,956
UNIVERSITY OF CALIFORNIA	47.041	EEC-1449305	-	70,031
UNIVERSITY OF CALIFORNIA DAVIS	47.074	1344187	-	2,886
UNIVERSITY OF FLORIDA	47.075	SMA-1540888	-	62,383
UNIVERSITY OF ILLINOIS	47.041	1542864	-	57,584
UNIVERSITY OF MARYLAND	47.074	DBI- 1458748	-	11,795
UNIVERSITY OF MARYLAND	47.074	PR: IOS-1355119 /SB: 23108-Z4229001	-	36,635
UNIVERSITY OF MICHIGAN	47.070	CNS-1405612	-	35,814
UNIVERSITY OF MINNESOTA	47.075	1539833	-	2,839
UNIVERSITY OF MINNESOTA	47.U07	1246761	-	27,284
UNIVERSITY OF NEBRASKA	47.076	DUE-1143844	-	17
UNIVERSITY OF NEW HAMPSHIRE	47.041	CBET-1231326	-	5,313
UNIVERSITY OF OKLAHOMA	47.075	SES-1421580	-	70,469
UNIVERSITY OF TENNESSEE AT CHATTANOOGA	47.070	CNS-1229213	-	151,275
UNIVERSITY OF TEXAS AT ARLINGTON	47.070	CCF-1442735	-	62,981
UNIVERSITY OF UTAH	47.049	DMS-1552238	-	83,466
UNIVERSITY OF UTAH	47.070	CNS-1 419199	-	113,567
UNIVERSITY OF WISCONSIN	47.076	DUE-1231286	-	63,484
WASHINGTON STATE UNIVERSITY	47.041	120239 G003229	-	94,841
WOODSHOLE OCEANOGRAPHIC INSTITUTION	47.050	AGS-1518503	-	33,890
WOODSHOLE OCEANOGRAPHIC INSTITUTION	47.050	OCE-1332666	-	107,069
WORCESTER POLYTECHNIC INSTITUTE	47.070	PR: IIS-1065298 / SB: 12-202760-00-03	-	24,853
WORCESTER POLYTECHNIC INSTITUTE	47.076	DGE1144804	-	11,218
<b>National Science Foundation Total</b>			<u>4,739,979</u>	<u>53,833,830</u>
<b>Small Business Administration</b>				
SMALL BUSINESS ADMINISTRATION	59.037		\$ 1,069,783	\$ 2,086,642
<b>Small Business Administration Total</b>			<u>1,069,783</u>	<u>2,086,642</u>

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<b>Department Of Veterans Affairs</b>				
DEPARTMENT OF VETERANS AFFAIRS	64.009		\$ -	\$ 207,480
DEPARTMENT OF VETERANS AFFAIRS	64.015		-	49,330
DEPARTMENT OF VETERANS AFFAIRS	64.U01	VA241-14-J-1477	-	75,166
DEPARTMENT OF VETERANS AFFAIRS	64.U02	PO#518C64085	-	20,983
DEPARTMENT OF VETERANS AFFAIRS	64.U03	VA IPA_BROWN	-	88,998
DEPARTMENT OF VETERANS AFFAIRS	64.U04	VA257-13-C0093 / PO# 671D52005	-	60,285
DEPARTMENT OF VETERANS AFFAIRS	64.U05	VA: NCT01249625	-	65,543
MICHAEL E DEBAKEY VA MEDICAL CENTER	64.U06	1R21AG043883	-	10,037
R. CHRISTOPHER GOODWIN & ASSOCIATES, INC	64.U07	VA101F-14-F-0285	-	134,905
<b>Department Of Veterans Affairs Total</b>			<b>-</b>	<b>712,727</b>
<b>Environmental Protection Agency</b>				
U.S. ENVIRONMENTAL PROTECTION AGENCY	66.461		\$ -	\$ 111,532
U.S. ENVIRONMENTAL PROTECTION AGENCY	66.509		726,445	1,454,781
U.S. ENVIRONMENTAL PROTECTION AGENCY	66.514		-	11,260
U.S. ENVIRONMENTAL PROTECTION AGENCY	66.516		-	26,278
U.S. ENVIRONMENTAL PROTECTION AGENCY	66.708		-	43,255
U.S. ENVIRONMENTAL PROTECTION AGENCY	66.714		-	8,191
HEALTH EFFECTS INSTITUTE	66.U01	4911-RFA10-2/12-5-2	-	31,917
MA DEPT OF AGRICULTURAL RESOURCES	66.714	CT AGR15	-	48,838
MA DEPT OF AGRICULTURAL RESOURCES	66.714	CT AGR15Pestanalyticalfed15	-	29,994
MA DEPT OF ENVIRONMENTAL PROTECTION	66.605	12-02/319 FY 13-15	26,808	47,201
MA DEPT OF ENVIRONMENTAL PROTECTION	66.605	EQEUMASSAMHERST01203319	-	28,318
MA DEPT OF ENVIRONMENTAL PROTECTION	66.605	QAPP FFY 2015-2020	-	9,145
MA OFFICE OF COASTAL ZONE MNGMNT	66.456	ENV200000142UMSI2A/RFP No. ENV 14 CZM 10	-	30,740
MICHIGAN DEPT OF ENVIRONMENTAL QUALITY	66.708	EPA-HQ-OPPT-2014-002	-	3,000
THE CADMUS GROUP, INC.	66.U02	EP-C-08-015	-	8,763
UNIVERSITY OF CONNECTICUT	66.437	96172701	-	73,693
UNIVERSITY OF CONNECTICUT	66.437	LI-96290913-1	-	968
<b>Environmental Protection Agency Total</b>			<b>753,253</b>	<b>1,967,874</b>
<b>Nuclear Regulatory Commission</b>				
U.S. NUCLEAR REGULATORY COMMISSION	77.008		\$ -	\$ 276,431
<b>Nuclear Regulatory Commission Total</b>			<b>-</b>	<b>276,431</b>
<b>Department Of Energy</b>				
OAK RIDGE NATIONAL LABORATORY	81.U01	4000135366	\$ -	\$ 152,786
OAK RIDGE NATIONAL LABORATORY	81.U02	4000136881	-	44
U.S. DEPARTMENT OF ENERGY	81.049		164,904	3,761,508
U.S. DEPARTMENT OF ENERGY	81.057		77,630	145,198
U.S. DEPARTMENT OF ENERGY	81.087		-	56,595
U.S. DEPARTMENT OF ENERGY	81.112		-	152,704
U.S. DEPARTMENT OF ENERGY	81.117		-	250,931
U.S. DEPARTMENT OF ENERGY	81.121		2,242	94,856
U.S. DEPARTMENT OF ENERGY	81.135		55,554	323,487
ARGONNE NATIONAL LABS	81.U03	DE-AC02-06CH11357	-	(1,087)

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<b>Department Of Energy, continued</b>				
ARGONNE NATIONAL LABS	81.U04	DE-AC02-06CH11357	\$ -	\$ 35,773
BROOKHAVEN NATIONAL LABORATORY	81.121	DE-AC02-98CH10886	-	(1,002)
BROOKHAVEN NATIONAL LABORATORY	81.U05	233969	-	123,900
BROOKHAVEN NATIONAL LABORATORY	81.U06	PR: DE-AC02-98CH10886 / SB: 289808	-	25,298
FERMI NATIONAL ACCELERATOR LABORATORY	81.U07	PO 622828	-	48,731
FERMI NATIONAL ACCELERATOR LABORATORY	81.U08	PO No. 618961	-	8,042
GEORGE MASON UNIVERSITY	81.113	DE-NA0001123	-	22,192
GINER, INC.	81.049	DE-SC00113077	-	119,404
LAWRENCE BERKELEY NATL LAB U-CALIFORNIA,	81.U09	7251704	-	8,958
LAWRENCE LIVERMORE NATL LAB U-CALIFORNIA	81.U10	B611731	-	15,490
LITTORAL POWER SYSTEMS, INC	81.087	DE-EE0007243	-	21,354
MARINE BIOLOGICAL LABORATORY	81.049	47812	-	163,832
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	81.135	571000-4079	-	23,270
NATIONAL RENEWABLE ENERGY LAB	81.087	AFC-5-52004-01	-	20,086
NATIONAL RENEWABLE ENERGY LAB	81.087	ZGV-2-22442-01	-	(1,172)
NATIONAL RENEWABLE ENERGY LAB	81.087	ZGV-2-22444-01	-	243
NATIONAL RENEWABLE ENERGY LAB	81.U11	DE-AC36-08G028308	-	23,628
PACE UNIVERSITY	81.117	DE-EE0006279	-	295,711
PACIFIC NORTHWEST NATIONAL LABORATORY	81.U12	DE-AC05-76RL01830	-	27,589
PHDS COMPANY	81.049	DE-SC0009639	-	43,550
SANDIA NATIONAL LABS	81.U13	DE-AC04-94AL85000	-	33,173
STANFORD UNIVERSITY	81.U14	SLAC-NA LAB: 159550	-	18,028
UNITED TECHNOLOGIES RESEARCH CENTER	81.086	EERE DE-EE0005775	-	64,006
UNIVERSITY OF CALIFORNIA LANL	81.U15	281407	-	45,681
UNIVERSITY OF DELAWARE	81.049	37776	-	182,155
<b>Department Of Energy Total</b>			<u>300,330</u>	<u>6,304,942</u>
<b>Department Of Education</b>				
NATL INSTITUTE ON DISABILITY & REHAB RES	84.133		\$ (13,375)	\$ (210,351)
U.S. DEPARTMENT OF EDUCATION	84.021		98,761	212,995
U.S. DEPARTMENT OF EDUCATION	84.031		-	205,033
U.S. DEPARTMENT OF EDUCATION	84.129		-	140,622
U.S. DEPARTMENT OF EDUCATION	84.133		(161,175)	(271,326)
U.S. DEPARTMENT OF EDUCATION	84.200		-	149,973
U.S. DEPARTMENT OF EDUCATION	84.224		-	(3,696)
U.S. DEPARTMENT OF EDUCATION	84.235		1,756,814	3,385,117
U.S. DEPARTMENT OF EDUCATION	84.264		-	(5,707)
U.S. DEPARTMENT OF EDUCATION	84.305		53,008	900,613
U.S. DEPARTMENT OF EDUCATION	84.324		36,941	345,367
U.S. DEPARTMENT OF EDUCATION	84.325		-	586,804
U.S. DEPARTMENT OF EDUCATION	84.365		-	877,530
U.S. DEPARTMENT OF EDUCATION	84.407		46,470	402,851
U.S. DEPARTMENT OF EDUCATION	84.411		162,052	505,390
BOSTON PLAN FOR EXCELLENCE	84.336	U336SI4088	-	325,078

