



Jeffrey A. Meyers
Commissioner

Meredith J. Telus
Director

STATE OF NEW HAMPSHIRE
DEPARTMENT OF HEALTH AND HUMAN SERVICES
PROGRAM PLANNING & INTEGRITY
BUREAU OF IMPROVEMENT & INTEGRITY

129 PLEASANT STREET, CONCORD, NH 03301
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October 5, 2018

His Excellency, Governor Christopher T. Sununu
And the Honorable Council
State House
Concord, New Hampshire 03301

Requested Action

Authorize the Department of Health and Human Services, Program Planning & Integrity, Bureau of Improvement & Integrity to amend an agreement with the University of Massachusetts Medical School, Center for Health Law and Economics, (Vender #177576), 55 Lake Avenue, Worcester, MA 01655 to provide policy and technical consulting services for New Hampshire Disproportionate Share Hospital Program by extending the completion date from October 31, 2018 to June 30, 2019, effective October 31, 2018 or date of Governor and Executive Council approval, whichever is later. This is a no cost extension. 50% Medicaid Enhancement Tax Funds, 50% Federal Funds.

This agreement was originally approved by the Governor and Executive Council on November 14, 2012, Item #45 and subsequently July 22, 2015, Item #10.

Funds to support this request are available in the following accounts in State Fiscal Year 2019, with authority to adjust amounts within the price limitation and adjust encumbrances between State Fiscal Years through the Budget Office without further approval from the Governor and Executive Council approval, if needed and justified.

05-95-95-9560010-6126 HEALTH AND SOCIAL SERVICES, DEPARTMENT OF HEALTH AND HUMAN SERVICES, HHS: COMMISSIONER, OFFICE MEDICAID & BUSINESS POLICY, MEDICAID ADMINISTRATION

Fiscal Year	Class	Title	Activity Code	Current Budget	Increase - Decrease	Modified Budget
2013	102-500731	Contracts for Program Svcs	47000004	\$130,680.00	\$0	\$130,680.00
			<i>Sub-Total:</i>	<i>\$130,680.00</i>	<i>\$0</i>	<i>\$130,680.00</i>

**05-00095-047-470010-7943 HEALTH AND SOCIAL SERVICES, HEALTH AND HUMAN SVCS
 DEPT OF, HHS: OFC OF MEDICAID & BUS PLCY, OFF. OF MEDICAID & BUS, POLICY,
 UNCOMPENSATED CARE FUND.**

Fiscal Year	Class	Title	Activity Code	Current Budget	Increase - Decrease	Modified Budget
2014	102-500731	Contracts for Program Svcs	47000004	\$200,920.00	\$0	\$200,920.00
2015	102-500731	Contracts for Program Svcs	47000004	\$205,943.00	\$0	\$205,943.00
2016	102-500731	Contracts for Program Svcs	47000004	\$205,943.00	\$0	\$205,943.00
2017	102-500731	Contracts for Program Svcs	47000004	\$205,943.00	\$0	\$205,943.00
2018	102-500731	Contracts for Program Svcs	47000004	\$212,807.76	\$0	\$212,807.76
2019	102-500731	Contracts for Program Svcs	47000004	\$72,080.04	\$0	\$72,080.04
			<i>Sub-Total:</i>	\$631,433.80	\$0	\$1,103,636.80
			Total:	\$1,234,279.70	\$0	\$1,234,316.80

Explanation

The purpose of this amendment is to extend the contract completion date in order to continue receiving expert external technical assistance from the University of Massachusetts Medical School in the area of Disproportionate Share Hospital (DSH) payments for the SFY 2019 payment. The Department plans to issue an RFP for these services prior to this contract expiration date, June 30, 2019.

DSH is a federal Medicaid program created in 1981 to compensate hospitals for their uncompensated care provided to Medicaid or uninsured patients. States are not obligated to participate in the DSH program. If States chose to participate, they are subject to numerous federal regulations and money distributed to hospitals is subject to recoupment upon audit. New Hampshire has chosen to participate, and has a signed agreement with New Hampshire hospitals structuring our State version of the program.

In 2009, the New Hampshire Legislature enacted Chapter 133.212 (HB 2), which required the Department of Health and Human Services to redesign the Disproportionate Share Hospital Program within the parameters of State and federal law. Since that time, New Hampshire's Disproportionate Share Hospital Program has undergone significant scrutiny, analysis, and modification in order to comply with State and federal law. In addition, recently the DSH program has had to be modified as a result of litigation at the State and federal level.

Over the last six years UMass has consulted with the State to develop, update, and issue the uncompensated care form revise administrative rules, interpret State and Federal law and court orders, write State Plan Amendments and notices, answer federal funding questions, calculate DSH payments, calculate required recoupsments or redistributions; review and report supplement versus DSH payments; identify deemed DSH hospitals; develop agendas for CMS conference calls; manage the audit program for the State's DSH auditors (Myers and Stauffer) to complete the DSH exam of 26 New Hampshire Hospitals, to include writing the State response; and generally to provide advice and analysis of the DSH program whenever questions arise from the Department, Legislature, Governor's Office, or Department of Justice.

The personnel of the University of Massachusetts Medical School personnel have the experience and expertise necessary to navigate through the Disproportionate Share Hospital Program's complex legal requirements and policy considerations and to advise the Department of Health and Human Services accordingly. The availability of specialized and expert services will enable the Department to continue the long-term policy and technical work necessary for State and federal legal compliance.

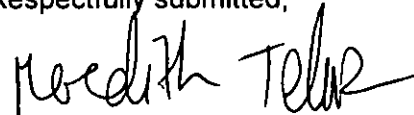
Should the Governor and Executive Council not approve this request, The Department would not have the necessary expertise to comply with State and federal law regulating the Disproportionate Share Hospital program. The Department would have difficulty completing Disproportionate Share Hospital program tasks in a timely and accurate manner; thereby exposing the Department and State to an increased risk of federal funds being withheld, of continued and costly litigation from hospitals, and liability for incorrect or noncompliant Disproportionate Share Hospital program calculations.

Area Served: 26 New Hampshire hospitals

Source of Funds: 50% Medicaid Enhancement Tax funds and 50% Federal funds.

In the event Federal Funds become no longer available, General Funds will not be requested to support this program.

Respectfully submitted,



Meredith J. Telus
Director

Approved by:



Jeffrey A. Meyers
Commissioner



State of New Hampshire
Department of Health and Human Services
Amendment #2 to the University of Massachusetts Medical School DSH Consultant Contract

This 2nd Amendment to the University of Massachusetts Medical School DSH Consultant contract (hereinafter referred to as "Amendment #2") dated this 19th day of September, 2018, is by and between the State of New Hampshire, Department of Health and Human Services (hereinafter referred to as the "State" or "Department") and University of Massachusetts Medical School, (hereinafter referred to as "the Contractor"), a public university with a place of business at 333 South Street, Shrewsbury, MA 01545.

WHEREAS, pursuant to an agreement (the "Contract") approved by the Governor and Executive Council on November 14, 2012, Item # 45, and as amended on July 22, 2015, Item #10, the Contractor agreed to perform certain services based upon the terms and conditions specified in the Contract as amended and in consideration of certain sums specified; and

WHEREAS, the State and the Contractor have agreed to make changes to the scope of work, payment schedules and terms and conditions of the contract; and

WHEREAS, pursuant to Form P-37, General Provisions, Paragraph 18, the State may modify the scope of work and the payment schedule of the contract upon written agreement of the parties and approval from the Governor and Executive Council; and

WHEREAS, the parties agree to extend the term of the agreement, and modify the scope of services to support continued delivery of these services; and

NOW THEREFORE, in consideration of the foregoing and the mutual covenants and conditions contained in the Contract and set forth herein, the parties hereto agree to amend as follows:

1. Form P-37 General Provisions, Block 1.7, Completion Date, to read:
June 30, 2019.
2. Form P-37, General Provisions, Block 1.9, Contracting Officer for State Agency, to read:
Nathan D. White, Director.
3. Form P-37, General Provisions, Block 1.10, State Agency Telephone Number, to read:
603-271-9631.
4. Standard Exhibit A, Section B, Paragraph B7 to read:
Participate in conference calls with the Department of Health and Human Services, as requested, throughout the term of this Agreement.
5. Standard Exhibit A, Section D Project Management and Implementation Work Plan, Major Milestones to read:
 - D1. Kick off meeting and Fiscal Year 2016 Workplan by November 2015 and repeated annually during the duration of the contract period;
 - D2. Resolution of Current State Plan Amendments and CMS Access Questions, November 2015 through February 2016;
 - D3. Advice on need for new SPAs and notices, as needed, November 2015 through June 2019;
 - D4. Draft new SPAs and notices, as needed, November 2015 through June 2019;
 - D5. Develop fiscal models for annual DSH payments in conformity with state and federal rules



- and state budget directives, November 2015, August 2016 through November 2016, August 2017 through June 2019;
- D6. Develop, update and issue annual DSH data form, December 2015, December 2016, December 2017 and by or before December 2018;
 - D7. Review DSH Data Feedback and calculation of preliminary DSH payments at least annually, and whenever DSH payment adjustments need to be made;
 - D8. Calculate interim final DSH payments (subject to final state budget directives and federally-required independent DSH audits by independent DSH audit contractor, under 42 CFR 455.300-304);
 - D9. Review and develop methods for calculations of state uncompensated care costs, DSH limits, Hospital UPLs, Deemed DSH identification, and P1/P2 provider tax test whenever some hospitals may be exempted from tax, Ongoing throughout the term of this Agreement;
 - D10. Assist with the development of responses to CMS inquires, and draft and/or edit and as requested review all draft responses, Ongoing throughout the term of this Agreement;
 - D11. Develop agenda and materials for CMS conference calls to resolve CMS questions; participate in calls; amend SPA provisions, provide other advice as needed to secure CMS approvals whenever needed during the term of this Agreement;
 - D12. Brief hospitals, solicit input and modify proposal, as appropriate and requested, in response to hospitals feedback; assist the Department with providing hospital technical assistance on reimbursement matters, DSH payments, hospital cost reports and related financial information as needed throughout the term of this Agreement;
 - D13. As requested, develop format and presentation materials for an annual provider/stakeholder forum with the Department officials to review past year's program, policy and process, develop understanding of upcoming year's program requirements, policies, parameters and procedures; solicit feedback on provider and stakeholder concerns each year, or other annual period as the Department prefers;
 - D14. Provide advice, analysis, document drafting, meeting participation, presentations for state Legislative Committees, Legislative leadership, as requested, and no less than annually throughout the term of this Agreement;
 - D15. Provide advice, analysis document drafting, meeting participation and presentations, as requested by the Department, for Executive Branch communications needs, including Governor's office or staff, DRA officials, Department of Justice attorneys, or other Department of the Executive Branch or the Department's leadership throughout the term of this Agreement;
 - D16. Provide advice, analysis, document drafting, meeting participation and/or preparation, and presentations, as requested, for conference calls, negotiations or meetings with CMS staff and officials, the Secretary of the United States Department of Health and Human Services or other federal oversight agency (e.g. OIG) throughout the term of this agreement;
 - D17. Provide advice and assistance to the Department on relationship management and negotiation strategies as requested throughout the term of this agreement;
 - D18. As requested, develop modeling for alternative DSH and Health Care Related Tax programs that are aligned with the leverage State options and mandates under the federal



health law, PPACA, in advance of the effective dates of various options and mandates, throughout the term of this Agreement;

- D19. Assist in development of periodic reports, as requested;
- D20. Assist, advise and participate in CMS conference calls and meetings, as requested;
- D21. Analyze and explain any final or new federal regulations or guidance relative to Access or DSH or Health Care Related Tax compliance throughout the term of this Agreement;
- D22. Assist with Provider – Department communications relative to access policies, plans, issues and reporting, as requested;
- D23. Assist the Department staff, provide advice and assist in the preparation or review of material relating to the incorporation of Access monitoring and measurement procedures into the terms, contract provisions and contractor management and oversight of the Care Management Plans, as requested throughout the term of this Agreement.

6. Standard Exhibit B, Methods and Conditions Precedent to Payment, add:

Staff Hourly Rates November 1, 2018 through June 30, 2019

Staff Position	Rate per Hour
UMMS Expert Advisor	\$265.00
Medicare Cost Report Expert (as needed)	\$140.50
Principal (Michael Grenier)	\$202.50
Senior Associate or Consultant	\$185.50
Associate	\$150.00
Senior Analyst	\$109.00
Analyst	\$90.00

Not to exceed the Form P-37, General Provisions, Item 1.8, Price Limitation

- 7. Standard Exhibit D, Certification Regarding Drug-Free Workplace Requirements, Period Covered by this Certification, to read:
 From November 1, 2012 to June 30, 2019
- 8. Standard Exhibit E, Certification Regarding Lobbying, Contract Period, to read:
 From November 1, 2012 to June 30, 2019
- 9. Add Exhibit K, DHHS Information Security Requirements, V4. Last update 04.04.2018

New Hampshire Department of Health and Human Services
University of Massachusetts Medical School DSH Consultant



This amendment shall be effective upon the date of Governor and Executive Council approval.
IN WITNESS WHEREOF, the parties have set their hands as of the date written below,

State of New Hampshire
Department of Health and Human Services

10/5/18
Date

[Signature]
Name:
Title:

University of Massachusetts Medical School

10/11/18
Date

[Signature]
Name: Patti Onorato
Title: Associate Vice Chancellor, Operations, CUMM

Acknowledgement of Contractor's signature:

State of MASSACHUSETTS County of Worcester on 10/1/18, before the undersigned officer, personally appeared the person identified directly above, or satisfactorily proven to be the person whose name is signed above, and acknowledged that s/he executed this document in the capacity indicated above.

[Signature]
Signature of Notary Public or Justice of the Peace

Notary Public
Name and Title of Notary or Justice of the Peace

My Commission Expires: 7-24-20



JUDITH A. NELSON
Notary Public
Commonwealth of Massachusetts
My Commission Expires July 24, 2020

New Hampshire Department of Health and Human Services
University of Massachusetts Medical School DSH Consultant



The preceding Amendment, having been reviewed by this office, is approved as to form, substance, and execution.