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<b>Department of Education, continued</b>				
CITY OF LOWELL, PUBLIC SCHOOLS	84.215	S215E150154	\$ -	\$ 11,652
CITY OF LOWELL, PUBLIC SCHOOLS	84.215	U215J150023	-	17,632
FLORIDA STATE UNIVERSITY	84.305	Student Success Skills	-	55,365
LANGSTON UNIVERSITY	84.129	P0011266	-	113,495
LANGSTON UNIVERSITY	84.133	E066023	-	(74,523)
LANGSTON UNIVERSITY	84.133	Z126346	-	188,659
MA ASSOCIATION OF SCHOOL SUPERINTENDENTS	84.412	Mass NSIP	-	5,852
MA CHARTER PUBLIC SCHOOL ASSOCIATION	84.282	115-0299	-	79,423
MA COMMISSION FOR THE BLIND	84.126	H126A140029	38,025	41,013
MA DEPARTMENT OF HIGHER EDUCATION	84.367	ITQ under No Child Left Behind	-	1,529
MA DEPARTMENT OF HIGHER EDUCATION	84.367	PR: No Child Left Behind / SB: MOU Title IIA	-	13,482
MA DEPT OF ELEMENTARY & SECONDARY ED	84.002	112-1823	-	40,239
MA DEPT OF ELEMENTARY & SECONDARY ED	84.412	RTTT CT DOE 128900	-	(10,577)
MIDDLESEX COMMUNITY COLLEGE	84.378	Standard Contract Dated 9-1-15	-	23,043
NATIONAL WRITING PROJECT	84.367	94-MA02-SEED2012	-	17,212
NATIONAL WRITING PROJECT	84.367	PR: 94-MA02-SEED2012 / SB: 114-1075	-	9,680
NATIONAL WRITING PROJECT	84.367	PR: 94-MA02-SEED2012 / SB: 114-1514	-	11,310
RANDOLPH PUBLIC SCHOOLS	84.215	S215E120098	-	21,894
TRANSCEN, INC.	84.133	H133B140043	-	101,057
UNIVERSITY OF ALABAMA	84.133	PR: H133A120102-12A / SB: 000500057-001	-	1,881
UNIVERSITY OF CALIFORNIA	84.324	S-000467	-	55
UNIVERSITY OF VERMONT	84.305	PR: R305A150438	-	10,630
<b>Department Of Education Total</b>			<b>2,017,521</b>	<b>8,226,296</b>
<b>Department Of Health And Human Services</b>				
ADMINISTRATION ON AGING	93.110		\$ -	\$ 158,580
AGENCY FOR HEALTHCARE RESEARCH & QUALITY	93.226		488,677	1,938,577
CENTERS FOR DISEASE CONTROL & PREVENTION	93.068		-	281,843
CENTERS FOR DISEASE CONTROL & PREVENTION	93.135		-	748,338
CENTERS FOR DISEASE CONTROL & PREVENTION	93.184		-	116,180
CENTERS FOR DISEASE CONTROL & PREVENTION	93.262		732,901	1,908,742
CENTERS FOR DISEASE CONTROL & PREVENTION	93.318		2,807,122	4,584,866
CENTERS FOR DISEASE CONTROL & PREVENTION	93.542		-	91,437
CENTERS FOR DISEASE CONTROL & PREVENTION	93.865		-	23,926
CENTERS FOR DISEASE CONTROL & PREVENTION	93.U01	211-2013-M-57158	-	7,637
CENTERS FOR MEDICARE & MEDICAID SERVICES	93.638		-	984,653
CENTERS FOR MEDICARE & MEDICAID SERVICES	93.779		3,541	11,811
HEALTH RESOURCES SERVICE ADMINISTRATION	93.107		520,636	582,456
HEALTH RESOURCES SERVICE ADMINISTRATION	93.110		279,347	1,177,954
HEALTH RESOURCES SERVICE ADMINISTRATION	93.145		1,133,579	1,625,712
HEALTH RESOURCES SERVICE ADMINISTRATION	93.178		-	784,630
HEALTH RESOURCES SERVICE ADMINISTRATION	93.247		-	295,293
HEALTH RESOURCES SERVICE ADMINISTRATION	93.250		-	16,963
HEALTH RESOURCES SERVICE ADMINISTRATION	93.265		-	64,559
HEALTH RESOURCES SERVICE ADMINISTRATION	93.516		-	22,967

**UNIVERSITY OF MASSACHUSETTS**  
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Federal Grantor/Federal Subdivision or Pass -Through Grantor and Cluster Title	Federal CFDA #	Identifying Information	Subrecipient Expenses	Total Expenses
<b>Department Of Health And Human Services, continued</b>				
HEALTH RESOURCES SERVICE ADMINISTRATION	93.884		\$ -	\$ 78,127
HEALTH RESOURCES SERVICE ADMINISTRATION	93.918		-	501,740
NATL INST FOR OCCUPATIONAL SAFETY&HEALTH	93.262		102,048	1,032,370
NIH-FOGARTY INTERNATIONAL CENTER	93.989		119,873	247,175
NIH-NATIONAL EYE INSTITUTE	93.867		-	1,085,147
NIH-NATIONAL INSTITUTE OF AGING	93.866		207,776	2,033,365
NIH-NATIONAL INSTITUTES OF HEALTH	93.113		130,500	1,680,776
NIH-NATIONAL INSTITUTES OF HEALTH	93.121		126,227	782,759
NIH-NATIONAL INSTITUTES OF HEALTH	93.142		557,359	1,293,717
NIH-NATIONAL INSTITUTES OF HEALTH	93.172		-	211,893
NIH-NATIONAL INSTITUTES OF HEALTH	93.173		-	855,076
NIH-NATIONAL INSTITUTES OF HEALTH	93.226		-	47,086
NIH-NATIONAL INSTITUTES OF HEALTH	93.233		-	479,643
NIH-NATIONAL INSTITUTES OF HEALTH	93.242		44,729	583,159
NIH-NATIONAL INSTITUTES OF HEALTH	93.273		-	24,128
NIH-NATIONAL INSTITUTES OF HEALTH	93.279		90,923	702,664
NIH-NATIONAL INSTITUTES OF HEALTH	93.281		-	11,017
NIH-NATIONAL INSTITUTES OF HEALTH	93.286		-	37,718
NIH-NATIONAL INSTITUTES OF HEALTH	93.307		44,728	278,464
NIH-NATIONAL INSTITUTES OF HEALTH	93.310		306,262	2,771,516
NIH-NATIONAL INSTITUTES OF HEALTH	93.350		-	77,796
NIH-NATIONAL INSTITUTES OF HEALTH	93.351		95,402	517,648
NIH-NATIONAL INSTITUTES OF HEALTH	93.393		439,100	834,242
NIH-NATIONAL INSTITUTES OF HEALTH	93.394		19,559	485,424
NIH-NATIONAL INSTITUTES OF HEALTH	93.395		-	538,587
NIH-NATIONAL INSTITUTES OF HEALTH	93.396		710,365	1,684,383
NIH-NATIONAL INSTITUTES OF HEALTH	93.397		-	641,755
NIH-NATIONAL INSTITUTES OF HEALTH	93.837		142,714	498,775
NIH-NATIONAL INSTITUTES OF HEALTH	93.846		73,317	225,566
NIH-NATIONAL INSTITUTES OF HEALTH	93.847		346,849	1,625,575
NIH-NATIONAL INSTITUTES OF HEALTH	93.853		-	310,573
NIH-NATIONAL INSTITUTES OF HEALTH	93.855		453,226	2,869,479
NIH-NATIONAL INSTITUTES OF HEALTH	93.859		676,585	7,303,737
NIH-NATIONAL INSTITUTES OF HEALTH	93.865		415,361	2,458,723
NIH-NATIONAL INSTITUTES OF HEALTH	93.866		86,979	1,644,277
NIH-NATIONAL INSTITUTES OF HEALTH	93.867		-	159,925
NIH-NATIONAL INSTITUTES OF HEALTH	93.879		-	299,553
NIH-NATIONAL INSTITUTES OF HEALTH	93.989		-	46,433
NIH-NATIONAL INSTITUTES OF HEALTH	93.U02	1 R01 HD083311-01A1	181,461	721,955
NIH-NATIONAL LIBRARY OF MEDICINE	93.879		19,790	179,314
NIH-NATIONAL LIBRARY OF MEDICINE	93.U03	HHSN276201100010C	(145)	(5,764)
NIH-NATIONAL LIBRARY OF MEDICINE	93.U04	HHSN276201100010C	-	1,115,744
NIH-NATL CANCER INSTITUTE	93.393		129,322	2,535,169
NIH-NATL CANCER INSTITUTE	93.394		4,199	527,562

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<b>Department Of Health And Human Services, continued</b>				
NIH-NATL CANCER INSTITUTE	93.395		\$ 177,612	\$ 1,286,885
NIH-NATL CANCER INSTITUTE	93.396		55,092	2,823,867
NIH-NATL CANCER INSTITUTE	93.398		9,300	924,661
NIH-NATL CANCER INSTITUTE	93.U05	HHSN261201500029C	19,602	199,946
NIH-NATL CTR ADVANCING TRANSLATIONAL SCI	93.310		199,369	1,713,268
NIH-NATL CTR ADVANCING TRANSLATIONAL SCI	93.350		91,547	3,687,194
NIH-NATL CTR FOR COMPLEMENT & INT HEALTH	93.213		159,500	1,547,863
NIH-NATL HEART, LUNG & BLOOD INSTITUTE	93.837		1,229,487	7,080,720
NIH-NATL HEART, LUNG & BLOOD INSTITUTE	93.838		-	854,512
NIH-NATL HEART, LUNG & BLOOD INSTITUTE	93.839		190,938	1,507,285
NIH-NATL HUMAN GENOME RESEARCH INSTITUTE	93.172		1,851,113	5,419,873
NIH-NATL HUMAN GENOME RESEARCH INSTITUTE	93.U06	HHSN302201600025M	-	1,274
NIH-NATL INST OF ALLERGY & INFEC DISEASE	93.855		1,221,044	27,494,541
NIH-NATL INST OF ALLERGY & INFEC DISEASE	93.U07	HHSN272201300031C	-	1,806,876
NIH-NATL INST OF ARTHRITIS & MUSCULOSKEL	93.846		393,730	3,000,435
NIH-NATL INST OF BIOMED IMAG & BIOENGRNG	93.286		-	783,891
NIH-NATL INST OF BIOMED IMAG & BIOENGRNG	93.310		-	232,809
NIH-NATL INST OF CHILD HLTH & HUMAN DEVL	93.865		2,311,459	7,760,057
NIH-NATL INST OF CHILD HLTH & HUMAN DEVL	93.U08	HHSN275201400449P	-	(8,488)
NIH-NATL INST OF CHILD HLTH & HUMAN DEVL	93.U09	HHSN275201500009I/HHSN27500001	-	3,764
NIH-NATL INST OF DENTAL & CRANIOFA RSCH	93.310		-	459,596
NIH-NATL INST OF DIAB & DIGEST KIDNEY DI	93.847		1,256,917	10,861,300
NIH-NATL INST OF ENVIR HEALTH SCIENCES	93.095		8,094	30,043
NIH-NATL INST OF ENVIR HEALTH SCIENCES	93.113		3,579	259,292
NIH-NATL INST OF ENVIR HEALTH SCIENCES	93.310		-	915,157
NIH-NATL INST OF GENERAL MEDICAL SCIENCE	93.310		139,125	619,345
NIH-NATL INST OF GENERAL MEDICAL SCIENCE	93.859		1,444,977	20,334,865
NIH-NATL INST OF NEUROLO DISORD & STROKE	93.853		882,724	9,589,223
NIH-NATL INST ON ALCO ABUSE & ALCOHOLISM	93.273		50,084	3,194,281
NIH-NATL INST ON DEAFNESS & OTH COM DIS	93.173		-	137,087
NIH-NATL INST ON MINORITY & HEALTH DISPA	93.307		406,859	1,329,579
NIH-NATL INSTITUTE OF MENTAL HEALTH	93.242		381,413	3,145,006
NIH-NATL INSTITUTE ON DRUG ABUSE	93.279		66,632	5,377,883
NIH-OFFICE OF THE DIRECTOR	93.351		189,133	1,575,747
OFFICE OF MINORITY HEALTH	93.137		-	160,509
SUBSTANCE ABUSE AND MENTAL HEALTH SERV	93.243		84,068	540,843
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.103		-	132,780
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.242		546,491	924,589
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.243		-	62,838
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.433		1,028,677	4,022,287
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.525		5,656,757	6,828,031
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.631		22,251	614,462
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.632		55,899	652,327
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.638		44,406	113,612

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<b>Department Of Health And Human Services, continued</b>				
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.866		\$ 272,413	\$ 527,581
U.S. FOOD AND DRUG ADMINISTRATION	93.103		-	237,726
ACADEMY HEALTH	93.226	PR: 1U18HS022789-01 / SB: UM2014.731.001PF	-	77,868
ADMINISTRATIVE OFFICE OF THE TRIAL COURT	93.243	1 H79 SM061663-01	-	3,057
AGLTRON, INC.	93.U10	1R43ES022884-01A1	-	45,250
ALBERT EINSTEIN COLLEGE OF MEDICINE	93.859	310743	-	135,468
ALTIUS INSTITUTE FOR BIOMEDICAL SCIENCES	93.172	U54 HG007010-05	-	49,280
AMERICAN COLLEGE OF RADIOLOGY	93.395	1 U24 CA19083-01	-	559,279
AMERICAN COLLEGE OF RADIOLOGY	93.395	U24CA180803 / SB: 1612	-	876,218
AMERICAN PSYCHIATRIC ASSOCIATION	93.243	SM-12-010	-	786
AMERICAN THROMBOSIS & HEMOSTASIS NETWORK	93.080	NU2 DD001155-01-00	98,984	161,979
AMERICAN THROMBOSIS & HEMOSTASIS NETWORK	93.184	U27 DD000862-02	104,155	145,761
AMHERST COLLEGE	93.243	PR: 1 U79 SM060455-01 / SB: 01-UMDI	-	3,953
ANTAGEN PHARMACEUTICALS, INC.	93.U11	200-2015-64147	-	36,298
ASSOC FOR PREVENTION TEACHING & RESEARCH	93.283	PR: 5U36OE000005 / SUB: 15-25-IPE-03	-	4,008
ASSOC OF STATE & TERRITORIAL HLTH OFFICE	93.292	1U38OT000161-01	-	11,801
ASSOC OF UNIV CENTERS ON DISABILITIES	93.283	1U38OT000140-02	-	33,177
ASSOC OF UNIV CENTERS ON DISABILITIES	93.314	CDC-RFA-DD16-1604	-	130
AUBURN UNIVERSITY	93.852	R01 NS093941	-	14,258
AUGUSTA UNIVERSITY	93.847	PR: 3 U24 DK076169-08S / SB: 25730-7	-	2,242
BANNER HEALTH	93.866	0435-02-43681	-	60,059
BAYLOR COLLEGE OF MEDICINE	93.U12	PR: HHSA-290201500002C / SB: 102038483	-	31,980
BAYSTATE MEDICAL CENTER, INC.	93.226	R21 HS021864-01	-	2,288
BAYSTATE MEDICAL CENTER, INC.	93.243	PR: 2U79SM059472-04 / SB: FED348-13004	-	35,972
BAYSTATE MEDICAL CENTER, INC.	93.243	U 79SM059472-04	-	62,991
BAYSTATE MEDICAL CENTER, INC.	93.847	PR: 1 R18 HL1055110 / SB: 705-11230-001	-	45,912
BECKMAN RESEARCH INSTITUTE CITY OF HOPE	93.847	PR: U01DK104162-02 / SB: 51504.2000556.6	-	12,132
BETH ISRAEL DEACONESS MEDICAL CENTER	93.837	UM1HL108724-01A1	-	306
BETH ISRAEL DEACONESS MEDICAL CENTER	93.837	UM1HL108724-02	-	6,669
BETH ISRAEL DEACONESS MEDICAL CENTER	93.847	R01DK073302	-	490
BETH ISRAEL DEACONESS MEDICAL CENTER	93.853	U01 NS074425-01	-	44,920
BETH ISRAEL DEACONESS MEDICAL CENTER	93.855	U19 AO095985-02	-	140,436
BETH ISRAEL DEACONESS MEDICAL CENTER	93.859	R01 GM104987	-	74,144
BETH ISRAEL DEACONESS MEDICAL CENTER	93.859	R01 GM104987-06	-	18,690
BOSTON COLLEGE	93.310	8U54GM119023-02	-	9,758
BOSTON COLLEGE	93.859	660-10/2R01GM060418	-	264
BOSTON COLLEGE	93.859	AG048962	-	43,886
BOSTON COLLEGE	93.865	R03HD080195	-	30,384
BOSTON COLLEGE	93.U13	5101962-10	-	28,462
BOSTON MEDICAL CENTER	93.839	PR: R01HL106029 / SB: 0305801	-	25,072
BOSTON MEDICAL CENTER	93.853	PR: U01 NS040069-06 / SB: A2-0314301	-	(2,749)
BOSTON MEDICAL CENTER	93.855	PR: R56 AI107821-01 / SB: Activity: 0355701	-	5,394
BOSTON PUBLIC HEALTH COMMISSION	93.104	U79SM061622-01	-	5,183

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<b>Department Of Health And Human Services, continued</b>				
BOSTON PUBLIC HEALTH COMMISSION	93.311	PAWOS000017	\$ -	\$ 3,423
BOSTON PUBLIC HEALTH COMMISSION	93.738	U58 DP004518-01	-	26,911
BOSTON PUBLIC HEALTH COMMISSION	93.738	U58DP005629-01	-	12,432
BOSTON PUBLIC HEALTH COMMISSION	93.914	FY15 104783A	36,623	40,218
BOSTON UNIVERSITY	93.143	4500001178	-	(2,763)
BOSTON UNIVERSITY	93.143	5P42ES007381-19	-	1,162
BOSTON UNIVERSITY	93.307	R24MD008819	-	43,774
BOSTON UNIVERSITY	93.393	PR: 3R01CA181392-02S / SB: 4500001969	-	76,391
BOSTON UNIVERSITY	93.393	R01 CA181392-02	-	449,987
BOSTON UNIVERSITY	93.516	4500001666	-	88,272
BOSTON UNIVERSITY	93.847	PR: DP3DK101084-01 / SB: 4500001477	-	44,014
BOSTON UNIVERSITY	93.853	R05 NS073947-02	-	67,939
BOSTON UNIVERSITY	93.855	PR: P01 AI078894-03 \SB:4500001711	-	(9,028)
BOSTON UNIVERSITY	93.U14	4500001819	-	6,198
BRANDEIS UNIVERSITY	93.242	PR: 1U01MH105949 / SB: 402473	-	(2,590)
BRANDEIS UNIVERSITY	93.865	PR: 7 R01 HD082105-02 / SB: 403193	-	8,707
BRANDEIS UNIVERSITY	93.865	PR: 7R01 HD074581 / SB: 4036160	-	3,472
BRIGHAM AND WOMEN'S HOSPITAL	93.286	PR: P41 EB015902 / SB:109443	-	27,319
BRIGHAM AND WOMEN'S HOSPITAL	93.837	113892	-	2,665
BRIGHAM AND WOMEN'S HOSPITAL	93.855	PR: 2P01 AI073748 / SB: 112669	-	284,478
BRIGHAM AND WOMEN'S HOSPITAL	93.866	U01 AG048270	134,418	201,570
BRIGHAM AND WOMEN'S HOSPITAL	93.U15	109102	-	33,197
BROWN UNIVERSITY	93.213	UH2-AT009145-01	-	150,816
BROWN UNIVERSITY	93.273	2P01AA019072-06	-	28,524
BROWN UNIVERSITY	93.273	PR: 1 I24 DA041123-01 / SB: 00000831	-	46,835
BROWN UNIVERSITY	93.866	R01AG048940-02	-	263,841
CASE WESTERN RESERVE UNIVERSITY	93.172	5PSOHG003390-09	-	11,280
CELLERANT THERAPEUTICS, INC.	93.U16	PR: BARDA / SB: HHSO 100201000051C	-	8,012
CHILDREN'S FRIEND AND SERVICE	93.600	EHSCCP-Eval-001	24,000	39,546
CHILDREN'S HOSPITAL	93.226	PR: 1R21HS023092 / SB:RSTFD0000575941	-	(2,789)
CHILDREN'S HOSPITAL	93.632	90DD0013-01-00	2,500	25,824
CHILDREN'S HOSPITAL	93.632	90DD0013-03-00	7,500	328,456
CHILDREN'S HOSPITAL	93.847	2R01DK077195-06	-	22,249
CHILDREN'S HOSPITAL	93.855	PR: R01AI116577 / SB: PRE AWARD	-	45,423
CHILDREN'S HOSPITAL	93.855	RSTFD0000616608	-	6,796
CHILDREN'S HOSPITAL OF PHILADELPHIA	93.395	PR: NCTN / SB: U10 CA180886	-	37,682
CHILDREN'S HOSPITAL OF PHILADELPHIA	93.395	U10CA098543	-	13,194
CLEVELAND CLINIC FOUNDATION	93.273	U01 AA0218893	-	409,352
COLUMBIA UNIVERSITY	93.837	R01 HL131422-01	-	5,980
COLUMBIA UNIVERSITY	93.838	PR: 1 R01 HL119836-01A1 / SB: 1(GG007699)	-	(26)
COLUMBIA UNIVERSITY	93.865	PR: P01 HD080642-01 / SB: PO #G0545	-	38,553
COMMONWEALTH HLTH INS CONNECTOR AUTH	93.525	HBEIE130143-01	-	27,530
DANA FARBER CANCER INSTITUTE	93.397	5P50CA090381-13	-	90,181

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<b>Department Of Health And Human Services, continued</b>				
DARTMOUTH COLLEGE	93.135	PR: U48DP005018 / SB: 1614	\$ -	\$ 11,210
DARTMOUTH COLLEGE	93.279	R01 DA032533-01A1	-	254
DARTMOUTH COLLEGE	93.393	PR: 5R01CA168778 / SB: R186	-	85,814
DUKE UNIVERSITY	93.837	5 U01 HL107023-04	-	79,867
DUKE UNIVERSITY	93.839	U01HL087229	-	6,060
DUKE UNIVERSITY	93.847	12-NIH-1126	-	37,855
DUKE UNIVERSITY	93.U17	PR: HSH272200900023C / SB: CT1300043	-	25,238
EDUCATION DEVELOPMENT CENTER, INC.	93.243	PR: U79 SM059945 / SB: 11370.0.05	-	10,812
EMERSON COLLEGE	93.173	PR: 1 R01 DC012774-01A1 / SB: 3452-UMMS	-	23,618
EMMES CORPORATION	93.853	PR: NS026835 / SB: CT1000064	-	17,657
EMORY UNIVERSITY	93.859	1R01GM105813	-	2,195
EMORY UNIVERSITY	93.859	1R01GM105813 - 01	-	124,276
ENFORMIA	93.U18	113-1486	-	27,875
FAMILY SERVICE, INC.	93.086	90FM0109-01-00	-	2,063
FLORIDA INTERNATIONAL UNIVERSITY	93.279	PR: 9 R01 DA035160-06 / SB: 800001069-02	-	42,264
FORDHAM UNIVERSITY	93.866	1R21AG050018-01A1	-	116
GEORGE WASHINGTON UNIVERSITY	93.610	PR: C1MS331343-01-00 / SB: 14-M83	-	57,584
GEORGE WASHINGTON UNIVERSITY	93.847	1R01DK100916-01A1	-	(6,156)
GEORGE WASHINGTON UNIVERSITY	93.847	5R01DK100916-02	-	136,194
GROUP HEALTH RESEARCH INSTITUTE	93.397	PR: 3U54CA163261 / SB: PO2015133068	-	24,089
GROUP HEALTH RESEARCH INSTITUTE	93.U19	R215-084.030-T04	-	61,443
HARVARD PILGRIM HEALTH CARE, INC.	93.103	HHSF22301001T	-	20,103
HARVARD PILGRIM HEALTH CARE, INC.	93.172	PR: R21HG008510 / SUB: AH000581	-	19,250
HARVARD PILGRIM HEALTH CARE, INC.	93.226	R18HS021424	-	45,981
HARVARD PILGRIM HEALTH CARE, INC.	93.865	AH000453	-	12,281
HARVARD PILGRIM HEALTH CARE, INC.	93.U20	HHSF22300910061	-	21,575
HARVARD PILGRIM HEALTH CARE, INC.	93.U21	HHSF22301007T-0005-2	-	57,014
HARVARD PILGRIM HEALTH CARE, INC.	93.U22	HHSF2232009100061	-	46,129
HARVARD PILGRIM HEALTH CARE, INC.	93.U23	HHSF223201400301	-	89,012
HARVARD PILGRIM HEALTH CARE, INC.	93.U24	PR: 2 R01 AG028745-08 / SB:2R01AG028745	-	242
HARVARD PILGRIM HEALTH CARE, INC.	93.U25	PR: HHSF223200910061 / SB: HHSF22301006T-009	-	1,299
HARVARD PILGRIM HEALTH CARE, INC.	93.U26	PR: HHSF2232010000091 / SB: HHSF22301010T	-	11,012
HARVARD PILGRIM HEALTH CARE, INC.	93.U27	PR: HHSP2232009100061 / SB: HHS2301007T-0012	-	(227)
HARVARD PILGRIM HEALTH CARE, INC.	93.U28	PR:HHSF2232009100061 / SB:TO HHSF22301007T	-	10,768
HARVARD SCHOOL OF PUBLIC HEALTH	93.113	R01 ES014370-06	-	16,844
HARVARD SCHOOL OF PUBLIC HEALTH	93.262	2 T42 OH008-416-10	-	(563)
HARVARD SCHOOL OF PUBLIC HEALTH	93.262	2 T42 OH008416-09	-	(2,060)
HARVARD SCHOOL OF PUBLIC HEALTH	93.262	T42 OH008416	-	6,588
HARVARD SCHOOL OF PUBLIC HEALTH	93.855	PR: U19 AI107774 / SB: 109708-5064861	-	291,497
HARVARD UNIVERSITY	93.853	PR: R01 NS082525 / SB: 138074-5085856	-	118,607
HARVARD UNIVERSITY	93.865	7R01HDO57599-06	-	68
HEALTH RESOURCES IN ACTION	93.610	CMS331039-01-00	-	13,867
HEBREW REHAB	93.866	2R01AG025037	-	56,011