OFFICE OF THE ATTORNEY GENERAL

10/10/18
Date

[Signature]
Name: Michael A. York
Title: Attorney

I hereby certify that the foregoing Amendment was approved by the Governor and Executive Council of the State of New Hampshire at the Meeting on: _____ (date of meeting)

OFFICE OF THE SECRETARY OF STATE

Date

Name:
Title:



A. Definitions

The following terms may be reflected and have the described meaning in this document:

1. "Breach" means the loss of control, compromise, unauthorized disclosure, unauthorized acquisition, unauthorized access, or any similar term referring to situations where persons other than authorized users and for an other than authorized purpose have access or potential access to personally identifiable information, whether physical or electronic. With regard to Protected Health Information, "Breach" shall have the same meaning as the term "Breach" in section 164.402 of Title 45, Code of Federal Regulations.
2. "Computer Security Incident" shall have the same meaning "Computer Security Incident" in section two (2) of NIST Publication 800-61, Computer Security Incident Handling Guide, National Institute of Standards and Technology, U.S. Department of Commerce.
3. "Confidential Information" or "Confidential Data" means all confidential information disclosed by one party to the other such as all medical, health, financial, public assistance benefits and personal information including without limitation, Substance Abuse Treatment Records, Case Records, Protected Health Information and Personally Identifiable Information.

Confidential Information also includes any and all information owned or managed by the State of NH - created, received from or on behalf of the Department of Health and Human Services (DHHS) or accessed in the course of performing contracted services - of which collection, disclosure, protection, and disposition is governed by state or federal law or regulation. This information includes, but is not limited to Protected Health Information (PHI), Personal Information (PI), Personal Financial Information (PFI), Federal Tax Information (FTI), Social Security Numbers (SSN), Payment Card Industry (PCI), and or other sensitive and confidential information.

4. "End User" means any person or entity (e.g., contractor, contractor's employee, business associate, subcontractor, other downstream user, etc.) that receives DHHS data or derivative data in accordance with the terms of this Contract.
5. "HIPAA" means the Health Insurance Portability and Accountability Act of 1996 and the regulations promulgated thereunder.
6. "Incident" means an act that potentially violates an explicit or implied security policy, which includes attempts (either failed or successful) to gain unauthorized access to a system or its data, unwanted disruption or denial of service, the unauthorized use of a system for the processing or storage of data; and changes to system hardware, firmware, or software characteristics without the owner's knowledge, instruction, or consent. Incidents include the loss of data through theft or device misplacement, loss or misplacement of hardcopy documents, and misrouting of physical or electronic



mail, all of which may have the potential to put the data at risk of unauthorized access, use, disclosure, modification or destruction.

7. "Open Wireless Network" means any network or segment of a network that is not designated by the State of New Hampshire's Department of Information Technology or delegate as a protected network (designed, tested, and approved, by means of the State, to transmit) will be considered an open network and not adequately secure for the transmission of unencrypted PI, PFI, PHI or confidential DHHS data.
8. "Personal Information" (or "PI") means information which can be used to distinguish or trace an individual's identity, such as their name, social security number, personal information as defined in New Hampshire RSA 359-C:19, biometric records, etc., alone, or when combined with other personal or identifying information which is linked or linkable to a specific individual, such as date and place of birth, mother's maiden name, etc.
9. "Privacy Rule" shall mean the Standards for Privacy of Individually Identifiable Health Information at 45 C.F.R. Parts 160 and 164, promulgated under HIPAA by the United States Department of Health and Human Services.
10. "Protected Health Information" (or "PHI") has the same meaning as provided in the definition of "Protected Health Information" in the HIPAA Privacy Rule at 45 C.F.R. § 160.103.
11. "Security Rule" shall mean the Security Standards for the Protection of Electronic Protected Health Information at 45 C.F.R. Part 164, Subpart C, and amendments thereto.
12. "Unsecured Protected Health Information" means Protected Health Information that is not secured by a technology standard that renders Protected Health Information unusable, unreadable, or indecipherable to unauthorized individuals and is developed or endorsed by a standards developing organization that is accredited by the American National Standards Institute.

I. RESPONSIBILITIES OF DHHS AND THE CONTRACTOR

A. Business Use and Disclosure of Confidential Information.

1. The Contractor must not use, disclose, maintain or transmit Confidential Information except as reasonably necessary as outlined under this Contract. Further, Contractor, including but not limited to all its directors, officers, employees and agents, must not use, disclose, maintain or transmit PHI in any manner that would constitute a violation of the Privacy and Security Rule.
2. The Contractor must not disclose any Confidential Information in response to a



request for disclosure on the basis that it is required by law, in response to a subpoena, etc., without first notifying DHHS so that DHHS has an opportunity to consent or object to the disclosure.

3. If DHHS notifies the Contractor that DHHS has agreed to be bound by additional restrictions over and above those uses or disclosures or security safeguards of PHI pursuant to the Privacy and Security Rule, the Contractor must be bound by such additional restrictions and must not disclose PHI in violation of such additional restrictions and must abide by any additional security safeguards.
4. The Contractor agrees that DHHS Data or derivative there from disclosed to an End User must only be used pursuant to the terms of this Contract.
5. The Contractor agrees DHHS Data obtained under this Contract may not be used for any other purposes that are not indicated in this Contract.
6. The Contractor agrees to grant access to the data to the authorized representatives of DHHS for the purpose of inspecting to confirm compliance with the terms of this Contract.

II. METHODS OF SECURE TRANSMISSION OF DATA

1. Application Encryption. If End User is transmitting DHHS data containing Confidential Data between applications, the Contractor attests the applications have been evaluated by an expert knowledgeable in cyber security and that said application's encryption capabilities ensure secure transmission via the internet.
2. Computer Disks and Portable Storage Devices. End User may not use computer disks or portable storage devices, such as a thumb drive, as a method of transmitting DHHS data.
3. Encrypted Email. End User may only employ email to transmit Confidential Data if email is encrypted and being sent to and being received by email addresses of persons authorized to receive such information.
4. Encrypted Web Site. If End User is employing the Web to transmit Confidential Data, the secure socket layers (SSL) must be used and the web site must be secure. SSL encrypts data transmitted via a Web site.
5. File Hosting Services, also known as File Sharing Sites. End User may not use file hosting services, such as Dropbox or Google Cloud Storage, to transmit Confidential Data.
6. Ground Mail Service. End User may only transmit Confidential Data via *certified* ground mail within the continental U.S. and when sent to a named individual.
7. Laptops and PDA. If End User is employing portable devices to transmit Confidential Data said devices must be encrypted and password-protected.
8. Open Wireless Networks. End User may not transmit Confidential Data via an open



- wireless network. End User must employ a virtual private network (VPN) when remotely transmitting via an open wireless network.
9. Remote User Communication. If End User is employing remote communication to access or transmit Confidential Data, a virtual private network (VPN) must be installed on the End User's mobile device(s) or laptop from which information will be transmitted or accessed.
 10. SSH File Transfer Protocol (SFTP), also known as Secure File Transfer Protocol. If End User is employing an SFTP to transmit Confidential Data, End User will structure the Folder and access privileges to prevent inappropriate disclosure of information. SFTP folders and sub-folders used for transmitting Confidential Data will be coded for 24-hour auto-deletion cycle (i.e. Confidential Data will be deleted every 24 hours).
 11. Wireless Devices. If End User is transmitting Confidential Data via wireless devices, all data must be encrypted to prevent inappropriate disclosure of information.

III. RETENTION AND DISPOSITION OF IDENTIFIABLE RECORDS

The Contractor will only retain the data and any derivative of the data for the duration of this Contract. After such time, the Contractor will have 30 days to destroy the data and any derivative in whatever form it may exist, unless, otherwise required by law or permitted under this Contract. To this end, the parties must:

A. Retention

1. The Contractor agrees it will not store, transfer or process data collected in connection with the services rendered under this Contract outside of the United States. This physical location requirement shall also apply in the implementation of cloud computing, cloud service or cloud storage capabilities, and includes backup data and Disaster Recovery locations.
2. The Contractor agrees to ensure proper security monitoring capabilities are in place to detect potential security events that can impact State of NH systems and/or Department confidential information for contractor provided systems.
3. The Contractor agrees to provide security awareness and education for its End Users in support of protecting Department confidential information.
4. The Contractor agrees to retain all electronic and hard copies of Confidential Data in a secure location and identified in section IV. A.2
5. The Contractor agrees Confidential Data stored in a Cloud must be in a FedRAMP/HITECH compliant solution and comply with all applicable statutes and regulations regarding the privacy and security. All servers and devices must have currently-supported and hardened operating systems, the latest anti-viral, anti-hacker, anti-spam, anti-spyware, and anti-malware utilities. The environment, as a



Exhibit K

DHHS Information Security Requirements

whole, must have aggressive intrusion-detection and firewall protection.

6. The Contractor agrees to and ensures its complete cooperation with the State's Chief Information Officer in the detection of any security vulnerability of the hosting infrastructure.

B. Disposition

1. If the Contractor will maintain any Confidential Information on its systems (or its sub-contractor systems), the Contractor will maintain a documented process for securely disposing of such data upon request or contract termination; and will obtain written certification for any State of New Hampshire data destroyed by the Contractor or any subcontractors as a part of ongoing, emergency, and or disaster recovery operations. When no longer in use, electronic media containing State of New Hampshire data shall be rendered unrecoverable via a secure wipe program in accordance with industry-accepted standards for secure deletion and media sanitization, or otherwise physically destroying the media (for example, degaussing) as described in NIST Special Publication 800-88, Rev 1, Guidelines for Media Sanitization, National Institute of Standards and Technology, U. S. Department of Commerce. The Contractor will document and certify in writing at time of the data destruction, and will provide written certification to the Department upon request. The written certification will include all details necessary to demonstrate data has been properly destroyed and validated. Where applicable, regulatory and professional standards for retention requirements will be jointly evaluated by the State and Contractor prior to destruction.
2. Unless otherwise specified, within thirty (30) days of the termination of this Contract, Contractor agrees to destroy all hard copies of Confidential Data using a secure method such as shredding.
3. Unless otherwise specified, within thirty (30) days of the termination of this Contract, Contractor agrees to completely destroy all electronic Confidential Data by means of data erasure, also known as secure data wiping.

IV. PROCEDURES FOR SECURITY

- A. Contractor agrees to safeguard the DHHS Data received under this Contract, and any derivative data or files, as follows:
 1. The Contractor will maintain proper security controls to protect Department confidential information collected, processed, managed, and/or stored in the delivery of contracted services.
 2. The Contractor will maintain policies and procedures to protect Department confidential information throughout the information lifecycle, where applicable, (from creation, transformation, use, storage and secure destruction) regardless of the media used to store the data (i.e., tape, disk, paper, etc.).



3. The Contractor will maintain appropriate authentication and access controls to contractor systems that collect, transmit, or store Department confidential information where applicable.
4. The Contractor will ensure proper security monitoring capabilities are in place to detect potential security events that can impact State of NH systems and/or Department confidential information for contractor provided systems.
5. The Contractor will provide regular security awareness and education for its End Users in support of protecting Department confidential information.
6. If the Contractor will be sub-contracting any core functions of the engagement supporting the services for State of New Hampshire, the Contractor will maintain a program of an internal process or processes that defines specific security expectations, and monitoring compliance to security requirements that at a minimum match those for the Contractor, including breach notification requirements.
7. The Contractor will work with the Department to sign and comply with all applicable State of New Hampshire and Department system access and authorization policies and procedures, systems access forms, and computer use agreements as part of obtaining and maintaining access to any Department system(s). Agreements will be completed and signed by the Contractor and any applicable sub-contractors prior to system access being authorized.
8. If the Department determines the Contractor is a Business Associate pursuant to 45 CFR 160.103, the Contractor will execute a HIPAA Business Associate Agreement (BAA) with the Department and is responsible for maintaining compliance with the agreement.
9. The Contractor will work with the Department at its request to complete a System Management Survey. The purpose of the survey is to enable the Department and Contractor to monitor for any changes in risks, threats, and vulnerabilities that may occur over the life of the Contractor engagement. The survey will be completed annually, or an alternate time frame at the Departments discretion with agreement by the Contractor, or the Department may request the survey be completed when the scope of the engagement between the Department and the Contractor changes.
10. The Contractor will not store, knowingly or unknowingly, any State of New Hampshire or Department data offshore or outside the boundaries of the United States unless prior express written consent is obtained from the Information Security Office leadership member within the Department.
11. Data Security Breach Liability. In the event of any security breach Contractor shall make efforts to investigate the causes of the breach, promptly take measures to prevent future breach and minimize any damage or loss resulting from the breach. The State shall recover from the Contractor all costs of response and recovery from



DHHS Information Security Requirements

the breach, including but not limited to: credit monitoring services, mailing costs and costs associated with website and telephone call center services necessary due to the breach.