**UNIVERSITY OF MASSACHUSETTS**  
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Federal Grantor/Federal Subdivision or Pass -Through Grantor and Cluster Title	Federal CFDA #	Identifying Information	Subrecipient Expenses	Total Expenses
<b>Department Of Health And Human Services, continued</b>				
HIGHLAND VALLEY ELDER SERVICES, INC.	93.052	116-0125	\$ -	\$ 2,488
HOLYOKE HEALTH CENTER INC	93.289	PR: Cntret Svcs 2/1/15 / SB: Let's Move Holyoke	-	4,847
HOSPICE OF HENDERSON COUNTY, INC.	93.U29	Post-Death Caregiver Satisfaction Survey	-	3,132
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	93.242	PR: U01MH103392-01 / SB: 0255-7231-4609	-	168,036
ILLINOIS INSTITUTE OF TECHNOLOGY	93.837	PR:R01 HL122484-01 / SB: SA557-0614-8907	-	381,820
INDIANA UNIVERSITY	93.397	PR:IU54CA19015101 / SB :PO #: 1571596	-	17,660
INDIANA UNIVERSITY	93.855	PR:R56A112398 / SB: IN4689741UMMS	-	78,032
JACKSON LABORATORY	93.351	U54 OD020351	-	25,493
JOHNS HOPKINS UNIVERSITY	93.936	1R01HD080474-01	-	291,882
JOHNS HOPKINS UNIVERSITY	93.U30	2001820334	-	221,786
JOHNS HOPKINS UNIVERSITY	93.U31	HHSN2682011000081 / HHSN26800002	-	21,708
JOSLIN DIABETES CENTER	93.847	PR: UC4DK101108-01 / SB: P.ERL Study	-	(11,614)
KAISER FOUNDATION RESEARCH INSTITUTE	93.279	UG1 DA040314-01	-	10,661
KAISER FOUNDATION RESEARCH INSTITUTE	93.393	U24 CA171524	-	(4,369)
KAISER FOUNDATION RESEARCH INSTITUTE	93.393	U24CA17524-04	-	118,038
KAISER FOUNDATION RESEARCH INSTITUTE	93.866	U01 AG034661-04	-	58,334
KLEIN BUENDEL, INC.	93.393	PR: R01CA192652 / SB: 0301-0154-000	-	114,001
LOWELL COMMUNITY HEALTH CENTER	93.243	1H79SP015756-03	-	2,281
LOWELL COMMUNITY HEALTH CENTER	93.570	90EE0903	-	160
LUK CRISIS CENTER, INC.	93.652	90C01057	-	119,437
LUMAMED LLC	93.394	1R43CA173938	-	935
LUMAMED LLC	93.394	PR: 3R43CA173938-1S1 / SB: N/A	-	17,786
MA DEPARTMENT OF MENTAL HEALTH	93.243	1 H79SM0061663	-	312
MA DEPARTMENT OF MENTAL HEALTH	93.243	INTF2400H78500224220	-	11
MA DEPARTMENT OF MENTAL HEALTH	93.243	IRAPS-FY15	43,809	62,537
MA DEPARTMENT OF MENTAL HEALTH	93.243	Mission Implmnt-FY15	-	54,238
MA DEPARTMENT OF MENTAL HEALTH	93.U32	32103559UMASS5	-	95,385
MA DEPARTMENT OF PUBLIC HEALTH	93.110	PR: CYSHCN SIB / SB: INT F3050HH2500224026	-	71,323
MA DEPARTMENT OF PUBLIC HEALTH	93.136	INTF3401M03700115043	-	265,153
MA DEPARTMENT OF PUBLIC HEALTH	93.184	RFA-DD12-120403CONT14	-	12,339
MA DEPARTMENT OF PUBLIC HEALTH	93.236	INTF 3327HH4300522083	-	40,063
MA DEPARTMENT OF PUBLIC HEALTH	93.243	IU79SP020794	-	31,406
MA DEPARTMENT OF PUBLIC HEALTH	93.296	3043H78500224028	-	36,103
MA DEPARTMENT OF PUBLIC HEALTH	93.994	INTF7900MM3701516150	-	158,495
MA DEPARTMENT OF PUBLIC HEALTH	93.U33	1H79SM062910-01	-	37,221
MA DEPT OF ELEMENTARY & SECONDARY ED	93.084	CTDOEISCT75UMASSBOSSURVEY	-	24,759
MA DEPT OF PUBLIC HEALTH, BSAS	93.243	Mission Forward-FY15	-	26
MA DEVELOPMENTAL DISABILITIES COUNCIL	93.360	DHHS CT010016G14CS62BCSNF0	-	30,050
MA DEVELOPMENTAL DISABILITIES COUNCIL	93.630	CT ADD 0100 15G13QA21EQANU*0	-	1,000
MA EXECUTIVE OFFICE OF HLTH & HUMAN SVC	93.525	13UMMSMTFACAEXCHANSW	-	85,592
MA EXECUTIVE OFFICE OF HLTH & HUMAN SVC	93.525	14UMMSIPTERMSI PPORSW	-	1
MA EXECUTIVE OFFICE OF HLTH & HUMAN SVC	93.609	13UMMSADULTMEDICAISW	-	78,131

**UNIVERSITY OF MASSACHUSETTS**  
**Schedule of Expenditures of Federal Awards**  
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Federal Grantor/Federal Subdivision or Pass -Through Grantor and Cluster Title	Federal CFDA #	Identifying Information	Subrecipient Expenses	Total Expenses
<b>Department Of Health And Human Services, continued</b>				
MA EXECUTIVE OFFICE OF HLTH & HUMAN SVC	93.628	14UMMSSONECARETRANSW	\$ -	\$ 7,278
MA EXECUTIVE OFFICE OF HLTH & HUMAN SVC	93.644	16UMMSCONTRACEPTIVSW	-	26,505
MA EXECUTIVE OFFICE OF HLTH & HUMAN SVC	93.768	111CMS31235-01-00	-	68,603
MA EXECUTIVE OFFICE OF HLTH & HUMAN SVC	93.791	11UMMSMFPD001SA001SW	-	9,539
MAHIDOL UNIVERSITY	93.989	1U01TW010091-01	-	2,854
MASSACHUSETTS GENERAL HOSPITAL	93.396	UH2CA189901	-	214,025
MASSACHUSETTS GENERAL HOSPITAL	93.837	226216	-	21,101
MASSACHUSETTS GENERAL HOSPITAL	93.847	P01 DK033506-26A1	-	235,900
MASSACHUSETTS GENERAL HOSPITAL	93.853	U10 NS086729-01	-	10,461
MASSACHUSETTS GENERAL HOSPITAL	93.855	PR: R01 AI103055 / SB: 223544	-	64,108
MAYO CLINIC ROCHESTER	93.121	UNI-194780	-	(333)
MAYO CLINIC ROCHESTER	93.396	PR: R01CA136526 / PO: 64195304/Sub UNI-203270	-	7,406
MCLEAN HOSPITAL	93.242	PR: 1 R01 MH105608 / SB: 401122	-	31,622
MEDICAL COLLEGE OF WISCONSIN	93.855	5R01AI101898-02	-	63,145
MEDICAL COLLEGE OF WISCONSIN	93.855	5U01AI107305-02	-	4,119
MEMORIAL HOSPITAL OF RHODE ISLAND	93.U34	HHSN2682010000020C	-	(2,770)
MIRIAM HOSPITAL	93.213	PR: R01 AT006948 / SB: 710-9907	-	9,748
MIRIAM HOSPITAL	93.213	R21AT008830	-	3,537
MIRIAM HOSPITAL	93.393	1 R01CA156699-02	-	142,256
MONTANA STATE UNIVERSITY	93.286	GI73-15-W5173	-	74,103
MOUNT HOLYOKE COLLEGE	93.837	MHC: GD8871	-	12,188
MOUNT SINAI MEDICAL CENTER	93.110	PR: H30 MC24048-02 / SB: 0253-6544-4609	-	24,050
NEW ENGLAND RESEARCH INSTITUTE, INC.	93.837	PR:U01HL107407 / SB: BEST-CLI	-	10,973
NEW YORK UNIVERSITY SCHOOL OF MEDICINE	93.393	NYU/PR: R21 CA187612	-	94,728
NEW YORK UNIVERSITY SCHOOL OF MEDICINE	93.855	P01 AI100151-01	-	230,970
NORC	93.U35	PR: HHSN275201200004I / SB: 7562.UMASS.T07	-	104,241
NORTHEASTERN UNIVERSITY	93.273	1R01AA021136-01A1	-	15,576
NORTHWESTERN UNIVERSITY	93.397	PR:1U54CA193419-01 / SUB: 6003974 UM	-	55,302
NORTHWESTERN UNIVERSITY	93.859	60035565 UMA	-	93,001
OMNITEC SOLUTIONS, INC.	93.U36	HHSN271200900139U	-	(10,006)
PARTNERS RESEARCH MANAGEMENT	93.103	PR: R01 FD0004127/ SB: 226881	-	23,062
PENNINGTON BIOMEDICAL RESEARCH CTR (LSU)	93.262	R210H010785-01A1SI	-	5,624
PENNINGTON BIOMEDICAL RESEARCH CTR (LSU)	93.U37	HD073807-50352-S01	-	23,518
PENNSYLVANIA STATE UNIVERSITY	93.242	R01 MH098003-02	-	34,676
PIONEER VALLEY PLANNING COMMISSION	93.737	1H75DP004641-01	-	1,056
PLYMOUTH STATE UNIVERSITY	93.243	G02HP28005-01-03	-	116,000
POLARIS HEALTH DIRECTIONS, INC.	93.273	2 R42AA022035-03	70	98,328
POLARIS HEALTH DIRECTIONS, INC.	93.393	PR: R24 CA174048-03 / SB: SBC Project	-	76,443
PRAXIS, INC.	93.121	R42DE020979-02	-	28,780
PRAXIS, INC.	93.173	R42DC010365-02	-	36,834
PRAXIS, INC.	93.865	2R42HD069070-02	-	159,683
PRISM	93.U38	720201	-	129,099
PURDUE UNIVERSITY	93.859	PR: R21 GM114853-01 / SB: 4102-64396	-	67,757
RESEARCH FOUNDATION OF SUNY	93.853	R01 NS093097-01A1	-	50,960