12. Contractor must, comply with all applicable statutes and regulations regarding the privacy and security of Confidential Information, and must in all other respects maintain the privacy and security of PI and PHI at a level and scope that is not less than the level and scope of requirements applicable to federal agencies, including, but not limited to, provisions of the Privacy Act of 1974 (5 U.S.C. § 552a), DHHS Privacy Act Regulations (45 C.F.R. §5b), HIPAA Privacy and Security Rules (45 C.F.R. Parts 160 and 164) that govern protections for individually identifiable health information and as applicable under State law.
13. Contractor agrees to establish and maintain appropriate administrative, technical, and physical safeguards to protect the confidentiality of the Confidential Data and to prevent unauthorized use or access to it. The safeguards must provide a level and scope of security that is not less than the level and scope of security requirements established by the State of New Hampshire, Department of Information Technology. Refer to Vendor Resources/Procurement at <https://www.nh.gov/doi/vendor/index.htm> for the Department of Information Technology policies, guidelines, standards, and procurement information relating to vendors.
14. Contractor agrees to maintain a documented breach notification and incident response process. The Contractor will notify the State's Privacy Officer, and additional email addresses provided in this section, of any security breach within two (2) hours of the time that the Contractor learns of its occurrence. This includes a confidential information breach, computer security incident, or suspected breach which affects or includes any State of New Hampshire systems that connect to the State of New Hampshire network.
15. Contractor must restrict access to the Confidential Data obtained under this Contract to only those authorized End Users who need such DHHS Data to perform their official duties in connection with purposes identified in this Contract.
16. The Contractor must ensure that all End Users:
 - a. comply with such safeguards as referenced in Section IV A. above, implemented to protect Confidential Information that is furnished by DHHS under this Contract from loss, theft or inadvertent disclosure.
 - b. safeguard this information at all times.
 - c. ensure that laptops and other electronic devices/media containing PHI, PI, or PFI are encrypted and password-protected.
 - d. send emails containing Confidential Information only if encrypted and being sent to and being received by email addresses of persons authorized to receive such information.



Exhibit K

DHHS Information Security Requirements

- e. limit disclosure of the Confidential Information to the extent permitted by law.
- f. Confidential Information received under this Contract and individually identifiable data derived from DHHS Data, must be stored in an area that is physically and technologically secure from access by unauthorized persons during duty hours as well as non-duty hours (e.g., door locks, card keys, biometric identifiers, etc.).
- g. only authorized End Users may transmit the Confidential Data, including any derivative files containing personally identifiable information, and in all cases, such data must be encrypted at all times when in transit, at rest, or when stored on portable media as required in section IV above.
- h. in all other instances Confidential Data must be maintained, used and disclosed using appropriate safeguards, as determined by a risk-based assessment of the circumstances involved.
- i. understand that their user credentials (user name and password) must not be shared with anyone. End Users will keep their credential information secure. This applies to credentials used to access the site directly or indirectly through a third party application.

Contractor is responsible for oversight and compliance of their End Users. DHHS reserves the right to conduct onsite inspections to monitor compliance with this Contract, including the privacy and security requirements provided in herein, HIPAA, and other applicable laws and Federal regulations until such time the Confidential Data is disposed of in accordance with this Contract.

V. LOSS REPORTING

The Contractor must notify the State's Privacy Officer, Information Security Office and Program Manager of any Security Incidents and Breaches within two (2) hours of the time that the Contractor learns of their occurrence.

The Contractor must further handle and report Incidents and Breaches involving PHI in accordance with the agency's documented Incident Handling and Breach Notification procedures and in accordance with 42 C.F.R. §§ 431.300 - 306. In addition to, and notwithstanding, Contractor's compliance with all applicable obligations and procedures, Contractor's procedures must also address how the Contractor will:

- 1. Identify Incidents;
- 2. Determine if personally identifiable information is involved in Incidents;
- 3. Report suspected or confirmed Incidents as required in this Exhibit or P-37;
- 4. Identify and convene a core response group to determine the risk level of Incidents and determine risk-based responses to Incidents; and



5. Determine whether Breach notification is required, and, if so, identify appropriate Breach notification methods, timing, source, and contents from among different options, and bear costs associated with the Breach notice as well as any mitigation measures.

Incidents and/or Breaches that implicate PI must be addressed and reported, as applicable, in accordance with NH RSA 359-C:20.

VI. PERSONS TO CONTACT

- A. DHHS contact for Data Management or Data Exchange issues:

DHHSInformationSecurityOffice@dhhs.nh.gov

- B. DHHS contacts for Privacy issues:

DHHSPrivacyOfficer@dhhs.nh.gov

- C. DHHS contact for Information Security issues:

DHHSInformationSecurityOffice@dhhs.nh.gov

- D. DHHS contact for Breach notifications:

DHHSInformationSecurityOffice@dhhs.nh.gov

DHHSPrivacy.Officer@dhhs.nh.gov

Alternative Documentation Provided in lieu of Certificate of Good Standing

A Certificate of Good Standing from the State of New Hampshire is not applicable to the University of Massachusetts. The University of Massachusetts is a public university created by the legislature of the Commonwealth of Massachusetts under statute M.G.L. ch. 75.

TAX STATUS OF THE UNIVERSITY OF MASSACHUSETTS

TAX-EXEMPT STATUS: The University of Massachusetts is tax-exempt under section 115 of the Internal Revenue Code and/or under the doctrine of intergovernmental tax immunity. Section 115 provides tax-exemption for "income derived from the exercise of any essential governmental function." In Revenue Ruling 75-436, the Internal Revenue Service recognized that citizen education was an essential governmental function.

CONTRIBUTIONS TO THE UNIVERSITY: For income tax purposes, section 170 provides that donations made for exclusively public purposes, to or for the use of a state or political subdivision, are deductible against the taxable income of individuals, corporations, and other taxpayers, subject to various limitations. For estate tax purposes, section 2055(a) provides that bequests, legacies, devises, or transfers made by an estate for exclusively public purposes, to or for the use of any state or political subdivision, are deductible from the value of the gross estate subject to various limitations. For gift tax purposes, section 2522(a) provides that transfers made for exclusively public purposes, to or for the use of any state or political subdivision, are deductible in computing taxable gifts subject to various limitations. The Internal Revenue Service has ruled (Private Letter Rulings 8336068, 8935012, and 9017014) that contributions to state universities qualify as being made for "exclusively public purposes" and "to or for the use of" a state. Although private letter rulings cannot be relied upon as legal precedent, they give a good indication of how the IRS would rule on a similar fact pattern. If donors prefer to contribute to a tax-exempt organization with an IRS determination letter and with section 501(c)(3) tax-exempt status, they should contribute to the University of Massachusetts Foundation, Inc.

Federal Tax Identification Numbers:

UNIVERSITY OF MASSACHUSETTS: 043167352

COMMONWEALTH OF MASSACHUSETTS: 04-6002284

(The Commonwealth of Massachusetts F.E.I.N. is used for payroll tax purposes.)



CERTIFICATION
PROGRAM

DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
PHILADELPHIA, PA 19255

Date: June 25, 2012



000182

Taxpayer: UNIVERSITY OF MASSACHUSETTS
TIN: 04-3167352
Tax Year: 2012

I certify that the above-named entity is a State, or political
~~subdivision of a State, or an agency, instrumentality, or public~~
educational organization of a State or political subdivision, which is
exempt from U.S. tax under the Internal Revenue Code, and is a resident
of the United States of America for purposes of U.S. taxation.

P. J. Bazick
Field Director, Accounts Management

**EXTRACT FROM THE RECORDS OF
UNIVERSITY OF MASSACHUSETTS**

Granting Authority to Execute Contracts and All Other Instruments

I, Zunilka Barrett, Secretary of the Board of Trustees of the University of Massachusetts, do hereby certify that the following is a true and complete copy of a vote duly adopted by the Board of Trustees of the University of Massachusetts at a meeting duly called and held on the fifth day of February, nineteen hundred and ninety-seven at the University of Massachusetts, Chancellor's Conference Room, Boston, Massachusetts:

“Further, to affirm that, except as to matters governed by the University of Massachusetts Intellectual Property Policy (Doc. T96-040), the Treasurer of the University of Massachusetts or his designee shall be the sole contracting officer of the University with the Authority to execute all contract, grants, restricted gifts (excluding endowments), and amendments thereto for sponsored programs in instruction, research, or public service, unless and until otherwise voted by the Board of Trustees.”

I further certify that the Senior Vice President for Administration & Finance and Treasurer of the University, Lisa A. Calise, has retained the right to remain the sole contracting officer of the University of Massachusetts, but in her absence, she has designated Andrew W. Russell, Senior Assistant Vice President of Operations and Associate Treasurer.

I further certify that effective August 7, 2018, the following is a list of designated individuals authorized in accordance with the afore referenced votes to review and execute all grants and contracts for sponsored programs in instruction, research and public service that are applicable to and received on behalf of the University of Massachusetts for their respective campuses.

Amherst Campus

Kumble R. Subbaswamy, Chancellor, Amherst Campus, Amherst, Massachusetts,
Robert S. Feldman, Deputy Chancellor, Amherst Campus, Amherst, Massachusetts,
Michael Malone, Vice Chancellor, Amherst Campus, Amherst, Massachusetts,
Carol P. Sprague, Director of the Office of Grants and Contracts Administration, Amherst Campus, Amherst, Massachusetts,
Jennifer A. Donais, Director of Research Compliance, Amherst Campus, Amherst, Massachusetts,
Theresa W. Girardi, Assistant Director, Amherst Campus, Amherst, Massachusetts,
Nancy E. Stewart, Assistant Director, Amherst Campus, Amherst, Massachusetts,
James B. Ayres, Assistant Director, Amherst Campus, Amherst, Massachusetts,
Laura J. Howard, Associate Director, Division of Continuing Education, Amherst Campus, Amherst, Massachusetts
Steven D. Goodwin, Deputy Chancellor, Amherst Campus, Amherst, Massachusetts

Boston Campus

Katherine S. Newman, Interim Chancellor, Boston Campus, Boston, Massachusetts,
Kathleen Kirleis, Vice Chancellor for Administration and Finance, Boston Campus, Boston, Massachusetts,
Emily McDermott, Interim Provost & Vice Chancellor for Academic Affairs, Boston Campus, Boston, Massachusetts,

Bala Sundaram, Vice Provost for Research and Strategic Initiatives and Dean of Graduate Studies, Boston Campus, Boston, Massachusetts,

Matthew L. Meyer, Associate Vice Provost for Research and Director of the Office of Research & Sponsored Programs, Boston Campus, Boston, Massachusetts,

Shala A. Bonyun, Assistant Director for the Office of Research and Sponsored Programs, Boston Campus, Boston, Massachusetts

Dartmouth Campus

Robert E. Johnson, Chancellor, Dartmouth Campus, Dartmouth, Massachusetts,

Mohammad A. Karim, Provost & Executive Vice Chancellor for Academic and Student Affairs & Chief Operating Officer, Dartmouth Campus, Dartmouth, Massachusetts,

Tesfay Meressi, Interim Vice Chancellor for Research & Economic Development, Dartmouth Campus, Dartmouth, Massachusetts,

Elena Glatman, Director of Research Administration, Dartmouth Campus, Dartmouth, Massachusetts,

Michelle M. Plaud, Manager of Pre and Post Award Administration, Dartmouth Campus, Dartmouth, Massachusetts,

Deborah Dolan, Pre-Award and Subrecipient Manager, Dartmouth Campus, Dartmouth Massachusetts,

Michael Barone, Interim Vice Chancellor for Administration and Finance, Dartmouth Campus, Dartmouth, Massachusetts,

Lowell Campus

Jacqueline F. Moloney, Chancellor, Lowell Campus, Lowell, Massachusetts,

Joanne Yestramski, Senior Vice Chancellor for Finance, Operations and Strategic Planning, Lowell Campus, Lowell, Massachusetts,

Michael Vayda, Provost, Lowell Campus, Lowell, Massachusetts,

Steven O'Riordan, Associate Vice Chancellor for Financial Services, Lowell Campus, Lowell, Massachusetts,

Susan Puryear, Director, Office of Research Administration, Lowell Campus, Lowell, Massachusetts,

Julie Chen, Vice Chancellor for Research & Innovation, Lowell Campus, Lowell, Massachusetts,

Anne Maglia, Associate Vice Chancellor, Research Administration, Lowell Campus, Lowell, Massachusetts,

President's Office

Katie Stebbins, Vice President for Economic Development, President's Office, Boston, Massachusetts,

Eric Heller, Deputy Director for the Donahue Institute, President's Office, Boston, Massachusetts,

Worcester

Michael F. Collins, M.D., Chancellor, University of Massachusetts Medical School, Worcester, Massachusetts,

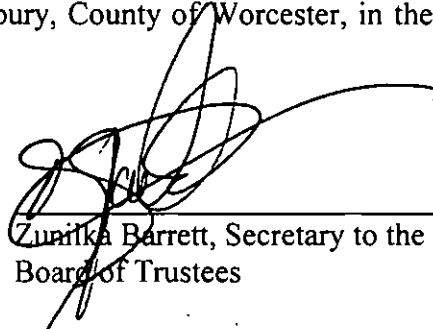
James Glasheen, Executive Vice Chancellor Innovation & Business Development, University of Massachusetts Medical School, Worcester, Massachusetts,

John C. Lindstedt, Executive Vice Chancellor for Administration & Finance, University of Massachusetts Medical School, Worcester, Massachusetts,

Katherine Luzuriaga, M.D., Vice Provost for Clinical and Translational Research, University of Massachusetts Medical School, Worcester, Massachusetts,
Janice Lagace, Associate Director Research Funding Services, University of Massachusetts Medical School, Worcester, Massachusetts,
Patti Onorato, Associate Vice Chancellor for Operations, Commonwealth Medicine, University of Massachusetts Medical School, Worcester, Massachusetts,
Terence R. Flotte, M.D., Dean, School of Medicine, Provost and Executive Deputy Chancellor, University of Massachusetts Medical School, Worcester, Massachusetts,
James McNamara, Executive Director, Office of Technology Management, University of Massachusetts Medical School, Worcester, Massachusetts,
Marcy Culverwell, Associate Vice Chancellor for Administration & Finance, University of Massachusetts Medical School, Worcester, Massachusetts,
Amy Miarecki, Senior Director Post Award Administration & Compliance, University of Massachusetts Medical School, Worcester, Massachusetts,
Danielle Howard, Director Clinical Research Operations, University of Massachusetts Medical School, Worcester Massachusetts,
Melissa Spragens, Director of Sponsored Programs, University of Massachusetts Medical School, Worcester Massachusetts

I further certify that Lisa A. Calise, Andrew W. Russell, Kumble R. Subbaswamy, Robert S. Feldman, Michael Malone, Carol P. Sprague, Jennifer A. Donais, Theresa W. Girardi, Nancy E. Stewart, James B. Ayres, Laura J. Howard, Steven D. Goodwin, Katherine S. Newman, Kathleen Kirleis, Emily McDermott, Bala Sundaram, Matthew L. Meyer, Shala A. Bonyun, Robert E. Johnson, Mohammad A. Karim, Michael Barone, Tesfay Meressi, Elena Glatman, Michelle M. Plaud, Deborah Dolan, Jacqueline F. Moloney, Joanne Yestramski, Steven O'Riordan, Julie Chen, Michael Vayda, Anne Maglia, Susan Puryear, Katie Stebbins, Eric Heller, Michael F. Collins, MD, James Glasheen, John C. Lindstedt, Katherine Luzuriaga, MD, Janice Lagace, Patti Onorato, Terence R. Flotte, MD, James McNamara, Marcy Culverwell, Amy Miarecki, Danielle Howard, and Melissa Spragens are members of the University Administration with its principal office located at 333 South Street, Shrewsbury, County of Worcester, in the Commonwealth of Massachusetts.

Date: 10/1/2018



Zunika Barrett, Secretary to the
Board of Trustees



University of Massachusetts

Amherst • Boston • Dartmouth • Lowell • Medical School • UMassOnline

To Whom It May Concern:

The University of Massachusetts, as an entity of the Commonwealth of Massachusetts, is self-insured for Worker's Compensation in accordance with Chapter 152 of the Massachusetts General Laws.

If you have any questions or concerns please contact me at 774-455-7616. Thank you.

Sincerely,

A handwritten signature in cursive script that reads "Kate Leahy".

Kate Leahy, J.D.
Insurance Analyst



Commonwealth Medicine
University of Massachusetts Medical School
333 South Street
Shrewsbury, MA 01545-2732 USA
508.856.6222 (office) 508.856.6100 (fax)

Commonwealth Medicine

Mission, Vision, Values

Mission

To create solutions that improve health and well-being, focused on those served by public programs.

Vision

To distinguish UMass Medical School as a national leader in transforming publicly-funded health care.

Values

We achieve our mission with integrity, collaboration, innovation, excellence, and evidence-based solutions.



University of Massachusetts Medical School

Our Mission, Values and Vision

The mission of the University of Massachusetts Medical School is to advance the health and well-being of the people of the commonwealth and the world through pioneering advances in education, research and health care delivery.

Values and Vision

As a combined enterprise with our clinical partner, UMass Memorial Health Care, we value:

- improving health and enhancing access to care for people within our community, the commonwealth, and the world;
- excellence in achieving the highest quality standards in patient care and satisfaction, education and research;
- common good as an institutional focus, exercised both internally and externally;
- collegiality as we work through a shared vision for the common good;
- integrity in decision-making and actions held to the highest ethical standards;
- diversity promoted within our institution to foster an atmosphere of compassion, courtesy, and mutual respect, stimulating inventiveness and broadening our talents and perspectives;
- academic opportunity and scholarship through high-quality, affordable educational programs for the training of physicians, nurses, advanced practitioners, researchers, and educators; and
- scientific advancement made possible by embracing creative thinking and innovation to yield an understanding of the causes, prevention, and treatment of human disease for the pursuit of knowledge and the benefit of people everywhere.

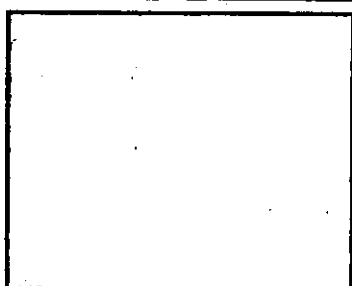
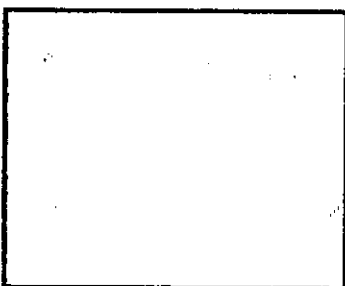
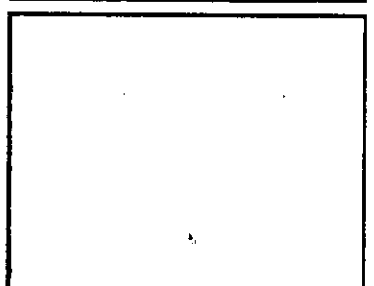
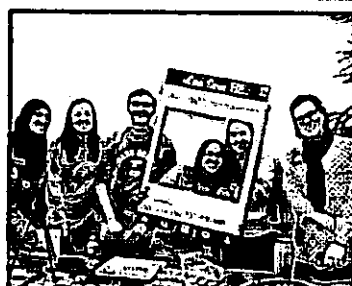
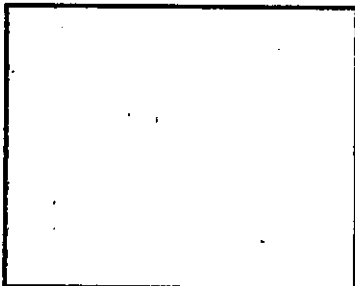
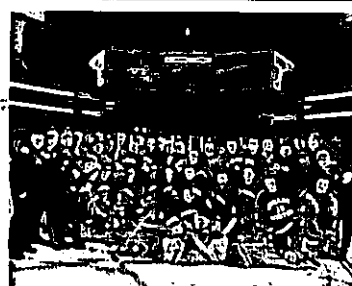
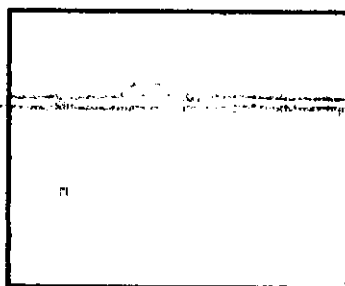


To become one of the nation's most distinguished academic health sciences centers, we seek to:

- achieve excellence in the practice of safe, high-quality care;
- design and implement innovative educational methods to train educators, clinicians, and scientists to meet the future health care workforce needs in Massachusetts and the United States;
- develop educators, clinicians and scientists who are equipped to become the next generation of outstanding leaders in health care;
- develop and capitalize on the strengths of all staff who provide the operational support for an academic health sciences center;
- nurture ongoing progress in the basic sciences to fuel breakthrough discoveries that will transform the practice of medicine;
- translate scientific discoveries to improve patient outcomes and address the root causes of poor health; and
- partner to create and optimize health care initiatives that improve the health of the communities we serve.

UNIVERSITY OF MASSACHUSETTS

Annual Financial Report 2017



University of Massachusetts
Amherst • Boston • Dartmouth • Lowell • Medical School • UMassOnline

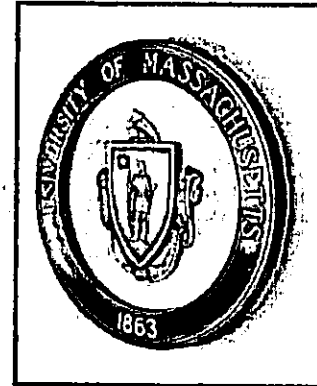
This publication is distributed by the University Controller's Office to present audited financial statements to the community, governmental bodies, investors and creditors.

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University Administration

As of December 2017



Board of Trustees:

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Norman Peters (Vice Chair), Paxton, MA
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Henry M. Thomas III, J.D., Springfield, MA
Steven A. Tolman
Victor Woolridge, Springfield, MA
Charles F. Wu, Newton, MA

Gray R. Milkowski (UMass Boston Student Trustee), Shirley, MA
(Non-Voting Student)
Samantha E. Reid (UMass Dartmouth Student Trustee), Leominster, MA
(Non-Voting Student)
Derek J. Dunlea (UMass Amherst Student Trustee), Randolph, MA
(Voting Student)
Melinda Reed, UMass Lowell Student Trustee, Lowell, MA
(Non-Voting Student)
Camilla D. Yu (UMass Worcester Student Trustee), Worcester, MA
(Voting Student)

Officers of the University

Martin T. Meehan J.D., President
Kumble R. Subbaswamy, Ph.D., Chancellor, UMass Amherst
Barry Mills, J.D., Ph.D. Interim Chancellor, UMass Boston
Robert E. Johnson, Ph.D., Chancellor, UMass Dartmouth
Jacqueline Moloney, Ed.D., Chancellor, UMass Lowell
Michael F. Collins, M.D., Chancellor, UMass Worcester
and Senior Vice President for Health Sciences
James R. Julian, J.D., Executive Vice President and Chief Operating Officer
Lisa A. Calise, Senior Vice President for Administration and Finance & Treasurer
Marcellette G. Williams, Ph.D., Senior Vice President for Academic Affairs and International Relations
Zunilka Barrett, Secretary to the Board of Trustees





December 14, 2017

To the Board of Trustees
and President Martin T. Meehan, J.D.

We are pleased to submit the annual Financial Report of the University of Massachusetts for the year ended June 30, 2017. The enclosed financial statements incorporate all financial activity of the University and its five campuses. These statements have been audited by an independent certified public accountant and are fully represented in the financial report of the Commonwealth of Massachusetts. Detailed information about each campus is provided as supplemental information.

The financial information presented in the Financial Report is designed to aid a wide variety of readers to assess the effectiveness of the University's management of its resources in meeting its primary mission of instruction, research, and public service. This report is intended to form a comprehensive and permanent record of the finances of the University of Massachusetts, and it is submitted as the public accounting of the University's financial affairs for the fiscal year ended June 30, 2017 including comparative information as of June 30, 2016.

The University's net position increased \$250 million from \$2.8 billion in fiscal year 2016 to \$3.1 billion in fiscal year 2017. This increase is primarily attributed to strong investment return, increases in tuition and auxiliary revenue from both a rate increase and enrollment increase, grant revenue due to new government and private grant activity, and statutory changes that resulted in a change in tuition retention and other non-operating revenue for the University.

Each year, the Board of Trustees reviews a five-year projection for key financial indicators that are likely to determine the success of the University over the long term. For the key indicators of operating margin, primary reserve, and debt service to operations, for FY2017, the University was on target with meeting projections. Overall, the University continues to make strategic investments that support the achievement of its long-term financial objectives of growth and stability.

Respectfully submitted,

Lisa A. Calise
Senior Vice President of Administration &
Finance and Treasurer

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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, 2017 and 2016, and the related notes to the financial statements, which collectively comprise the University's basic financial statements as listed in the table of contents.

Management's responsibility for the financial statements

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

Auditor's responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the University's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Grant Thornton LLP
U.S. member firm of Grant Thornton International Ltd

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, 2017 and June 30, 2016, and the respective changes in financial position and, where applicable, cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other matters

Required supplementary information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 7 through 16 and the Schedule of the University's Proportionate Share of the Net Pension Liability and the Schedule of the University's Contributions for the Massachusetts State Employees' Retirement System on page 53 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.

Emphasis of Matter

The financial statements of the University are intended to present the financial position, the changes in financial position and cash flows that are attributable to the transactions of the University. They do not purpose to, and do not present fairly the position of the Commonwealth of Massachusetts as of June 30, 2017 and 2016, the changes in its financial position, or where applicable, its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Other reporting required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report, dated December 14, 2017, on our consideration of the University's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the University's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the University's internal control over financial reporting and compliance.

Grant Thornton LLP

Boston, Massachusetts
December 14, 2017



Management's Discussion and Analysis (unaudited)

Introduction

The University of Massachusetts 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, 2017 with comparative information as of June 30, 2016 and June 30, 2015. 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 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 2016, the University enrolled 63,978 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 \$250.2 million from \$2.8 billion in fiscal year 2016 to \$3.1 billion in fiscal year 2017. Net position at June 30, 2015 was \$2.7 billion.

From fiscal year 2016 to fiscal year 2017, the University's operating revenues increased by \$39.5 million driven by an increase in tuition and fee and auxiliary revenue from both a rate increase and enrollment increases and grant revenue due to new government and private grant activity. Operating expenses increased by \$22.6 million primarily driven by a collective bargaining rate increase, a state fringe rate increase and depreciation associated with the University's capital plan. Non-operating revenues increased \$68.4 million primarily attributed to strong double-digit investment gains and two changes in state laws. The first allowed for the University to retain tuition revenue without remitting a portion back to the Commonwealth, and adjusted State Appropriations as a result. The second change in state law relates to learning contracts entered into by the Medical School and certain medical students. These contracts give students the option of deferring a portion of their tuition until after residency training, and cancelling all or a portion of their tuition if they practice primary care medicine in the Commonwealth for a prescribed time period. As a result of changes in legislation, outstanding balances from these learning contracts were recorded as non-operating income in 2017.

Using the Annual Financial Report

The Statement of Net Position, Statement of Revenues, Expenses and Changes in Net Position and the Statement of Cash Flows 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 present 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 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 Statements Of Net Position – University (Excludes Related Organizations) As of June 30, 2017, 2016, and 2015 (in thousands of dollars)

	University June 30, 2017	University June 30, 2016	FY17-16 Change	University June 30, 2015
ASSETS				
Current Assets	\$ 739,847	\$ 677,927	\$ 61,920	\$ 692,679
Noncurrent Assets				
Investment in Plant, Net of Accumulated Depreciation	4,930,912	4,615,776	315,136	4,333,761
All Other Noncurrent Assets	1,283,546	1,294,028	(10,482)	1,501,421
Total Assets	6,954,305	6,587,731	304,654	6,527,861
DEFERRED OUTFLOWS OF RESOURCES				
	275,725	293,432	(17,707)	178,410
LIABILITIES				
Current Liabilities	619,250	774,837	(155,587)	856,460
Noncurrent Liabilities	3,522,756	3,294,183	228,573	3,133,710
Total Liabilities	4,142,006	4,069,020	72,986	3,990,170
DEFERRED INFLOWS OF RESOURCES				
	37,671	12,050	25,621	48,753
NET POSITION				
Invested in Capital Assets, Net of Related Debt	2,204,001	2,013,966	190,035	1,887,941
Restricted				
Nonexpendable	27,443	18,384	9,059	18,378
Expendable	201,710	218,272	(16,562)	169,591
Unrestricted	617,199	549,471	67,728	591,438
Total Net Position	\$3,050,353	\$2,800,093	\$250,260	\$2,667,348

At June 30, 2017, total University net position was \$3.1 billion. The University's largest asset continues to be its net investment in its physical plant of \$4.9 billion at June 30, 2017, \$4.6 billion at June 30, 2016 and \$4.3 billion at June 30, 2015.