**UNIVERSITY OF MASSACHUSETTS**  
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<b>Department Of Health And Human Services, continued</b>				
RESEARCH TRIANGLE INTERNATIONAL	93.U39	200-2008-27958	\$ -	\$ 9,090
RESEARCH TRIANGLE INTERNATIONAL	93.U40	HHS2832012000061/HHSS2834204T	-	438,790
RESEARCH TRIANGLE INTERNATIONAL	93.U41	PR: HHSP23320095651WC / SB: 64-312-0212050-51967L	-	27,255
RHODE ISLAND HOSPITAL	93.361	R01 NR014782	-	16,368
RHODE ISLAND HOSPITAL	93.361	R21 NR073869	-	9,690
RUSH UNIVERSITY MEDICAL CENTER	93.361	PR: R01 NR013910/ SB: R01NR13910-01	-	9,071
RUTGERS UNIVERSITY	93.273	R34 AA023027-01	-	(1,597)
RUTGERS UNIVERSITY	93.847	PR: 1R01DK102934 / SB: 5471	-	11,489
SANFORD-BURNHAM MEDICAL RESEARCH INST	93.866	PR: P01AG033561 / SB: 56154-11670-UMMS-1	-	75,252
SEVEN HILLS FOUNDATION	93.243	1 SP021244-01	-	22,067
SIGMOVIR BIOSYSTEMS, INC.	93.855	R41 AI 109926-01	-	1,330
SIGNABLOK, INC.	93.837	5 R44HL110417-03	-	148,003
SIMON FRASER UNIVERSITY	93.856	R01 AI097051-01	-	139,446
SOCIAL & SCIENTIFIC SYSTEMS, INC.	93.U42	PR: HHSN272200900001/2/31 / SB: IRC 003	-	14,986
SOCIAL & SCIENTIFIC SYSTEMS, INC.	93.U43	PR:HHSN261200800001E / SB:CRB-SSS-16-004803	-	567
SPECIAL OLYMPICS, INC.	93.063	Global Collaborating Center	-	32
SPEECH TECHNOLOGY AND APPLIED RESEARCH	93.173	R44-DC011668	-	67,482
STANFORD UNIVERSITY	93.286	1U01EB017140-01A1	-	2,752
STANFORD UNIVERSITY	93.286	5U01EB017140 / U01EB017140	-	76,021
STANFORD UNIVERSITY	93.859	PR: 1R01GM112720-01 / SB: 60893476-114988	-	44,410
STATE OF NEW HAMPSHIRE INSURANCE DEPT	93.511	02-24-24-240010-88870000-046-500464	-	29,411
STATE OF RHODE ISLAND	93.624	SRI/RFP Number: 7549877	-	198,773
STATE OF VERMONT	93.624	GICMS 331181-01-00	-	232,818
STRYKAGEN CORPORATION	93.846	1 R41 AR067014-01	-	(777)
SWEDISH MEDICAL CENTER	93.U44	223004 B.01	-	95,247
TCG, INC.	93.853	R44NS074540-02A1	-	46,571
TEXAS A&M UNIVERSITY	93.855	P01 1A1095208-01A1	-	227,888
THE CTR FOR CONSTRUCTION RESEAR & TRAIN	93.262	U60 OH 009762	-	225,484
THE FORSYTH INSTITUTE	93.U45	PR: R01 AR064793-01A1/SB: UMASS2530-084793	-	56,375
THE GENERAL HOSPITAL CORPORATION	93.837	R01 HL112661-01	-	287,696
THE J. DAVID GLADSTONE INSTITUTE	93.853	R01 NS079725-03	-	215,089
THE MARY IMOGENE BASSETT HOSPITAL	93.262	5 U54 OH007542-14	-	22,089
THE MARY IMOGENE BASSETT HOSPITAL	93.262	5 U54 OH007542-15	-	118,496
THE MARY IMOGENE BASSETT HOSPITAL	93.262	U54OH007542-14	-	(3,109)
THE SCRIPPS RESEARCH INSTITUTE	93.855	PR: 5P01AI100263 / SB: 5-20718	-	293,489
THE SCRIPPS RESEARCH INSTITUTE	93.855	PR:5P01AI100263 / SB: PO 5-20598	-	253,064
TRANSCEN, INC.	93.433	90RT 5034-02-00	-	13,803
TUFTS MEDICAL CENTER	93.839	PR: P50 HL110789-04 / SB: 6013016-SERV	-	36,345
TUFTS MEDICAL CENTER	93.839	PR: P50 HL110789-04 / SB: 6013015-SERV	-	1,118
TUFTS MEDICAL CENTER	93.865	R01HD072778-01A1	-	20,474
TUFTS UNIVERSITY	93.859	5K12GM074869-09	-	17,536
TULANE UNIVERSITY	93.847	1R01DK099598	-	22,413

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<b>Department Of Health And Human Services, continued</b>				
UNIVERSITY OF ALABAMA	93.226	1 U19HS021110-01	\$ -	\$ 28,277
UNIVERSITY OF ALABAMA	93.226	U19 HS021110-01	-	15,478
UNIVERSITY OF ALABAMA	93.846	PR: R01AR080240 / SB: 000401984-004	-	333,177
UNIVERSITY OF ALABAMA	93.855	PR: R01AI109001 / SB: 000503587-001	-	321,352
UNIVERSITY OF ALABAMA	93.865	R01 HD061959-08	-	135,259
UNIVERSITY OF ALABAMA	93.989	PR: 5 R01 TW009272-02 / SB: 000421737-0001	-	26,210
UNIVERSITY OF ALABAMA	93.U46	PR: HHSN268200900047C / SB: CT1100012	-	45,184
UNIVERSITY OF ALABAMA	93.U47	PR: HHSN268201300025C / SB: 000501394-02	-	50,187
UNIVERSITY OF CALIFORNIA	93.121	2R01DE016402-10	-	77,905
UNIVERSITY OF CALIFORNIA	93.242	PR: R01 MH083799-05 / SB: 0008591	-	9,231
UNIVERSITY OF CALIFORNIA	93.855	PR: HL / SB: VEST/PREDICTS	-	4,744
UNIVERSITY OF CALIFORNIA	93.859	PR: R01GM117189 / SB: 9185sc	-	42,851
UNIVERSITY OF CALIFORNIA	93.865	55962754	-	11,868
UNIVERSITY OF CALIFORNIA IRVINE	93.226	2015-3303	-	8,355
UNIVERSITY OF CALIFORNIA REGENTS	93.279	U24 DA041123-01	-	29,680
UNIVERSITY OF CALIFORNIA REGENTS	93.855	1-R21-AI101566	-	100,128
UNIVERSITY OF CALIFORNIA REGENTS	93.989	PR: 2 U19 TW007401-10 / SB: 61686358	-	4,377
UNIVERSITY OF CALIFORNIA SAN FRANCISCO	93.242	9168sc	7,840	12,576
UNIVERSITY OF CALIFORNIA SAN FRANCISCO	93.865	R21 HD082330	-	5,832
UNIVERSITY OF COLORADO AT DENVER	93.846	PR: UH2AR067681-01 / SB: FY15.090.004	-	96,154
UNIVERSITY OF CONNECTICUT	93.624	1 G1CMS331404	-	3,954
UNIVERSITY OF CONNECTICUT	93.837	1R21HL125157-01	-	20,706
UNIVERSITY OF CONNECTICUT	93.866	PR: P01 AG021600-09 / SB: USHS6-62703698	-	412,794
UNIVERSITY OF FLORIDA	93.286	1 R01EB014869-01A1	-	55,672
UNIVERSITY OF FLORIDA	93.846	1 R01AR069660-01	-	9,393
UNIVERSITY OF LOUISVILLE	93.847	120597	-	2,519
UNIVERSITY OF MARYLAND	93.067	PEPFAR	-	1,021
UNIVERSITY OF MARYLAND	93.243	PR: 14-027G / SB: 101846D	-	61,435
UNIVERSITY OF MARYLAND	93.853	PR: 5R21NS086902 / SUB: 1500188/12976	-	14,754
UNIVERSITY OF MEDICINE & DENTISTRY OF NJ	93.433	PR: H133A120152	-	80,851
UNIVERSITY OF MEMPHIS	93.286	5-40312	-	213,401
UNIVERSITY OF MICHIGAN	93.350	PR: UL1 TR000433 / SB: 3002334360	-	5,443
UNIVERSITY OF MICHIGAN	93.853	PR:R21 NS084081 / SB: 3003018835	-	18,681
UNIVERSITY OF MICHIGAN	93.859	PR: R01GM116960 / SB: 30038554238	-	16,821
UNIVERSITY OF MICHIGAN	93.866	5P01AG029409-08	-	29,852
UNIVERSITY OF MICHIGAN	93.866	U01 AG017719-13	-	(139)
UNIVERSITY OF MINNESOTA	93.226	U.MN: P005171401	-	8,791
UNIVERSITY OF MINNESOTA	93.361	N002994701	-	17,884
UNIVERSITY OF MINNESOTA	93.433	90RT5019-01-00	-	20,414
UNIVERSITY OF MINNESOTA	93.859	PR: P01 GM091743 / SB:H001786602	-	309,931
UNIVERSITY OF MISSISSIPPI	93.U48	PR: HHSN268201300046C/SB: 66102700414-04UMASS	-	28,570
UNIVERSITY OF MISSISSIPPI MEDICAL CENTER	93.855	PR: 7R01AI095740 / SB: 66103650115-UM	-	17,114
UNIVERSITY OF MISSISSIPPI MEDICAL CENTER	93.U49	HHSN268201300047C	-	26,601

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<b>Department Of Health And Human Services, continued</b>				
UNIVERSITY OF NEBRASKA	93.279	24-0524-0054-004	\$ -	\$ 38,609
UNIVERSITY OF NEW HAMPSHIRE	93.865	R01HD064576	-	105,656
UNIVERSITY OF NEW MEXICO	93.273	PR: R32AA02334 / SB: 028326-871G	-	8,754
UNIVERSITY OF NORTH CAROLINA	93.847	PR:1R01DK103546 / SB: 510150	-	123,362
UNIVERSITY OF NORTH CAROLINA	93.855	1 R21AI115752-01	-	12,968
UNIVERSITY OF NORTH CAROLINA	93.855	PR: 5U19 AI109965-02 / SUB: 5103507	-	86,503
UNIVERSITY OF NORTH CAROLINA	93.855	R21 AI11108-01	-	71,544
UNIVERSITY OF NORTH CAROLINA	93.855	R01 AI121558-01	-	39,170
UNIVERSITY OF PENNSYLVANIA	93.393	1-R01-CA-196131-01A1	-	30,883
UNIVERSITY OF PENNSYLVANIA	93.393	R01 CA202699-01A1	-	27,844
UNIVERSITY OF PENNSYLVANIA	93.838	P30 DK047757-21	-	83,750
UNIVERSITY OF PENNSYLVANIA	93.839	2-R56-HL-090774-05A1	-	21,232
UNIVERSITY OF PENNSYLVANIA	93.855	PR: R01AI1210821-01 / SB: Subaward: 566489	-	50,780
UNIVERSITY OF PENNSYLVANIA	93.855	PR: U19AI109646 / SB: 568103	-	340,705
UNIVERSITY OF PITTSBURGH	93.837	5 U01HL098180-04	-	6,778
UNIVERSITY OF PITTSBURGH	93.847	PR: 1 R01 DK095748-01A1/SB: 0028057(123009-1)	-	21,995
UNIVERSITY OF PITTSBURGH	93.855	UH2 AI12295-01	-	191,719
UNIVERSITY OF PITTSBURGH	93.866	PR: U01AGI2533 / SB: 0040521(124995-5)	-	210,042
UNIVERSITY OF RHODE ISLAND	93.855	P01 AI034533-21	-	100,467
UNIVERSITY OF RHODE ISLAND	93.855	P01 AI034533-22	-	229,817
UNIVERSITY OF ROCHESTER	93.121	1R01DE025447-01	-	4,189
UNIVERSITY OF ROCHESTER	93.837	PR: U01 HL096607-05 / SB: 415588-G	-	12,988
UNIVERSITY OF ROCHESTER	93.U50	PR: HHSN272201400005C / SB: 416428	-	106,152
UNIVERSITY OF SOUTH CAROLINA	93.393	PR: R01CA151304-03 / SB: 14-2701	-	124,445
UNIVERSITY OF SOUTH FLORIDA	93.853	PR: 1R01NS095563 / SB: 6125-1076-00B	-	10,789
UNIVERSITY OF TEXAS AT SAN ANTONIO	93.855	PR: 1R21AI114762-01/ SB: 10000753	-	69,950
UNIVERSITY OF TORONTO	93.242	R01 MH099167-01	-	71,970
UNIVERSITY OF UTAH	93.837	PR: U54 HL12311 \ SB:10023730-01	45,123	621,299
UNIVERSITY OF VERMONT	93.393	7 P01 CA082834	-	223,424
UNIVERSITY OF VERMONT	93.837	PR: P01 HL059408 / SB: 23326	-	417
UNIVERSITY OF WASHINGTON	93.172	PR: U54 HG007010 / SB: 763324	-	92,565
UNIVERSITY OF WASHINGTON	93.837	PR: R56HL21069 / SB: 762839	-	9,628
UNIVERSITY OF WASHINGTON	93.855	PR: 1 R01 AI112640-01A1/ SB:UWSC8525	-	54,013
UNIVERSITY OF WASHINGTON	93.866	750326	-	34,273
UNIVERSITY OF WASHINGTON	93.U51	HHS-N-276-2011-00008-C	-	26,391
UNIVERSITY OF WISCONSIN	93.847	U54DK104310	-	116,000
UNIVERSITY OF WISCONSIN	93.855	PR: R01 AI12135 / SB: 617K536	-	35,664
UNIVERSITY OF WISCONSIN	93.865	153405508	-	17,896
US PHARMACOPEIAL CONVENTION	93.U52	USP Global Fellowship	-	11,192
VANDERBILT UNIVERSITY	93.847	R01DK094199	-	52,249
VANDERBILT UNIVERSITY	93.847	PR: U01DK089572-03 / SB: VUMC:37016	-	(15,015)
VANDERBILT UNIVERSITY	93.855	PR: R21AI097978-01 / SB: 22306-SI	-	8
VISTA SCIENTIFIC LLC	93.701	2R44EY013479-05	-	143