University liabilities totaled \$4.1 billion at June 30, 2017, an increase of \$73.0 million over fiscal year 2016. Long-term liabilities represent 85.0% of the total liabilities which primarily consist of bonds payable amounting to \$3.1 billion and net pension liability of \$429.9 million at June 30, 2017.

The University's current assets as of June 30, 2017 of \$739.8 million were above the current liabilities of \$619.3 million, and as a result the current ratio was \$1.19 in assets to every one dollar in liabilities. Current assets of \$677.9 million at June 30, 2016 were below the current liabilities of \$774.8 million, resulting in a current ratio of 0.9.

The unrestricted and restricted expendable net position totaled \$818.9 million in fiscal year 2017, which represents 26% of total operating expenditures of \$3.2 billion for fiscal year 2017. The unrestricted and restricted expendable net position totaled \$767.7 million in fiscal year 2016, which represented 24% of total operating expenditures of \$3.1 billion in 2016. The unrestricted and restricted expendable net position totaled \$761.0 million in fiscal year 2015, which represents 27% of total operating expenditures of \$2.9 billion in 2015.

Condensed Statements of Net Position – Related Organizations At June 30, 2017, 2016 and 2015 (in thousands of dollars)

	University Related Organizations June 30, 2017	University Related Organizations June 30, 2016	FY17-16 Change	University Related Organizations June 30, 2015
ASSETS				
Current Assets	\$ 3,062	\$ 2,094	\$ 968	\$ 1,373
Noncurrent Asset				
Investment in Plant Net of Accumulated Depreciation	17,421	8,090	9,331	8,293
All Other Noncurrent Assets	535,829	472,478	63,351	478,645
Total Assets	556,312	482,662	(73,650)	488,311
LIABILITIES				
Current Liabilities	28,644	29,194	(550)	31,421
Noncurrent Liabilities	2,764	3,502	(738)	3,505
Total Liabilities	31,408	32,696	(1,288)	34,926
NET POSITION				
Invested in Capital Assets Net of Related Debt	17,421	8,090	9,331	8,293
Restricted				
Nonexpendable	385,856	374,566	11,290	330,301
Expendable	98,145	46,275	51,870	90,413
Unrestricted	23,482	21,035	2,447	24,378
Total Net Position	\$524,904	\$449,966	\$74,938	\$453,385

Statement of Revenues, Expenses and Changes in Net Position

Total operating revenues for fiscal year 2017 were \$2.4 billion. This represents a \$39.5 million (1.6%) increase from the \$2.4 billion in operating revenues in fiscal year 2016. 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 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 below, is used almost exclusively to fund payroll for University employees.

In fiscal year 2017, operating expenditures, including depreciation and amortization, totaled \$3.2 billion. Of this total, \$1.8 billion or 53% was used to support the academic core activities of the University, including \$447.4 million in research. The Academic Core represents functional expenses in the following categories: Instruction, Research, Public Service, Academic Support, and Student Services. In fiscal year 2016, operating expenditures, including depreciation and amortization, totaled \$3.1 billion.

**Condensed Statements of Revenues, Expenses, and Changes in Net Position –
University (excludes Related Organizations)**
For the Years Ended June 30, 2017, 2016 and 2015 (in thousands of dollars)

	University June 30, 2017	University June 30, 2016	FY17-16 Change	University June 30, 2015
Operating Revenues				
Tuition and Fees, (net of scholarship allowances)	\$ 847,832	\$ 826,815	\$ 21,017	\$ 765,218
Grants and Contracts	560,081	528,352	31,729	510,741
Auxiliary Enterprises	400,822	383,281	17,541	362,193
Other Operating Revenue	634,245	665,048	(30,803)	474,632
Total Operating Revenues	2,442,980	2,403,496	39,484	2,112,784
Operating Expenses	3,163,322	3,140,753	22,569	2,782,297
Operating Loss	(720,342)	(737,257)	16,915	(669,513)
Nonoperating Revenues/(Expenses)				
Federal Appropriations	6,602	6,827	(225)	6,619
State Appropriations	720,817	669,748	51,069	621,200
Interest on Indebtedness	(110,069)	(105,276)	(4,793)	(100,332)
Other Nonoperating Income	114,437	90,443	23,994	74,892
Nonoperating Federal Grants	74,050	75,743	(1,693)	76,539
Net Nonoperating Revenues	805,837	737,485	68,352	678,918
Income Before Other Revenues, Expenses, Gains, and Losses	85,495	228	85,267	9,405
Other Revenues, Expenses, Gains, and Losses				
Capital Appropriations, Grants and Other Sources	150,412	172,557	(22,145)	118,405
Disposal of Plant Facilities	(4,274)	(10,462)	6,188	(12,120)
Other Additions/(Deductions)	18,627	(29,578)	48,205	(27,731)
Total Other Revenues, Expenses, Gains, and Losses	164,765	132,517	32,248	78,554
Total Increase in Net Position	250,260	132,745	117,515	87,959
Net Position				
Net Position at the Beginning of the Year	2,800,093	2,667,348	132,745	2,818,295
Cumulative effect of change in accounting principle**				(238,849)
Net Position at the Beginning of the Year, adjusted	2,800,093	2,667,348	132,745	2,579,389
Net Position at the End of the Year	\$3,050,353	\$2,800,093	\$250,260	\$2,667,348

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

Condensed Statements of Revenues, Expenses, and Changes in Net Position – Related Organizations
For the Years Ended June 30, 2017, 2016 and 2015 (in thousands of dollars)

	University Related Organizations June 30, 2017	University Related Organizations June 30, 2016	FY17-16 Change	University Related Organizations June 30, 2015
Operating Expenses	\$ 14,090	\$ 17,068	\$(2,978)	\$ 16,709
Operating Loss	(14,090)	(17,068)	(2,978)	(16,709)
Nonoperating Revenues/(Expenses)				
Other Nonoperating Income	13,631	20,351	(6,720)	18,480
Net Nonoperating Revenues	13,631	20,351	(6,720)	18,480
Income Before Other Revenues, Expenses, Gains, and Losses	(459)	3,283	(3,742)	1,771
Other Revenues, Expenses, Gains, and Losses				
Additions to Permanent Endowments	42,173	25,864	16,309	21,618
Other Additions	33,224	(32,566)	65,790	(15,798)
Total Other Revenues, Expenses, Gains, and Losses	75,397	(6,702)	82,099	5,820
Total Increase in Net Position	74,938	(3,419)	78,357	7,591
Net Position				
Net Position at the Beginning of the Year	449,966	453,385	(3,419)	445,794
Net Position at the End of the Year	\$524,904	\$449,966	\$74,938	\$453,385

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. 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. Finally, Public Service Activity expenditures also include payments made to the Commonwealth of Massachusetts pursuant to requirements of legislation enacted by the State Legislature of Massachusetts. See footnote 1 for additional information regarding "Other Operating Revenues and Expenditures, Sales and Services, Public Service Activities".

State Appropriations

Commonwealth Operating Appropriations Received by the University For Fiscal Years Ended June 30, 2017, 2016 and 2015

	FY2017	FY2016	FY2015
Gross Commonwealth Appropriations	\$512,900	\$546,952	\$516,794
Plus: Fringe Benefits*	207,917	178,032	159,403
	720,817	724,984	676,197
Less: Mandatory Waivers		(24,653)	(23,942)
Less: Tuition Remitted		(30,583)	(31,055)
Net Commonwealth Support	\$720,817	\$669,748	\$621,200

*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 items 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.

In July 2015, the Legislature passed and the Governor signed into law, provisions in the fiscal year 2016 State budget that would give the University the tools to adopt a new system of billing that conforms to national norms across higher education, known as tuition retention. The passage of this legislation allowed for 100% of tuition to be retained by the University (out of state tuition retention was granted in FY04). As a result, the gross appropriation was reduced in 2017 to reflect the \$30.6 million in tuition that the University retained. In addition, the amounts that were previously deducted from the appropriation in the form of mandatory waivers are now reflected in gross tuition revenue and the offsetting scholarship allowances.

In fiscal year 2017, state appropriations represented 22% 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 \$51.1 million from fiscal year 2016, with the increase attributable to a higher level of State Appropriation and related fringe benefit support and a change in policy regarding the treatment of mandatory waivers and tuition remitted as a result of full Tuition Retention implemented in FY17 as discussed above. 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 table above. The University pays the Commonwealth for the fringe benefit cost of the employees paid from funding sources other than Commonwealth operating appropriations (details of the payment are referenced in footnote 11). The table above details the Commonwealth operating appropriations and the change as a result of full tuition retention.

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 2017, there was \$121.4 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 2017 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. Major construction and deferred maintenance projects are underway at all five of the University's campuses. These projects are funded by a combination of University and State funds.

Grant and Contract Revenue

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

Collectively, the University's Amherst Campus and Medical School in Worcester account for 73% of University grant and contract activity. The following table details the University's grant and contract revenues (in thousands):

Grant and Contract Revenues For Fiscal Years Ended June 30, 2017, 2016 and 2015

	FY2017	FY2016	FY2015
Federal Grants and Contracts	\$354,110	\$329,403	\$313,754
State Grants and Contracts	78,417	75,306	70,871
Local Grants and Contracts	2,489	2,445	1,717
Private Grants and Contracts	125,065	121,198	124,399
Total Grants and Contracts	\$560,081	\$528,352	\$510,741

Discretely Presented Component Units

University of Massachusetts Foundation, Inc.

The combined University and Foundation endowment has increased to \$819.7 million at June 30, 2017 from \$734.2 million at June 30, 2016 and from \$768.4 million at June 30, 2015.

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 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 funds that exist during each quarter-end are included in the calculation. In addition, a prudence rule is utilized to limit spending from a particular endowment fund to no lower than 93% of its book value. The Foundation distributed \$28.4 million (4%) and \$27.3 million (4%) in fiscal year 2017 and 2016, respectively.

The total investment gain of the Foundation for fiscal year 2017 was \$104.6 million as compared to 2016, which was a net loss of \$39.1 million.

University of Massachusetts Dartmouth Foundation, Inc.

Total investments of the Dartmouth Foundation were \$57.7 million at June 30, 2017 up from \$52.7 million at June 30, 2016, which are held by the University of Massachusetts Foundation, Inc. The Dartmouth Foundation total investment gain for fiscal year 2017, including realized and unrealized investment activity, was a net gain of \$4.7 million as compared to a net loss of \$1.9 million in 2016.

Tuition and Fees

For academic year 2016-2017, tuition was raised an average 5.6% for in-state undergraduate students. 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 years 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. 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 2017 semester, Massachusetts residents accounted for approximately 82.3% and 52.4% of the University's total undergraduate and graduate enrollment, respectively. Total enrollment in the fall of 2017 was 64,533 FTE (74,655 headcount students) an increase of 8.7%. Enrollments at the University have shown significant increases over the last five years (59,480 FTE in fall 2011). The 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.

The online learning consortium of the University, UMassOnline, has also 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 160 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 2017, UMassOnline and the Continuing Education units at the five campuses collaboratively generated tuition revenue in excess of \$104.0 million and supported 75,565 course enrollments, an increase of 9.2% for revenue and an increase of 6.6% for course enrollments as compared to fiscal year 2016.

Degrees Awarded

The University awards four levels of degrees, as follows: associates, bachelors, masters and doctoral/professional degrees. A total of 18,023 degrees were awarded in the 2015-2016 academic year reflecting a 1.0% increase from the previous year. Of these awards, 67.3% were at the undergraduate level and 21.0% were at the graduate level. The remaining were associates degrees and undergraduate certificates.

Bonds Payable

As of June 30, 2017, the University had outstanding bonds of \$3.1 billion. The principal issuer of the University's debt is the University of Massachusetts Building Authority. A relatively small portion of the total (\$46.8 million) was financed through the Massachusetts Health and Educational Facilities Authority ("MHEFA"), and \$8.0 million financed through the Worcester City Campus Corporation (the "WCCC Bonds"). Bonds payable is the University's largest liability at June 30, 2017.

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 January 31, 2017, the Building Authority issued \$165.1 million of tax-exempt Project Revenue Bonds, Senior Series 2017-1 (the "2017-1 Bonds"), \$19.5 million of federally taxable Project Revenue Bonds, Senior Series 2017-2 (the "2017-2 Bonds"), and \$187.7 million of Refunding Revenue Bonds, Senior Series 2017-3 (the "2017-3 Bonds"). The Series 2017-3 Bonds were issued to refinance a portion of the MHEFA's Revenue Bonds, University of Massachusetts Issue, Series D (2007), the MHEFA's Revenue Bonds, Worcester City Campus Corporation Issue (University of Massachusetts Project), Series E & F (2007), the University of Massachusetts Building Authority Project Revenue Bonds, Senior Series 2008-2, and the University of Massachusetts Building Authority Project Revenue Bonds, Senior Series 2009-1.

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 \$200.0 million the total principal amount of notes and bonds of the Building Authority that may be Commonwealth guaranteed and outstanding at any one time. The amount of bond obligations guaranteed by the Commonwealth at June 30, 2017 and 2016 was \$115.3 million and \$117.4 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 \$2.3 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.

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.

In spite of investing more than \$3.5 billion on capital improvements over the last decade, the University's 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 and State funding will be utilized to fund renovations, new construction, and deferred maintenance projects as illustrated in the capital plan.

Factors Impacting Future Periods

There are a number of issues of University-wide importance that directly impact the financial operations of the University. Many of these issues, such as improving academic quality, realizing strong financial results, investing in capital assets, expanding fundraising capacity, operating more efficiently, being the most effective University for students and the Commonwealth given the available resources, and measuring performance are ongoing activities of continuous importance to the Board and University leadership that impact the financial and budget planning each year. The level of state support, the impact of collectively bargained wage increases, and the ability of student-fee supported activities to meet inflationary pressures determine the limits of program expansion, new initiatives and strategic investments, as well as the ability of the University to meet its core mission and ongoing operational needs.

Contacting the University

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

Consolidated Statements of Net Position

AS OF JUNE 30, 2017 AND 2016 (IN THOUSANDS OF DOLLARS)

	University June 30, 2017	University Related Organizations June 30, 2017	University June 30, 2016	University Related Organizations June 30, 2016
ASSETS				
Current Assets				
Cash and Cash Equivalents	\$ 92,344	\$ 1,424	\$ 101,207	\$ 1,475
Cash Held By State Treasurer	15,114	-	8,888	-
Accounts, Grants and Loans Receivable, net	275,166	-	244,178	-
Pledges Receivable, net	7,091	1,515	7,464	371
Short-Term Investments	286,171	-	206,266	-
Inventories, net	19,137	-	18,006	-
Accounts Receivable from UMass Memorial	33,818	-	35,724	-
Due From Related Organizations	21	123	69	193
Other Assets	10,985	-	56,125	55
Total Current Assets	739,847	3,062	677,927	2,094
Noncurrent Assets				
Cash Held By State Treasurer	7,599	-	8,342	-
Cash and Securities Held By Trustees	438,585	-	486,015	-
Accounts, Grants and Loans Receivable, net	48,775	-	38,526	-
Pledges Receivable, net	13,346	737	17,595	1,690
Investments	766,392	532,605	734,205	468,260
Other Assets	8,849	2,487	9,345	2,528
Investment in Plant, net	4,930,912	17,421	4,615,776	8,090
Total Noncurrent Assets	6,214,458	553,250	5,909,804	482,568
Total Assets	6,954,305	556,312	6,587,731	482,662
DEFERRED OUTFLOWS OF RESOURCES				
Deferred Change in Fair Value of Interest Rate Swaps	37,768	-	65,428	-
Loss on Debt Refunding	79,772	-	80,851	-
Pensions	158,185	-	147,153	-
Total Deferred Outflows of Resources	275,725	-	293,432	-
LIABILITIES				
Current Liabilities				
Accounts Payable	111,808	53	105,652	64
Accrued Salaries and Wages	83,543	-	112,521	-
Accrued Compensated Absences	81,357	-	80,730	-
Accrued Workers' Compensation	2,640	-	3,252	-
Accrued Interest Payable	22,694	-	21,976	-
Bonds Payable	206,696	-	332,996	-
Capital Lease Obligations	203	-	169	-
Accelerated Variable Rate Debt, current	-	-	5,000	-
Assets Held on Behalf of Others	-	27,408	-	27,837
Accounts Payable to UMass Memorial	4,422	-	3,707	-
Due to Related Organizations	123	21	193	69
Unearned Revenues and Credits	44,128	1,162	44,041	1,224
Advances and Deposits	8,375	-	6,712	-
Other Liabilities	53,261	-	57,888	-
Total Current Liabilities	619,250	28,644	774,937	29,194
Noncurrent Liabilities				
Accrued Compensated Absences	30,395	-	35,671	-
Accrued Workers' Compensation	11,946	-	12,160	-
Bonds Payable	2,885,146	-	2,646,626	-
Capital Lease Obligations	389	-	429	-
Derivative Instruments, Interest Rate Swaps	61,839	-	90,478	-
Net Pension Liability	429,871	-	408,418	-
Unearned Revenues and Credits	32,597	-	23,936	-
Advances and Deposits	29,140	-	27,705	-
Other Liabilities	41,433	2,764	48,760	9,502
Total Noncurrent Liabilities	3,522,756	2,764	3,294,183	3,502
Total Liabilities	4,142,006	31,408	4,069,020	32,696
DEFERRED INFLOWS OF RESOURCES				
Pensions	37,671	-	12,050	-
NET POSITION				
Invested in Capital Assets Net of Related Debt	2,204,001	17,421	2,013,966	8,090
Restricted	-	-	-	-
Nonexpendable	27,443	385,856	18,384	374,566
Expendable	201,710	98,145	218,272	46,275
Unrestricted	617,199	23,482	549,471	21,035
Total Net Position	\$3,050,353	\$524,904	\$2,800,093	\$449,966

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

Consolidated Statements of Revenues, Expenses, and Changes in Net Position

FOR THE YEARS ENDED JUNE 30, 2017 AND 2016 (IN THOUSANDS OF DOLLARS)

	University June 30, 2017	University Related Organizations June 30, 2017	University June 30, 2016	University Related Organizations June 30, 2016
REVENUES				
Operating Revenues				
Tuition and Fees (net of scholarship allowances of \$288,708 at June 30, 2017 and \$244,025 at June 30, 2016)	\$ 847,832	\$ -	\$ 826,815	\$ -
Federal Grants and Contracts	354,110	-	329,403	-
State Grants and Contracts	78,417	-	75,306	-
Local Grants and Contracts	2,489	-	2,445	-
Private Grants and Contracts	125,065	-	121,198	-
Sales and Service, Educational	28,910	-	27,500	-
Auxiliary Enterprises	400,822	-	383,281	-
Other Operating Revenues:				
Sales and Service, Independent Operations	79,261	-	47,613	-
Sales and Service, Public Service Activities	418,726	-	476,831	-
Other	107,348	-	113,104	-
Total Operating Revenues	2,442,980	-	2,403,496	-
EXPENSES				
Operating Expenses				
<i>Educational and General</i>				
Instruction	824,042	-	794,691	-
Research	447,370	-	434,213	-
Public Service	68,083	11,278	71,457	16,502
Academic Support	177,173	-	181,057	-
Student Services	151,033	-	141,915	-
Institutional Support	247,740	-	248,379	-
Operation and Maintenance of Plant	240,501	-	228,406	-
Depreciation and Amortization	249,669	314	240,865	202
Scholarships and Fellowships	47,710	2,498	44,645	364
Auxiliary Enterprises	306,850	-	297,089	-
Other Expenditures				
Independent Operations	57,276	-	47,930	-
Public Service Activities	345,875	-	410,106	-
Total Operating Expenses	3,163,322	14,090	3,140,753	17,068
Operating Loss	(720,342)	(14,090)	(737,257)	(17,068)
NONOPERATING REVENUES/(EXPENSES)				
Federal Appropriations	6,602	-	6,827	-
State Appropriations	720,817	-	669,748	-
Gifts	26,253	3,620	42,415	7,396
Investment Income	28,756	(219)	29,381	182
Unrealized Gain (Loss) on Investments	15,466	-	(7,633)	-
Endowment Income Distributed for Operations	26,877	1,386	24,740	1,386
Interest on Indebtedness	(110,069)	-	(105,276)	-
Nonoperating Federal Grants	74,050	-	75,743	-
Other Nonoperating Income	17,085	10,011	1,540	11,387
Net Nonoperating Revenues	805,837	13,412	737,485	20,351
Income Before Other Revenues, Expenses, Gains, and Losses	85,495	(678)	228	3,283
OTHER REVENUES, EXPENSES, GAINS, AND LOSSES				
Capital Appropriations	121,380	-	121,298	-
Capital Grants and Contracts	29,080	-	51,259	-
Endowment Gain (Loss), net of amount used for operations	21,278	30,441	(28,958)	(36,524)
Additions to Permanent Endowments	-	42,173	-	25,864
Capital Contribution	-	-	2,985	-
Disposal of Plant Facilities	(4,274)	-	(10,462)	-
Other Additions (Deductions)	(2,699)	3,002	(3,605)	3,958
Total Other Revenues, Expenses, Gains, and Losses	164,765	75,616	132,517	(6,702)
Total Increase in Net Position	250,260	74,938	132,745	(3,419)
NET POSITION				
Net Position at Beginning of Year	2,800,093	449,966	2,667,348	453,385
Net Position at the End of Year	\$3,050,353	\$524,904	\$2,800,093	\$449,966

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

Consolidated Statements of Cash Flows

FOR THE YEARS ENDED JUNE 30, 2017 AND 2016 (IN THOUSANDS OF DOLLARS)

	University June 30, 2017	University June 30, 2016
CASH FLOWS FROM OPERATING ACTIVITIES		
Tuition and Fees	\$ 852,889	\$ 829,654
Grants and Contracts	814,018	791,533
Payments to Suppliers	(1,131,219)	(1,295,707)
Payments to Employees	(1,461,100)	(1,444,036)
Payments for Benefits	(401,143)	(354,120)
Payments for Scholarships and Fellowships	(47,675)	(44,635)
Loans Issued to Students and Employees	(8,105)	(5,596)
Collections of Loans to Students and Employees	6,989	7,099
Auxiliary Enterprises Receipts	357,968	369,715
Sales and Service, Educational	25,118	24,328
Sales and Service, Independent Operations	76,221	57,451
Sales and Service, Public Service Activities	428,012	493,461
Net Cash Used for Operating Activities	(488,027)	(570,853)
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES		
State Appropriations	720,819	724,985
Tuition Remitted to the State		(30,583)
Federal Appropriations	6,602	6,827
Gifts and Grants for Other than Capital Purposes	32,854	26,831
Nonoperating Federal Grants	74,050	75,743
Student Organization Agency Transactions	155	527
Net Cash Provided by Noncapital Financing Activities	834,480	804,330
CASH FLOWS FROM CAPITAL AND OTHER FINANCING ACTIVITIES		
Proceeds from Capital Debt	236,666	8,668
Bond Issuance Costs Paid	(620)	2
Capital Appropriations	121,333	121,297
Capital Grants and Contracts	9,332	58,759
Purchases of Capital Assets and Construction	(105,493)	(191,039)
Principal Paid on Capital Debt and Leases	(120,353)	(78,287)
Interest Paid on Capital Debt and Leases	(115,201)	(113,746)
Use of Debt Proceeds on Deposit with Trustees	(369,995)	(321,964)
Net Cash Used for Capital Financing Activities	(344,331)	(516,310)
CASH FLOWS FROM INVESTING ACTIVITIES		
Proceeds from Sales and Maturities of Investments	1,124,176	1,138,588
Interest on Investments	10,605	8,862
Purchase of Investments	(1,187,713)	(1,090,191)
Net Cash (Used for) Provided by Investing Activities	(52,932)	57,259
NET DECREASE IN CASH AND CASH EQUIVALENTS	(50,810)	(225,574)
Cash and Cash Equivalents — Beginning of the Year	604,452	830,026
Cash and Cash Equivalents — End of Year	\$553,642	\$604,452
RECONCILIATION OF OPERATING LOSS TO NET CASH PROVIDED BY OPERATING ACTIVITIES		
Operating Loss	\$ (720,342)	\$ (737,257)
<i>Adjustments to reconcile loss to net cash used for Operating Activities:</i>		
Depreciation and Amortization Expense	249,669	240,865
<i>Changes in Assets and Liabilities:</i>		
Accounts Receivable, net	(36,615)	(2,969)
Inventories	(1,131)	(534)
Due to/from Related Organizations	(118)	
Accounts Receivable/Payable, UMass Memorial	(2,621)	(17,341)
Other Assets	(45,821)	(44,077)
Accounts Payable (non-capital)	(8,412)	(17,821)
Accrued Liabilities	(34,453)	(5,835)
Deferred Revenue	(8,748)	(4,374)
Advances and Deposits	3,098	(395)
Other Liabilities	(13,737)	18,885
Net Cash Used for Operating Activities	\$ (488,027)	\$ (570,853)
SUPPLEMENTAL DISCLOSURE OF NONCASH ACTIVITIES		
Bonds to Refund Existing Debt	130,325	—
Assets Acquired and Included in Accounts Payable and Other Liabilities	60,853	63,109

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

Notes to Consolidated Financial Statements

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 ("US GAAP") as prescribed by the Governmental Accounting Standards Board ("GASB") using the economic resources measurement focus and the accrual basis of accounting. These financial statements are reported on a 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 US GAAP 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, valuation of derivatives, 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. GASB 35 establishes standards for external financial reporting by public colleges and universities that resources be classified into the following net position categories:

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

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*. The University is required to adopt this standard in fiscal year 2018. 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.

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, 2017 and 2016 was \$131.6 million and \$119.0 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 funds that exist during each quarter-end are included in the calculation. 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 2017 and 2016. 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 2017 and 2016, the deficiencies were \$0.5 million and \$3.2 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. Prior to the fiscal year ended June 30, 2017, the University recorded a full year of depreciation in the year of acquisition. Beginning in the fiscal year ended June 30, 2017, to be consistent with the Building Authority, the University applied a half-year convention to the straight-line basis of depreciation. This change in accounting estimate is reported prospectively for all depreciable assets. Management estimates that the adoption of the half-year convention reduced depreciation expense by \$5.0 million in fiscal year 2017.

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

Assets	Useful Lives
Buildings	15-50 years
Building Improvements	3-20 years
Equipment and Furniture	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 year ended June 30, 2016 present as tuition revenue \$30.6 million 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.

In July of 2015, the Legislature passed and the Governor signed into law provisions in the fiscal year 2016 State budget that would give the University the tools to adopt a new system of billing that conforms to national norms across higher education. The University restructured its tuition and fees in a way that is transparent and consistent with peer institutions across the nation. Beginning in the year ended June 30, 2017, the State Appropriation decreased to reflect the reduction in appropriation to offset the tuition that previously had been remitted to the State. Gross tuition and fees revenue and the related scholarship allowances on the Statement of Revenues, Expenses and Changes in Net Position increased to reflect the amounts previously credited as mandatory waivers as noted below.