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Federal Grantor/Federal Subdivision or Pass -Through Grantor and Cluster Title	Federal CFDA #	Identifying Information	Subrecipient Expenses	Total Expenses
<b>Department Of Health And Human Services, continued</b>				
WAKE FOREST UNIVERSITY	93.077	3R01CA141643-04S2	\$ -	\$ (13,585)
WAKE FOREST UNIVERSITY	93.393	PR: R01 CA199137 / SB: WFUHSI14040	-	69,557
WASHINGTON STATE UNIVERSITY	93.846	R01 AR062279-01A1	-	26,652
WASHINGTON UNIVERSITY	93.855	2 R01AI081803-06A1	-	61,213
WASHINGTON UNIVERSITY	93.855	PR: R01 AI072195 / SB: WU-14-364-MOD-2	-	114,782
WASHINGTON UNIVERSITY	93.855	PR: R01AI125045-01 / SB: WU-16-307	-	74,623
WASHINGTON UNIVERSITY	93.859	1 R01 GM080591-01A2	-	(35)
WASHINGTON UNIVERSITY	93.859	WU-HT-12-16	-	9,289
WASHINGTON UNIVERSITY	93.867	WU-14-32	-	54,504
WEILL CORNELL MEDICAL COLLEGE	93.103	U01FD005478-01	-	118,479
WELLESLEY COLLEGE	93.110	R40MC26825	-	10,213
WEST AT, INC.	93.U53	6182-506	-	1,155
WOMEN'S & INFANTS HOSPITAL OF R.I.	93.865	NATIONAL INSTITUTES OF HEALTH	-	21,388
WOMEN'S & INFANTS HOSPITAL OF R.I.	93.865	PR: U10HD040600 / SB: 9586	-	435
WOODS HOLE OCEANOGRAPHIC INSTITUTION	93.113	5P01ES021923-02	-	30,449
WORCESTER POLYTECHNIC INSTITUTE	93.226	PR: R21HS024003 / SB 15-21084-00	-	70,655
WORCESTER POLYTECHNIC INSTITUTE	93.361	R15 HL121761-01A1	-	51,872
WORCESTER POLYTECHNIC INSTITUTE	93.394	PR: 1-R01-CA166379-01A1 / SB:14-210730-02	-	125,702
WRIGHT STATE UNIVERSITY	93.279	1R01DA039454	-	34,882
WRIGHT STATE UNIVERSITY	93.279	PR: 1R56DA038366 / SB PO:P0034600	-	10,661
YALE UNIVERSITY	93.213	5 R01 AT008448-02	-	52,844
YALE UNIVERSITY	93.226	5U18HS016978-07	24,118	84,359
YALE UNIVERSITY	93.266	4U18HS016978-09	29,738	92,822
YALE UNIVERSITY	93.279	M12A11395 (A08776)	-	(402)
YALE UNIVERSITY	93.837	R01HL115295-04	-	20,480
YALE UNIVERSITY	93.866	C15A12281(A10334)	-	39,939
<b>Department Of Health And Human Services Total</b>			<b>32,499,482</b>	<b>221,789,361</b>
<b>Social Security Administration</b>				
U.S. SOCIAL SECURITY ADMINISTRATION	96.008		\$ -	\$ 257,464
MATHEMATICA POLICY RESEARCH	96.007	PR: DRC12000001-01-00 / SB 40112S03049	-	66,632
<b>Social Security Administration Total</b>			<b>-</b>	<b>324,096</b>
<b>Department Of Homeland Security</b>				
U.S. DEPARTMENT OF HOMELAND SECURITY	97.061		\$ -	\$ 71,491
MA DEPT OF CONSERVATION AND RECREATION	97.047	CDAPDMC0902UMSI1A	-	(10,231)
MA EMERGENCY MANAGEMENT AGENCY	97.039	HMGF 1994-10	40,140	40,208
MA EMERGENCY MANAGEMENT AGENCY	97.039	ISACDAHM409703UMSI5A	-	212,475
NORTHEAST STATES EMERGENCY CONSORTIUM	97.U01	115-1443	-	3,552
UNIVERSITY OF MARYLAND	97.061	2012-ST-061-CS0001-03	-	4,575
UNIVERSITY OF MINNESOTA	97.061	P001955420	-	23,661
UNIVERSITY OF SOUTHERN CALIFORNIA	97.061	2010-ST-061-RE0001-05	-	3,007
UNIVERSITY OF SOUTHERN CALIFORNIA	97.061	2010-ST-061-RE0001-06	-	28,276
<b>Department Of Homeland Security Total</b>			<b>40,140</b>	<b>377,014</b>

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<b>Agency For International Development</b>				
EDUCATION DEVELOPMENT CENTER, INC.	98.U01	GS-10F-0406P	\$ -	\$ 381,092
FHI 360	98.U02	AID-306-A-1 3-00009-00	190,423	4,148,406
INTERFAITH MEDIATION CENTRE	98.001	AID-620-A-12-00003	-	3,716
INTERFAITH MEDIATION CENTRE	98.001	AID-620-A-12-0003	-	141,366
NATIONAL ACADEMY OF SCIENCES	98.012	ESP-A-00-05-0000 1-00	-	86,690
TETRA TECH, INC.	98.U03	USAID/India	-	88,080
<b>Agency For International Development Total</b>			<u>190,423</u>	<u>4,849,350</u>
<b>Research and Development Cluster Total</b>			<u>47,257,458</u>	<u>358,821,161</u>
<b>Student Financial Assistance Cluster</b>				
<b>Department Of Education</b>				
U.S. DEPARTMENT OF EDUCATION	84.007	SEOG	\$ -	\$ 3,101,681
U.S. DEPARTMENT OF EDUCATION	84.033	Federal Work Study	-	5,238,461
U.S. DEPARTMENT OF EDUCATION	84.063	Pell Grants	-	72,765,132
U.S. DEPARTMENT OF EDUCATION	84.379	TEACH Grants	-	283,896
U.S. DEPARTMENT OF EDUCATION	84.268	William D. Ford Federal Direct Loans	-	183,456,563
U.S. DEPARTMENT OF EDUCATION	84.268	William D. Ford Federal Direct Parent Loans for Undergraduates	-	148,434,091
U.S. DEPARTMENT OF EDUCATION	84.038	Perkins Loans	-	41,229,384
		Loans Outstanding at Beginning of Fiscal Year	-	5,678,948
		Dispersed During the Fiscal Year	-	-
<b>Department Of Education Total</b>			<u>-</u>	<u>460,188,156</u>
<b>Department Of Health And Human Services</b>				
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.264	Nurse Faculty Loan Program	-	-
		Loans Outstanding at Beginning of Fiscal Year	\$ -	\$ 2,582,338
		Dispersed During the Fiscal Year	-	1,034,029
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.342	Health Professions Student Loans	-	-
		Primary Care Loans Outstanding at Beginning of Fiscal Year	-	1,031,806
		Primary Care Loans Dispersed During the Fiscal Year	-	150,000
		Loans for Disadvantaged Students Outstanding at Beginning of Fiscal Year	-	204,614
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.364	Nursing Student Loans Outstanding at Beginning of Fiscal Year	-	31,358
<b>Department Of Health And Human Services Total</b>			<u>-</u>	<u>5,034,145</u>
<b>Student Financial Assistance Cluster Total</b>			<u>-</u>	<u>465,222,301</u>
<b>Other Federal Assistance</b>				
<b>Department Of Agriculture</b>				
<b>SNAP Cluster</b>				
MA DEPT OF TRANSITIONAL ASSISTANCE	10.551	ISA WEL44003076UMS15A	\$ 10,009	\$ 897,497
MA DEPT OF TRANSITIONAL ASSISTANCE	10.551	PRE ISA TBA 115-1839	11,555	2,369,104
<b>SNAP Cluster Total</b>			<u>21,564</u>	<u>3,266,601</u>

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<b>Department Of Housing And Urban Development</b>				
<b>CDBG - Entitlement Grant Cluster</b>				
CITY OF SPRINGFIELD	14.218	20140908	\$ -	\$ (1,528)
CITY OF SPRINGFIELD	14.218	20150795	-	5,519
CITY OF SPRINGFIELD	14.218	20160818	-	7,970
<b>CDBG - Entitlement Grant Cluster Total</b>			<u>-</u>	<u>11,961</u>
<b>Department Of Labor</b>				
<b>Employment Service Cluster</b>				
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.207	ES-27496-15-55-A-25	\$ -	\$ 292,039
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.207	FY15 Wagner/Peysner 90/10	-	50,973
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.801	PR: DV26628M5C / SB: Contract 1027 Mod 2 FY16 DVOP	-	10,115
MA EXEC OFFICE OF LABOR & WORKFORCE DEV	17.207	13DEIWWL000000000000	-	274,327
MA EXEC OFFICE OF LABOR & WORKFORCE DEV	17.207	3250 DEIIC100	-	307,031
MA EXEC OFFICE OF LABOR & WORKFORCE DEV	17.207	325015DEW WL 00000000000000	-	52,234
MA EXEC OFFICE OF LABOR & WORKFORCE DEV	17.207	EOL3250	-	50,149
<b>Employment Service Cluster Total</b>			<u>-</u>	<u>1,036,868</u>
<b>WIA Cluster</b>				
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.260	WIA TITLE ONE DISLOCATED WORKER THROUGH BAWIB	\$ -	\$ 87,072
<b>WIA Cluster Total</b>			<u>-</u>	<u>87,072</u>
<b>WIA/WIOA Cluster</b>				
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.258	AA-26785-15-55-A-25	\$ -	\$ 348,258
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.258	FY 15 BAWIB ADULT	-	83,095
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.278	AA-26785-15-55-A-25	-	475,048
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.278	FY 16 Rapid Response	-	8,500
GREATER NB WORKFORCE INVESTMENT AREA	17.259	203-372-14-8-001	-	18,275
GREATER NB WORKFORCE INVESTMENT AREA	17.259	UMD Camp/Project Success FY16	-	4,555
GREATER NB WORKFORCE INVESTMENT AREA	17.278	404-327-15-6-001	-	3,211
GREATER NB WORKFORCE INVESTMENT AREA	17.278	CT EOL 16CCNBEDWIA	-	840
<b>WIA/WIOA Cluster Total</b>			<u>-</u>	<u>941,782</u>
<b>Department Of Transportation</b>				
<b>Highway Planning and Construction Cluster</b>				
MA DEPARTMENT OF TRANSPORTATION	20.205	0214 INTF00X0201A0072854	\$ 44,844	\$ 114,729
MA DEPARTMENT OF TRANSPORTATION	20.205	72580	-	1,540
MA DEPARTMENT OF TRANSPORTATION	20.205	77077	-	57,183
MA DEPARTMENT OF TRANSPORTATION	20.205	HIS-002S(591)X	-	13,250
MA DEPARTMENT OF TRANSPORTATION	20.205	INTF00X002012A0073160	-	102,381
MA DEPARTMENT OF TRANSPORTATION	20.205	INTF00X002014A0082301	-	152,321
MA DEPARTMENT OF TRANSPORTATION	20.205	INTF00X20150086036 or 85828	-	773,432
MA DEPARTMENT OF TRANSPORTATION	20.205	ISA INTF00X002012A00	2,750	46,596