	2017	2016
Gross Commonwealth Appropriations	\$512,900	\$546,953
Plus: Fringe Benefits	207,919	178,032
	720,819	724,985
Less: Tuition Remitted		(30,583)
Less: Mandatory Waivers		(24,654)
Net Commonwealth Support	\$720,819	\$669,748

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, 2017 and 2016, the University recognized Auxiliary Enterprise revenue of \$400.8 million and \$383.3 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 \$296.0 million and \$283.8 million for the years ended June 30, 2017 and 2016, respectively. Included in expenditures are Commonwealth Medicine expenditures of \$248.8 million and \$244.1 million for the years ended June 30, 2017 and 2016, 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 \$140.0 million and \$209.9 million for the years ended June 30, 2017 and 2016, respectively. Finally, Public Service Activity expenditures include payments made to the Commonwealth of Massachusetts of \$96.5 million and \$166.0 million for the years ended June 30, 2017 and 2016, pursuant to requirements of legislation enacted by the State Legislature of Massachusetts.

Other non-operating income included revenue of \$15.2 million and \$0.5 million for the years ended June 30, 2017 and 2016, respectively. In 2017, other non-operating income consists of amounts due to the University Medical School campus for its learning contracts.

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, 2017 and 2016, 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 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.

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 18.7% and 23.5% of the University's investments at June 30, 2017 and 2016, 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, 2017 and 2016, 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, 2017 and 2016, the carrying amounts of bank balances with uninsured or uncollateralized operating cash deposits were \$293.9 million and \$246.9 million, respectively.

At June 30, 2017, the University held a carrying and fair market value of \$778.0 million in non-money market investments compared to a carrying and fair market value of \$737.3 million at June 30, 2016. In the event of negligence due to the University's custodian and/or investment manager(s), it is expected that investment balances of \$778.0 million and \$737.3 million at June 30, 2017 and 2016, 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, 2017 and 2016, 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, 2017 and 2016, respectively:

Asset Class	June 30, 2017 Fair Value	Average Credit Quality	June 30, 2016 Fair Value	Average Credit Quality
Short Duration	\$356,026	AAA	\$270,117	AAA
Intermediate Duration	\$249,365	A	\$239,218	A

The tables below present 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, 2017 and 2016, respectively:

	S&P Quality Ratings								
	Fair Value	AAA	AA	A	BBB	BB	B	<B	Unrated
US Agencies	\$ 432	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 432
US Government	52,217	-	-	-	-	-	-	-	52,217
Certificates of Deposit	10,500	-	-	-	-	-	-	-	10,500
Corporate Debt	91,358	16,243	3,178	23,990	34,951	195	-	-	12,801
Municipal/Public Bonds	4,149	427	1,773	459	1,490	-	-	-	-
Bond Mutual Funds	161,355	61,128	26,099	18,617	27,621	13,038	5,683	1,225	8,944
Money Market Funds	285,380	31,276	-	-	-	-	-	269	253,835
	\$605,391	\$109,047	\$30,050	\$43,066	\$64,062	\$13,323	\$5,683	\$1,494	\$338,729

Rated Debt Investments — 2016

	S&P Quality Ratings								
	Fair Value	AAA	AA	A	BBB	BB	B	<B	Unrated
US Agencies	\$ 535	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 535
US Government	34,641	-	-	-	-	-	-	-	36,641
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
	\$509,535	\$108,198	\$28,519	\$45,199	\$62,818	\$13,016	\$6,717	\$1,592	\$243,276

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, 2017 and 2016, respectively:

Asset Class	6/30/17 Allocation	6/30/17 Fair Value	6/30/16 Allocation	6/30/16 Fair Value
Short Duration	34%	\$ 356,026	29%	\$ 270,117
Intermediate Duration	24%	249,365	25%	239,218
Alternative Assets	18%	196,376	23%	220,543
Equities	1%	8,330	1%	9,108
Commodities	21%	224,437	20%	183,027
Real Estate	2%	18,029	2%	18,458
	100%	\$1,052,563	100%	\$940,471

The tables below present 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, 2017 and 2016, respectively:

Investment Type	Fair Value	Investment Maturity (in Years)			
		Less than 1	1 to 5	6 to 10	More than 10
Debt Securities					
US Agencies	\$ 432	\$ 296	\$ 136	\$ —	\$ —
US Government	52,217	448	47,233	4,536	—
Certificates of Deposit	10,500	10,500	—	—	—
Corporate Debt	91,358	30,648	55,812	4,486	412
Municipal/Public Bonds	4,149	4,003	146	—	—
Bond Mutual Funds	161,355	24,751	81,212	44,488	10,904
Money Market Mutual Funds	285,380	285,380	—	—	—
Sub Total Debt Securities	\$ 605,391	\$356,026	\$184,539	\$53,510	\$11,316
Other Investments					
Alternative Assets	196,376				
Equity Securities - International	128,458				
Equity Securities - Domestic	95,979				
Commodities	8,330				
Real Estate	18,029				
Grand Total	\$1,052,563				

Investment Type	Investment Maturity (in Years)				
	Fair Value	Less than 1	1 to 5	6 to 10	More than 10
Debt Securities					
US Agencies	\$ 535	\$ 343	\$ 192	\$ -	\$ -
US 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 Mutual Funds	189,391	189,391	-	-	-
Sub Total Debt	\$509,335	\$270,117	\$180,082	\$45,759	\$13,377
Other Investments					
Alternative Assets	220,543	-	-	-	-
Equity Securities - International	106,102	-	-	-	-
Equity Securities - Domestic	76,925	-	-	-	-
Commodities	9,108	-	-	-	-
Real Estate	18,458	-	-	-	-
Grand Total	\$940,471				

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, 2017, by the GASB No. 72 valuation hierarchy defined above (in thousands):

Investments by fair value level	Fair Value Measurements Using			
	6/30/2017	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Debt Securities				
US Treasury securities	\$ 49,198	\$ 49,198	\$ -	\$ -
Government agency bonds	432	-	432	-
Asset backed securities	20,571	-	20,571	-
Commercial mortgage-backed securities	5,771	-	5,771	-
Government issued commercial mortgage-backed securities	253	-	253	-
Government mortgage-backed securities	3,047	-	3,047	-
Non Government Backed CMO's	886	-	886	-
Corporate bonds	63,866	-	63,629	237
Municipal and provincial bonds	4,149	-	4,149	-
Other fixed income	161,353	147,948	13,405	-
Total Debt Securities	309,526	197,146	112,143	237
Equity Securities				
Domestic equities	95,979	94,729	-	1,250
International equities	128,458	128,458	-	-
Total Equity Securities	224,437	223,187		1,250
Other Securities				
Commodities	8,330	8,330	-	-
REITS	18,029	18,029	-	-
Total Other Securities	26,359	26,359		
Total Investments by Fair Value Level	\$ 560,322	\$446,692	\$112,143	\$1,487
Investments Measured at Net Asset Value (NAV)				
Multi Strategy hedge funds				
Equity	46,681			
Long/short	12,640			
Fixed income	48,196			
Absolute return	50,623			
Real assets	11,784			
Private equity	3,402			
Private debt	19,221			
Private real estate	3,829			
Total Investments Measured at NAV	196,376			
Total Investments Measured at Fair Value	756,698			
Cash and Cash Equivalents	295,865			
Total Investments Per Financial Statements	\$1,052,563			

The following table presents the investments carried at fair value, as of June 30, 2016, by the GASB No. 72 valuation hierarchy defined above (in thousands):

Investments by Fair Value Level	Fair Value Measurements Using			
	6/30/2017	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Debt Securities				
US Treasury securities	\$ 31,873	\$ 31,873	\$ -	\$ -
Government agency bonds	535		535	
Asset backed securities	23,951		23,951	
Commercial 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	151,386	137,608	13,778	
Total Debt Securities	301,244	169,481	131,605	158
Equity Securities				
Domestic equities	76,925	76,074		851
International equities	106,102	106,102		
Total Equity Securities	183,027	182,176	-	851
Other Securities				
Commodities	9,108	9,108		
REITS	18,458	18,458		
Total Other Securities	27,566	27,566	-	-
Total Investments by Fair Value Level	\$511,837	\$379,223	\$131,605	\$1,009
Investments Measured at Net Asset Value (NAV)				
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	3,498			
Total Investments Measured at Nav	220,543			
Total Investments Measured at Fair Value	732,380			
Cash and Cash Equivalents	208,091			
Total Investments per Financial Statements	\$940,471			

3. CASH HELD BY STATE TREASURER

Accounts payable, accrued salaries and outlays for future capital projects to be funded from state-appropriated funds totaled \$14.4 million at June 30, 2017 and \$17.3 million at June 30, 2016. 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 consist primarily 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, 2017 and 2016, there was \$1.0 million and \$0.9 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 \$438.6 million and \$485.1 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 (\$438.6 million at June 30, 2017 and \$437.6 million at June 30, 2016) 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):

	2017	2016
Cash	\$ 5,553	\$ 4,577
Permitted Money Market Accounts ("MMA")	425,797	475,240
Total Cash and Cash Equivalents	\$432,350	\$479,817

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, 2017 and June 30, 2016, the bank balances of uninsured deposits totaled \$5.1 million and \$4.1 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.

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, 2017, the Building Authority had 98.8% of its investments in MMDT. As of June 30, 2016, the Building Authority had 98% of its investments in MMDT.

5. ACCOUNTS, GRANTS AND LOANS RECEIVABLE

Accounts, grants and loans receivable as of June 30, 2017 and 2016 are as follows (in thousands):

	2017	2016
Student Accounts Receivable	\$58,065	\$56,661
Less Allowance for Uncollectible Accounts	(20,258)	(23,077)
	37,807	33,584
Grants and Contracts Receivable	94,583	98,383
Less Allowance for Uncollectible Accounts	(1,189)	(2,108)
	93,394	96,275
Student Loans Receivable	63,660	44,760
Less Allowance for Uncollectible Accounts	(4,499)	(303)
	59,161	44,457
Commonwealth Medicine	76,093	69,489
Less Allowance for Uncollectible Accounts	(2,029)	(500)
	74,064	68,989
Other	60,304	39,996
Less Allowance for Uncollectible Accounts	(789)	(597)
	59,515	39,399
Total, net	323,941	282,704
Less Current Portion, net	(275,166)	(244,178)
Long-term, net	\$48,775	\$38,526

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, 2017 and 2016, the reimbursements for services provided to UMass Memorial were \$147.7 million and \$125.2 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 \$89.2 million and \$71.3 million for fiscal years 2017 and 2016, respectively. At June 30, 2017 and 2016, the University has recorded a receivable in the amount of \$33.8 million and \$35.7 million, respectively from UMass Memorial which includes \$19.4 million and \$22.9 million, respectively, in payroll and related fringe charges. The University has recorded a payable of \$4.4 million and \$3.6 million at June 30, 2017 and 2016, respectively, 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, 2017, the net position of the Foundation included as related organization in the accompanying financial statements of the University is \$538.6 million, of which \$500.2 million are restricted funds and \$38.4 million are unrestricted funds. During the fiscal year ended June 30, 2017, the University received \$33.0 million from the Foundation, and transferred \$11.6 million to the Foundation of which \$1.6 million related to the establishment of quasi-endowment. At June 30, 2017, the University's investments include \$331.5 million of endowment funds held in a custodial relationship at the Foundation, and \$301.1 million in ITIF.

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. 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.

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.

7. INVESTMENT IN PLANT

Investment in plant activity for the year ended June 30, 2017 is comprised of the following (in thousands):

	Beginning Balance	Additions/Adjustments	Retirements/Adjustments	Ending Balance
UNIVERSITY				
Buildings and Improvements	\$ 5,691,000	\$ 456,293	\$ (14,652)	\$ 6,132,641
Equipment and Furniture	658,968	80,119	(45,586)	693,501
Software	136,503	4,272	(29,737)	111,038
Library Books	65,978	-	(5,834)	60,144
	6,552,449	540,684	(95,809)	6,997,324
Accumulated Depreciation	(2,697,213)	(249,974)	82,907	(2,864,280)
Subtotal	3,855,236	290,710	(12,902)	4,133,044
Land	84,161	14,394	(895)	97,660
Construction in Progress	676,379	478,566	(454,737)	700,208
Subtotal	760,540	492,960	(455,632)	797,868
Total	\$4,615,776	\$783,670	\$(468,534)	\$4,930,912
UNIVERSITY RELATED ORGANIZATIONS				
Buildings and Improvements	\$7,942	\$ 7,900	-	\$ 15,842
Equipment and Furniture	168	7	-	175
	8,110	7,907	-	16,017
Accumulated Depreciation	(1,439)	(315)	-	(1,754)
Subtotal	6,671	7,592	-	14,263
Land	1,419	1,650	-	3,069
Total	\$ 8,090	\$ 9,242	-	\$ 17,332

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

	Beginning Balance	Additions/Adjustments	Retirements/Adjustments	Ending Balance
UNIVERSITY				
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)
Subtotal	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
Subtotal	535,721	441,371	(216,552)	760,540
Total	\$4,333,762	\$512,484	(\$230,470)	\$4,615,776
UNIVERSITY RELATED ORGANIZATIONS				
Buildings and Improvements	\$ 7,942	\$ -	\$ -	\$ 7,942
Equipment and Furniture	168	-	-	168
	8,110	-	-	8,110
Accumulated Depreciation	(1,238)	(201)	-	(1,439)
Subtotal	6,872	(201)	-	6,671
Land	1,421	-	-	1,419
Total	\$ 8,291	(\$ 201)	-	\$ 8,090

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, 2017 and 2016, the University capitalized net interest costs of \$20.5 million and \$22.1 million, respectively.

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.