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<b>Highway Planning and Construction Cluster, continued</b>				
MA DEPARTMENT OF TRANSPORTATION	20.205	ISA INTF00X02015A83600	\$ -	\$ 82,691
MA DEPARTMENT OF TRANSPORTATION	20.205	Implementation of SHRP2 Technologies: Preservation	-	28,942
UNIVERSITY OF NEW HAMPSHIRE	20.205	081110-065	-	1,172
VERMONT AGENCY OF TRANSPORTATION	20.205	0984757 #3	-	5,966
<b>Highway Planning and Construction Cluster Total</b>			<u>47,594</u>	<u>1,380,203</u>
<b>Highway Safety Cluster</b>				
MA DEPARTMENT OF TRANSPORTATION	20.600	SSS-002-S-812-000	\$ -	\$ 39,441
MA DEPT OF STATE POLICE	20.600	ISAPOLF14TCOAPUMSI4A	-	22,596
MA EXEC OFC OF PUBLIC SAFETY & SECURITY	20.600	CTEPΣ015UMASSBSURVY	-	43,476
MA EXEC OFC OF PUBLIC SAFETY & SECURITY	20.616	ISACTEPSUMSCRASHFY15	-	43,970
<b>Highway Safety Cluster Total</b>			<u>-</u>	<u>149,483</u>
<b>Transit Services Programs Cluster</b>				
MA DEPARTMENT OF TRANSPORTATION	20.521	MA-57-X031	\$ -	\$ 132,556
<b>Transit Services Programs Cluster Total</b>			<u>-</u>	<u>132,556</u>
<b>Department Of Education</b>				
<b>Special Education Cluster (IDEA)</b>				
MA DEPT OF ELEMENTARY & SECONDARY ED	84.027	FH027130143	\$ -	\$ (1,850)
MA DEPT OF ELEMENTARY & SECONDARY ED	84.027	14CT8300UMASSAIRCTR	-	40,545
<b>Special Education Cluster (IDEA) Total</b>			<u>-</u>	<u>38,695</u>
<b>TRIO Cluster</b>				
U.S. DEPARTMENT OF EDUCATION	84.042		\$ -	\$ 876,856
U.S. DEPARTMENT OF EDUCATION	84.044		-	404,495
U.S. DEPARTMENT OF EDUCATION	84.047		156,117	1,907,692
U.S. DEPARTMENT OF EDUCATION	84.217		-	249,659
<b>TRIO Cluster Total</b>			<u>156,117</u>	<u>3,438,702</u>
<b>Teacher Quality Partnership Grants Cluster</b>				
BOSTON PLAN FOR EXCELLENCE	84.336	U336SI4088	\$ -	\$ 81,290
<b>Teacher Quality Partnership Grants Cluster Total</b>			<u>-</u>	<u>81,290</u>
<b>Vocational Rehabilitation Cluster</b>				
MAINE DEPARTMENT OF LABOR	84.126	20150401*3086	\$ -	\$ 803
<b>Vocational Rehabilitation Cluster Total</b>			<u>-</u>	<u>803</u>
<b>Department Of Health And Human Services</b>				
<b>Head Start Cluster</b>				
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.600		\$ 376,898	\$ 2,370,308
IMPAQ INTERNATIONAL, LLC	93.600	HHSN263201200019I	-	23,147
<b>Head Start Cluster Total</b>			<u>376,898</u>	<u>2,393,455</u>

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<b>Department Of Homeland Security</b>				
<b>Homeland Security Cluster</b>				
MA EXEC OFC OF PUBLIC SAFETY & SECURITY	97.067	CTSHSP13ExercisUM14A	\$ -	\$ 17,126
MA EXEC OFC OF PUBLIC SAFETY & SECURITY	97.067	PR: CTUASI14EXERCISUM15A / SB: UASI EPS Actv Shtr	-	129,272
<b>Homeland Security Cluster Total</b>			<u>-</u>	<u>146,398</u>
<b>Department Of Agriculture</b>				
NATL INSTITUTE OF FOOD AND AGRICULTURE	10.500		\$ 75,300	\$ 3,801,829
U.S. DEPARTMENT OF AGRICULTURE	10.435		-	37,683
U.S. DEPARTMENT OF AGRICULTURE	10.500		-	3,665
KANSAS STATE UNIVERSITY	10.500	SI5059	-	20,252
KANSAS STATE UNIVERSITY	10.500	SI6062	-	12,689
MA DEPT OF ELEMENTARY & SECONDARY ED	10.225	13-035-SF-69	9,211	24,714
MA DEPT OF ELEMENTARY & SECONDARY ED	10.560	CT-DOE-15CT7500UMASSMAKECOUN	-	292,143
MA DEPT OF TRANSITIONAL ASSISTANCE	10.557	WEL44003064UMSI3A	-	8,768
<b>Department Of Agriculture Total</b>			<u>84,511</u>	<u>4,201,743</u>
<b>Department Of Defense</b>				
NATIONAL SECURITY AGENCY	12.900		\$ -	\$ 9,544
<b>Department Of Defense Total</b>			<u>-</u>	<u>9,544</u>
<b>Department Of Justice</b>				
U.S. DEPARTMENT OF JUSTICE	16.525		\$ 9,702	\$ 72,518
U.S. DEPARTMENT OF JUSTICE	16.726		367,589	509,184
MA DEPARTMENT OF MENTAL HEALTH	16.812	MA DMH/DOJ/IRAPS	-	3,264
MA DEPARTMENT OF PUBLIC HEALTH	16.589	INTF3222M020115023	-	59
MA OFFICE FOR VICTIM ASSISTANCE	16.575	2014ISAVWAMOVA2014VOCAUMSI4	-	(571)
MA OFFICE FOR VICTIM ASSISTANCE	16.575	FY2015/2015VOCAVWA	-	(774)
MA OFFICE FOR VICTIM ASSISTANCE	16.575	ISAVWAVOCAEVWCUM15A	-	(356)
MA OFFICE FOR VICTIM ASSISTANCE	16.575	MOVA-VOCA/FY2016	-	171,479
<b>Department Of Justice Total</b>			<u>377,291</u>	<u>754,803</u>
<b>Department Of Labor</b>				
U.S. DEPARTMENT OF LABOR	17.502		\$ -	\$ 63,589
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.225	Contract IOSCC10 16 RESEA	-	64,141
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.225	FY 16 UI SPACE	-	11,300
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.225	UI-27117-15-55-A-25	-	157,406
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.245	PR: T A26730VU0 / SB: Contract #10SCC10	-	12,490
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.277	FY 15 BAWIB Job Driven NEG	-	59,712
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.277	HAEMONETICS NEG / SB: 10SCC10	-	101,062
ECONOMIC DEVEL & INDUST CORP	17.268	Life Science Internship Program	-	40,770
ECONOMIC SYSTEMS, INC.	17.720	EFSLMP-15_121504	-	35,452

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<b>Department of Labor, continued</b>				
MASSASOIT COMMUNITY COLLEGE	17.282	Navigator - TAACCT IV	\$ -	\$ 1,621
<b>Department Of Labor Total</b>			-	547,543
<b>Department Of State</b>				
U.S. DEPARTMENT OF STATE	19.009		\$ -	\$ 651,093
U.S. DEPARTMENT OF STATE	19.401		-	233,918
U.S. DEPARTMENT OF STATE	19.501		-	204,014
FULBRIGHT COMMISSION ARGENTINA	19.U02	ARG 2015	-	37,786
FULBRIGHT COMMISSION ARGENTINA	19.U03	ARG 2016	-	31,458
INSTITUTE OF INTERNATIONAL EDUCATION	19.021	IZ-100-11-GR070	-	54,851
MERIDIAN INTERNATIONAL CENTER	19.021	PR: SIZ-100-15-CA023 / SB: IYELP2016	-	42,458
MERIDIAN INTERNATIONAL CENTER	19.021	PR: SIZ-100-13-GR039 / SB: 021-0012-0345	-	93,475
<b>Department Of State Total</b>			-	1,349,053
<b>Department Of Transportation</b>				
COMMONWEALTH CORPORATION	20.U10	4200 Mod 3	\$ -	\$ 62,344
PIONEER VALLEY TRANSIT AUTHORITY	20.518	PVTA PRIME DOT (BUSLIFT)	-	663,996
<b>Department Of Transportation Total</b>			-	726,340
<b>Appalachian Regional Commission</b>				
APPALACHIAN REGIONAL COMMISSION	23.011		\$ -	\$ 248
<b>Appalachian Regional Commission Total</b>			-	248
<b>National Endowment For The Arts</b>				
ARTSMIDWEST	45.024	NEA Program - The Big Read	\$ -	\$ 2,114
NEW ENGLAND FOUNDATION FOR THE ARTS	45.025	15-29604	-	700
NEW ENGLAND FOUNDATION FOR THE ARTS	45.025	15-29658	-	10,000
NEW ENGLAND FOUNDATION FOR THE ARTS	45.025	15-29659	-	2,575
NEW ENGLAND FOUNDATION FOR THE ARTS	45.025	15-29720	-	7,105
<b>National Endowment For The Arts Total</b>			-	22,494
<b>National Endowment For The Humanities</b>				
NATIONAL ENDOWMENT FOR THE HUMANITIES	45.163		\$ 1,854	\$ 365,482
MASS HUMANITIES	45.164	039-15	-	5,231
<b>National Endowment For The Humanities Total</b>			1,854	370,713
<b>Department Of Veterans Affairs</b>				
VETERAN AFFAIRS BOSTON HEALTHCARE SYS	64.U08	Ctrct # GA-10F-0211M/Obligation#523D43002(43033)	\$ -	\$ 13,316
<b>Department Of Veterans Affairs Total</b>			-	13,316
<b>Department Of Education</b>				
U.S. DEPARTMENT OF EDUCATION	84.031		\$ -	\$ 203,987
U.S. DEPARTMENT OF EDUCATION	84.129		-	331,694
U.S. DEPARTMENT OF EDUCATION	84.133		-	(50,233)
U.S. DEPARTMENT OF EDUCATION	84.200		-	977
U.S. DEPARTMENT OF EDUCATION	84.264		804,018	2,136,699
U.S. DEPARTMENT OF EDUCATION	84.299		-	293,299
U.S. DEPARTMENT OF EDUCATION	84.325		5,000	549,019
U.S. DEPARTMENT OF EDUCATION	84.327		109,610	499,600

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<b>Department Of Education, continued</b>				
U.S. DEPARTMENT OF EDUCATION	84.365		\$ -	\$ 439,864
U.S. DEPARTMENT OF EDUCATION	84.407		-	401,236
BOSTON PLAN FOR EXCELLENCE	84.215	U405A100117	-	1,733
MA DEPARTMENT OF EARLY EDUCATION & CARE	84.412	ARRA - RTTT13008761UMASSDON	17,500	282,435
MA DEPARTMENT OF HIGHER EDUCATION	84.367	E1014489	-	5,676
MA DEPT OF ELEMENTARY & SECONDARY ED	84.002	340-007-5-11255-P	-	29,443
MA DEPT OF ELEMENTARY & SECONDARY ED	84.002	340-061-5-1255-P	-	21,277
MA DEPT OF ELEMENTARY & SECONDARY ED	84.002	PRE115-1524	-	381,366
MA DEPT OF ELEMENTARY & SECONDARY ED	84.360	FS360A1069 / ISA Acct # 7048-1500 (765U)	-	95,921
MA DEPT OF ELEMENTARY & SECONDARY ED	84.366	CTDOE 1247UMASSDONAHUE0293	-	152,694
MA DEPT OF ELEMENTARY & SECONDARY ED	84.395	ARRA - SS3951A1058 / ISA Acct # 7060-7888(515V)	-	84,313
MA EXECUTIVE OFFICE OF EDUCATION	84.395	CT-EDU-13CTEDUMASSONLINE130	-	6,149
NATIONAL WRITING PROJECT	84.367	#2A/92-MA01-SEED2012 NWP 2014-2016	-	8,729
NATIONAL WRITING PROJECT	84.367	03-MA04-SEED 2012	-	8,498
NATIONAL WRITING PROJECT	84.367	U367D150004	-	250
SALUS UNIVERSITY	84.325	H325H140002-14A	-	43,131
SPECIAL OLYMPICS, INC.	84.128	Project Unify	-	488,819
UNIVERSITY OF MINNESOTA	84.133	H133B130006	-	54,914
<b>Department Of Education Total</b>			<u>936,128</u>	<u>6,471,490</u>
<b>Department Of Health And Human Services</b>				
ADMINISTRATION ON AGING	93.048		\$ -	\$ 737
CENTERS FOR DISEASE CONTROL & PREVENTION	93.318		-	25,550
HEALTH RESOURCES SERVICE ADMINISTRATION	93.178		-	169,662
NIH-NATIONAL INSTITUTES OF HEALTH	93.879		130,655	236,545
OFFICE OF MINORITY HEALTH	93.137		12,050	114,011
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.048		-	283,654
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.433		-	293,617
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.631		-	35
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.U54	HHSP23320100015YC	-	684
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.U55	HHSP233201500006C	-	2,509,896
BROCKTON NEIGHBORHOOD HEALTH CENTER	93.570	90EE0909	-	(1,692)
CHILDREN'S HOSPITAL	93.110	5T73MC00020-20-00	-	50
CHILDREN'S HOSPITAL	93.110	6 T73MC00020-23-00	-	163,594
CHILDREN'S HOSPITAL	93.632	90DD0808-01-00	-	17,301
FLORIDA DEVELOPMENT DISABILITIES COUNCIL	93.630	907EM14C	8,000	32,820
MA DEPARTMENT OF EARLY EDUCATION & CARE	93.505	PRF46 - CT EEC 0900 FY12SRF120210UMASSDO	-	165,416
MA DEPARTMENT OF MENTAL HEALTH	93.104	821014080220000	44,095	188,492
MA DEPARTMENT OF MENTAL HEALTH	93.243	1 H79 SM061663-01	-	46,326

**UNIVERSITY OF MASSACHUSETTS**  
**Notes to the Schedule of Expenditures of Federal Awards**  
**For the year ended June 30, 2016**

Federal Grantor/Federal Subdivision or Pass -Through Grantor and Cluster Title	Federal CFDA #	Identifying Information	Subrecipient Expenses	Total Expenses
<b>Department Of Health And Human Services, continued</b>				
MA DEPARTMENT OF MENTAL HEALTH	93.243	MA DMH/DOJ/IRAPS	\$ 132,074	\$ 251,077
MA DEPARTMENT OF MENTAL HEALTH	93.829	16UMMS CBHCPAYMENTSW	-	133,308
MA DEPARTMENT OF PUBLIC HEALTH	93.104	INTF2400HH2500224213	-	73,667
MA DEPARTMENT OF PUBLIC HEALTH	93.243	INTF2400HH2706811198	-	28,169
MA DEPARTMENT OF PUBLIC HEALTH	93.243	PR: INTF233MM3W16007103 34512-9086	-	110,291
MA DEPARTMENT OF PUBLIC HEALTH	93.283	INTF4126H23SPRF46004	-	180,761
MA DEPARTMENT OF PUBLIC HEALTH	93.735	CDC	-	120,242
MA DEPARTMENT OF PUBLIC HEALTH	93.757	4120HH250024053	-	50,214
MA DEPARTMENT OF PUBLIC HEALTH	93.918	PR: HRSA Ryan White / SB: INTF4943MM3200120038	-	701,213
MA DEPARTMENT OF PUBLIC HEALTH	93.918	PR: Part C Outpatient / SB:INTF4943MM3200120038	-	(5,308)
MA DEPARTMENT OF PUBLIC HEALTH	93.945	4104HH4300522026	-	2,324
MA DEPARTMENT OF PUBLIC HEALTH	93.994	PR: HRSA / SB: INTF3054M03300819017	-	132
MA DEPARTMENT OF PUBLIC HEALTH	93.994	INTF3054M03300819017	-	27,562
MA DEPT OF PUBLIC HEALTH, BSAS	93.243	1 H79T1025347	-	113,886
MA DEPT OF PUBLIC HEALTH, BSAS	93.243	PR: SAMHSA / SB: N/A	-	43,160
MA EXECUTIVE OFFICE OF HLTH & HUMAN SVC	93.609	15UMMSMOANALYTICSSW	-	11,665
MA EXECUTIVE OFFICE OF HLTH & HUMAN SVC	93.624	PR: CMMS / SB: PCPR	-	321,139
POLICY RESEARCH ASSOCIATES	93.243	1809LC-65	-	6,525
SPAN, INC.	93.243	1H79T1024794-01	-	27,707
TUFTS UNIVERSITY	93.859	K12GM074869	-	7,430
WASHINGTON STATE DEPT OF SOC & HLTH SVCS	93.243	1465-24434	-	14,899
WASHINGTON STATE DEPT OF SOC & HLTH SVCS	93.243	1565-30187	-	44,882
<b>Department Of Health And Human Services Total</b>			<u>326,874</u>	<u>6,511,643</u>
<b>Corporation For National And Community Service</b>				
BOSTON FOUNDATION	94.019	Fed Grant #14SIHMA002	\$ -	\$ 40,787
<b>Corporation For National And Community Service Total</b>			<u>-</u>	<u>40,787</u>
<b>Agency For International Development</b>				
U.S. AGENCY INTERNATIONAL DEVELOPMENT	98.001		\$ -	\$ 34,825
U.S. AGENCY INTERNATIONAL DEVELOPMENT	98.U04	306-A-00-00515-00 Mod #9	-	(88,281)
<b>Agency For International Development Total</b>			<u>-</u>	<u>(53,456)</u>
<b>Other Federal Assistance Total</b>			<u>2,328,831</u>	<u>34,072,130</u>
<b>Grand Total</b>			<u>49,586,289</u>	<u>858,115,592</u>

**UNIVERSITY OF MASSACHUSETTS**  
**Notes to the Schedule of Expenditures of Federal Awards**  
**For the year ended June 30, 2016**

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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, 2016.

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 also prepared on the accrual basis of accounting. The information in this schedule is presented in accordance with OMB Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations* or with the requirements of Title 2 U.S. Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit requirements for Federal Awards* (Uniform Guidance), as applicable. Therefore, some amounts presented in this 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 are represented on the Schedule in accordance with Uniform Guidance Part 200.502 *Basis of determining federal awards expended* to include previous balance of amounts outstanding and current loans dispersed for which the University is the lender.

**2. MATCHING COSTS**

Matching costs, i.e., the nonfederal share of program costs, are not included in the accompanying Schedule.

**3. RELATIONSHIP TO FEDERAL FINANCIAL REPORTS**

The regulations and guidelines governing preparation of federal financial reports do not always match the accounting principles used by the University to present amounts in the accompanying Schedule. Accordingly, the amounts reported in the federal financial reports do not necessarily agree with the amounts reported in the accompanying Schedule which is prepared on the accrual basis, as explained in note 1.

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

Federal award expenditures consist of direct and indirect costs which are commonly referred to as facilities and administrative (F&A) costs. Direct costs are those that can be readily identified with an individual federally sponsored project. The salary of a principal investigator of a sponsored research project and the materials consumed by the project are examples of direct costs.

Unlike direct costs, indirect costs cannot be readily identified with an individual federally sponsored project. Indirect costs are the costs of services and resources that benefit both sponsored and non-sponsored project and activities. Indirect costs consist of expenses incurred for administration, library, plant maintenance, and building and equipment depreciation.

**UNIVERSITY OF MASSACHUSETTS**  
**Notes to the Schedule of Expenditures of Federal Awards**  
**For the year ended June 30, 2016**

The University and federal agencies use an indirect cost rate to charge indirect costs to individual federally sponsored projects. The rate is a result of a number of complex cost allocation procedures that the University uses to allocate its indirect costs to both sponsored and non-sponsored activities. Rates are negotiated with and approved by the University's cognizant audit agency, the U.S. Department of Health and Human Services.

The on-campus facilities and administrative cost rate in place for at each campus during the fiscal year ended June 30, 2016 was as follows:

<b>Campus</b>	<b>Rate</b>	<b>Basis</b>	<b>Rate Period – July 1 to June 30</b>
Amherst	59.50 %	Modified Total Direct Costs	2015 through 2018
Boston	52.50 %	Modified Total Direct Costs	2015 through 2017
Central	26.00 %	Modified Total Direct Costs	2015 through 2017
Dartmouth	55.00 %	Modified Total Direct Costs	2015 through 2016
Lowell	53.00 %	Modified Total Direct Costs	2015 through 2016
Worcester	67.50 %	Modified Total Direct Costs	2015 through 2019

Other rates in place for University facilities and administrative cost recovery during fiscal year 2016 ranged from 18.25% to 68% of modified direct costs.

**5. FEDERAL LOAN PROGRAMS**

The following schedule presents new loans processed by the University for eligible students under federal student loan programs and federally guaranteed loan programs for the year ended June 30, 2016:

	<b>CFDA Number</b>	<b>Amount Disbursed</b>	
<b>William D. Ford Federal Direct Loan Programs</b>			
Ford Loans	84.268	\$ 183,456,563	
Parent Loans for Undergraduate Students	84.268	148,434,091	
Total William D. Ford Federal Direct Loan Program		331,890,654	
<b>Other Loan Programs</b>			
Perkins Loan	84.038	5,678,948	\$ 39,685,134
Primary Care Loans	93.342	150,000	1,012,663
Loans for Disadvantaged Students	93.342	-	164,012
Nurse Faculty Loan Program	93.264	1,034,029	3,460,284
Nurse Faculty Loan Program - ARRA	93.264	-	75,563
Nursing Student Loans	93.364	-	28,380
Total Other Loan Programs		6,862,977	\$ 44,426,036
Total Federal Loan Programs		\$ 338,753,631	

**UNIVERSITY OF MASSACHUSETTS**  
**Notes to the Schedule of Expenditures of Federal Awards**  
**For the year ended June 30, 2016**

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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. Loans outstanding at the beginning of the year and loans made during the year under these programs are included in the federal expenditures presented in this Schedule.

**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  
**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 years ended June 30, 2016 and 2015, and the related notes to the financial statements, which collectively comprise the University’s basic financial statements, and have issued our report thereon dated December 15, 2016.

The financial statements of the 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 control 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 cursive script that reads "Grant Thornton LLP".

Boston, Massachusetts  
December 15, 2016

**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, 2016. 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 Educational Loan Servicing LLC (d/b/a/ Campus Partners) to perform these compliance activities. This third-party servicer has obtained a compliance examination from another practitioner for the year ended June 30, 2016 in accordance with the U.S. Department of Education’s Audit Guide, *Audits of Federal Student Financial Assistance Programs at Participating Institutions 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, 2016.

#### **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  
December 15, 2016

**PART III**

**SCHEDULE OF FINDINGS AND QUESTIONED COSTS**

**UNIVERSITY OF MASSACHUSETTS**  
**Schedule of Findings and Questioned Costs**  
**For the year ended June 30, 2016**

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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:**

Program or Cluster Title	Federal CFDA Number
Research and Development Cluster	Multiple
Student Financial Assistance Cluster	Multiple
SNAP Cluster	Multiple

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

Auditee qualified as low-risk auditee? X yes    \_\_ no

**UNIVERSITY OF MASSACHUSETTS**  
**Schedule of Findings and Questioned Costs**  
**For the year ended June 30, 2016**

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**SECTION II - FINANCIAL STATEMENT FINDINGS**

None noted.

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

None noted.

**PART IV**

**SUMMARY SCHEDULE OF PRIOR YEAR AUDIT FINDINGS**

**UNIVERSITY OF MASSACHUSETTS**  
**Summary Schedule of Prior year Audit Findings**  
**For the year ended June 30, 2016**

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**Finding No. 2015-001: Pledge accounting**

Corrective action was taken and the finding has been resolved.

**Finding No. 2015-002: Late reporting**

**Compliance Requirement: Reporting**

Lowell Campus

Original Response

The UMass Lowell campus will reinstate a monthly review of the centralized listing that will include appropriate follow-up if there are any past due filings, edits to the timeline, sign-off and supporting documentation will be included in the grant file. This is the responsibility of the Director of Research Accounting or designee. Until such time as the position is filled, the Assistant Director and Grant Accounting Supervisor will review the report to ensure all reports are filed by the due date. In addition, a new policy will be drafted to ensure all accounting office staff and principal investigators are aware of requirement that reports are to be filed on time.

FY16 Status

The monthly review process has been reinstated, and the milestone tracking report improved. The Assistant Director and Grant Accounting Supervisor review and approve all reports due and completed status to ensure there are no late filings. In addition, the Research Accounting staff has been trained to ensure all reports due are completed on time and any issues resolved with the Principal Investigator (“PI”) before the due date. The importance of reporting responsibilities is also emphasized in on-going training sessions for PIs and department administrators. Campus internal policy guidelines for charges to Sponsored Research Awards was updated to include financial reporting responsibility. This information is one of several internal policies communicated on the Research Administration website. Other reporting requirements, e.g., Technical Reports, are included in Board of Trustees policy document T94-034 “Policy for the Development and Administration of Grants, Contracts and Cooperative Agreements for Sponsored Programs.”

**Contact Person(s):**

Brent Morgan, Controller

978-934-3231