8. BONDS PAYABLE

Amounts outstanding at June 30, 2017 are as follow (in thousands):

Issue Borrowing	Original Borrowing	Maturity Date	Interest Rate	Amount Outstanding
UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY				
Series 2008-A	\$26,580	2038	variable	\$ 19,145
Series 2008-1	232,545	2038	variable	171,430
Series 2008-2	120,560	2038	4.00-5.00%	3,065
Series 2009-1	247,810	2039	3.00-5.00%	28,400
Series 2009-2	271,855	2039	6.42-6.57%	271,855
Series 2009-3	28,570	2039	5.82-6.17%	25,685
Series 2010-1	118,985	2020	5.00%	59,230
Series 2010-2	430,320	2040	3.80-5.45%	430,320
Series 2010-3	3,005	2040	5.75%	2,730
Series 2011-1	135,040	2034	variable	126,540
Series 2011-2	101,700	2034	variable	96,115
Series 2013-1	212,585	2043	2.00-5.00%	198,655
Series 2013-2	71,970	2043	0.43-2.69%	65,090
Series 2013-3	24,640	2043	4.00-5.00%	24,640
Series 2014-1	293,890	2044	3.00-5.00%	293,015
Series 2014-2	14,085	2019	0.44-2.10%	8,555
Series 2014-4	157,855	2025	0.20-3.38%	122,125
Series 2014-3	67,635	2029	2.00-5.00%	61,640
Series 2015-1	298,795	2036	4.00-5.00%	298,795
Series 2015-2	191,825	2036	3.00-5.00%	191,825
Series 2017-1	165,130	2047	3.25-3.77%	165,130
Series 2017-2	19,510	2027	1.58-3.37%	19,510
Series 2017-3	35,945	2038	3.00-5.00%	187,680
				2,871,175
			Unamortized Bond Premium	164,887
			SUBTOTAL	3,036,062
UNIVERSITY OF MASSACHUSETTS HEFA/MDFA				
2000 Series A	20,000	2030	variable	20,000
Series 2011	29,970	2034	2.50%-4.00%	25,925
				45,925
			Unamortized Bond Premium	1,870
			SUBTOTAL	46,795
WCCC HEFA/MDFA				
Series 2005-D	99,325	2029	5.00%-5.25%	715
Series 2011	10,495	2023	2.00%-5.00%	6,690
				7,405
			Unamortized Bond Premium	624
			SUBTOTAL	8,029
Clean Renewable Energy Bonds	1,625	2027	3.50%	956
			TOTAL BONDS PAYABLE	\$3,091,842

Bond Payable activity for the year ended June 30, 2017 is summarized as follows (in thousands):

	Beginning Balance	Additions/Amortization	Retirements/Repayments	Ending Balance
UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY				
Series 2004-1	\$ 1,515	\$ -	\$ (1,515)	\$ -
Series 2008-A	20,105	-	(960)	19,145
Series 2008-1	179,425	-	(7,995)	171,430
Series 2008-2	63,025	-	(59,960)	3,065
Series 2009-1	108,365	-	(79,965)	28,400
Series 2009-2	271,855	-	-	271,855
Series 2009-3	26,235	-	(550)	25,685
Series 2010-1	72,310	-	(13,080)	59,230
Series 2010-2	430,320	-	-	430,320
Series 2010-3	2,785	-	(55)	2,730
Series 2011-1	128,245	-	(1,705)	126,540
Series 2011-2	97,265	-	(1,150)	96,115
Series 2013-1	203,420	-	(4,765)	198,655
Series 2013-2	67,335	-	(2,245)	65,090
Series 2013-3	24,640	-	-	24,640
Series 2014-1	293,465	-	(450)	293,015
Series 2014-2	11,330	-	(2,775)	8,555
Series 2014-4	149,975	-	(27,850)	122,125
Series 2014-3	64,470	-	(2,830)	61,640
Series 2015-1	298,795	-	-	298,795
Series 2015-2	191,825	-	-	191,825
Series 2017-1	-	165,130	-	165,130
Series 2017-2	-	19,510	-	19,510
Series 2017-3	-	187,680	-	187,680
Plus: unamortized bond premium	122,146	55,987	(13,246)	164,887
Subtotal	2,828,851	428,307	(221,096)	3,036,062
UNIVERSITY OF MASSACHUSETTS HEFA/MDFA				
2000 Series A	20,000	-	-	20,000
2007 Series D	8,645	-	(8,645)	-
Series 2011	26,940	-	(1,015)	25,925
Plus: Unamortized Bond Premium	949	-	(79)	870
Subtotal	56,534	-	(9,739)	46,795
WCCC HEFA/MDFA				
WCCC 2005 Series D	1,335	-	(620)	715
WCCC 2007 Series E	31,250	-	(31,250)	-
WCCC 2007 Series F	51,890	-	(51,890)	-
Series 2011	7,495	-	(805)	6,690
Plus: Unamortized Bond Premium	1,215	-	(591)	624
Subtotal	93,185	-	(85,156)	8,029
MDFA				
Clean, Renewable, Energy, Bonds	1,052	-	(96)	956
Total	\$2,979,622	\$428,307	\$(316,087)	\$3,091,842

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

	Beginning Balance	Retirements/Repayments/Amortization	Ending Balance
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
UNIVERSITY OF MASSACHUSETTS 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, 2017, on bonds payable for the next five fiscal years and in subsequent five-year periods are as follows (in thousands):

Fiscal Year	Principal	Interest
2018	\$ 94,314	\$ 120,128
2019	100,271	116,960
2020	103,931	113,481
2021	107,866	109,470
2022	100,356	105,462
2023-2027	519,043	469,016
2028-2032	514,595	364,839
2033-2037	493,775	263,926
2038-2042	554,865	138,095
2043-2047	316,045	32,583
2048-2052	20,400	536
Total	\$2,925,461	\$1,834,496

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 \$115.3 million and \$117.4 million at June 30, 2017 and 2016, 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 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 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 years 2017 and 2016 the Authority incurred fees in connection with the Barclays agreement in the amount of \$0.7 million and \$0.1 million, respectively. The agreement expires on April 22, 2019 and may be extended if a mutual interest exists between the 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 Authority in connection with J.P. Morgan totaled \$0.4 million for the year ended June 30, 2016.

The 2008-A bonds are supported by a standby bond purchase agreement with Barclays which requires Barclays to purchase bonds that are tendered and not remarketed. Under the terms of the Barclays standby bond purchase agreement, the Authority was 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 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 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 Authority and Barclays. Fees incurred by the Authority in connection with the Barclays agreement totaled \$0.1 million for the years ended June 30, 2017 and June 30, 2016.

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%. Under the agreement, the 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 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 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. On May 17, 2017, the agreement was extended with Wells until June 9, 2019. The facility fee under the extended agreement is 32 basis points. Fees incurred by the Authority in connection with the Wells agreement totaled \$0.4 million and \$0.4 million for the years ended June 30, 2017 and 2016, respectively.

Window Bonds In fiscal year 2011, the Authority issued its 2011-2 bonds in a variable rate Window Bond mode. As with the Authority's other variable rate bonds, the Window Bondholders can tender the bonds at any time. However, unlike the 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 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 In fiscal year 2017, the Authority issued \$187.7 million of Refunding Revenue Senior Series 2017-3 Bonds which advance refunded \$77.3 million of the WCCC Series 2007-E and 2007-F Bonds and \$8.3 million of Lowell bonds issued under the Massachusetts Health and Academic Facilities Authority (MHEFA) Series 2007-D. The Series 2017-3 bonds also refunded \$57.0 million of the Authority's 2008-2 bonds and \$65.0 million of the Authority's 2009-1 bonds. The 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 University's financial statements.

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

There were no refundings of bonds in fiscal year 2016.

Bond Premium and Issuance Expenses In fiscal year 2017, the Authority received premiums at issuance totaling \$56.0 million. The Authority amortizes the premiums received as a reduction in interest expense over the life of the respective bond issue. There were no new bond issues in fiscal year 2016, thus no bond premiums were recorded in 2016.

In connection with the Authority's bond issues in fiscal 2017, the Authority incurred certain issuance costs associated with the bond offerings. In fiscal year 2017, these costs amounted to \$2.3 million and were expensed in accordance with the provisions of GASB Statement No. 65, *Items Previously Reported as Assets and Liabilities*.

Debt Covenants There were no financial debt covenants related to the above debt instruments.

Interest Rate Swaps The 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 Authority's contracts are evaluated pursuant to GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments* ("GASB 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 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 Authority's hedging derivative instruments at June 30, 2017 and 2016 were as follows (in thousands):

	Fair Value June 30, 2016	Net Change in Fair Value	Fair Value June 30, 2017	Type of Hedge	Financial Statement Classification for Changes in Liability
Series 2008-1 Swap	\$(38,227)	\$12,960	\$(25,267)	Cash Flow	Deferred Outflow of Resources
Series 2008-A Swap	(4,338)	1,454	(2,884)	Cash Flow	Deferred Outflow of Resources
Series 2006-1 Swap	(47,913)	14,225	(33,688)	Cash Flow	Deferred Outflow of Resources
Total	\$(90,478)	\$28,639	\$(61,839)		

The terms of the Authority's financial derivative instruments that were outstanding at June 30, 2017 are summarized in the table below (in thousands):

	Type	Effective Date	Termination Date	Rate Authority Pays	Authority Receives	Original Notional Value
Series 2008-1 Swap	Synthetic Fixed	May 1, 2008	May 1, 2038	3.39%	70% of 1-Month LIBOR	\$232,545
Series 2008-A Swap	Synthetic Fixed	Nov 13, 2008	May 1, 2038	3.38%	70% of 1-Month LIBOR	26,580
Series 2006-1 Swap	Synthetic Fixed	Apr 20, 2006	Nov 1, 2034	3.48%	60% of 3-Month LIBOR + .18%	243,830

Fair Values — 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 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 non-performance 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.

Credit risk — As of June 30, 2017 and 2016, the 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 counterparty 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 U.S. 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, 2017 are as follows:

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

Basis risk — The Authority is exposed to basis risk on its pay-fixed interest rate swaps because the variable-rate payment received by the 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. The terms of the related hedging fixed rate swap transactions are summarized in the chart at the top of this page.

Termination risk — The 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 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 Authority is withdrawn, suspended or falls below certain levels or the Authority fails to have a rating. The Authority or the counterparties may terminate the swaps if the other party fails to perform under the terms of the contract. The 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 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 Authority is owed or must pay cash to close out the swap position. A negative fair value means the 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 Authority's swaps include provisions that require the Authority to post collateral in the event its credit rating falls below certain levels. In the event the Authority is rated A2 by Moody's Investors Service or A by Standard & Poor's, the 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 Authority is not rated or rated below A3 by Moody's Investors Service or below A- by Standard & Poor's, the 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 Authority does not post collateral, the derivative instrument may be terminated by the counterparty. The 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, 2015; therefore, no collateral was required to be posted.

Termination of hedge accounting — In June of 2011, the 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, 2017 is reported as a deferred outflow as the swap was determined to be effective at June 30, 2017.

Swap payments and associated debt — Using rates as of June 30, 2017, the debt service requirements of the variable-rate debt and net swap payments, assuming current interest rates remain the same for their term, were as follows (in thousands):

Fiscal Year Ending June 30,	Principal	Interest	Interest Rate Swaps, Net	Total
2018	\$ 11,770	\$ 378	\$10,446	\$ 22,594
2019	12,215	369	10,145	22,729
2020	12,720	360	9,831	22,911
2021	28,390	341	9,315	38,046
2022	29,545	314	8,586	38,445
2022-2026	158,250	1,109	30,831	190,190
2027-2031	124,330	427	12,313	137,070
2032-2036	35,035	52	1,435	36,522
2037-2038	825		21	847
Total	\$413,080	\$3,351	\$92,923	\$509,354

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 \$20.0 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 1.2%. 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 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 25th of each March and September. As of June 30, 2017 and 2016, 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. 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. The Series D Bonds were refunded in 2017 using proceeds from Series 2017-3.

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

The 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. 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 \$5.9 million and \$6.5 million for fiscal years 2017, and 2016, respectively.

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 \$24.6 million and \$27.1 million for the years ended June 30, 2017 and 2016, respectively. The master leases primarily consist of telecommunications, software, and co-generation systems. The University also leases space to third-party tenants. During 2017 and 2016, the amount reported as rental income was \$18.9 million and \$18.3 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, 2017 (in thousands):

Year	Operating Leases
2018	\$ 26,770
2019	25,413
2020	24,602
2021	24,049
2022	22,719
2023 and thereafter	134,557
Total Payments	\$258,110

10. OTHER LONG-TERM LIABILITIES

During the year ended June 30, 2017, the following changes occurred in long-term liabilities as recorded in the statements of net position (in thousands):

	Beginning Balance	Additions/Adjustments	Reductions/Adjustments	Ending Balance
UNIVERSITY				
Capital Lease Obligations	\$ 429	\$ 180	\$ (220)	\$ 389
Compensated Absences	35,671		(5,276)	30,395
Workers' Compensation	12,160		(214)	11,946
Unearned Revenues and Credits	23,936	24,391	(15,596)	32,731
Advances and Deposits	27,705	1,834	(399)	29,140
Other Liabilities	48,760	800	(8,127)	41,433
UNIVERSITY RELATED ORGANIZATIONS				
Other Liabilities	\$ 3,502	-	\$ (738)	\$ 2,764

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

	Beginning Balance	Additions/Adjustments	Reductions/Adjustments	Ending Balance
UNIVERSITY				
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
UNIVERSITY RELATED ORGANIZATIONS				
Other Liabilities	\$ 3,505	-	-	\$ 3,502

11. FRINGE BENEFITS

Expenditures for the years ended June 30, 2017 and 2016 include \$329.3 million and \$295.1 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, \$123.8 million for 2017 and \$117.1 million for 2016 was reimbursed to the Commonwealth and \$205.5 million and \$178.0 million, respectively, is included in revenue as state appropriations.

12. PENSIONS

The Massachusetts State Employees' Retirement System ("MSERS") is a public employee retirement system ("PERS") that administers a cost-sharing multi-employer defined benefit plan as defined by 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 to 1983	7% of regular compensation
1984 to 6/30/1996	8% of regular compensation
7/1/1996 to 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 charge amounted to \$89.9 million and \$84.5 million for the years ended June 30, 2017 and 2016, respectively. Annual covered payroll was 75.8% and 75.8% for the years ended June 30, 2017 and 2016, respectively of annual total payroll for the University. The amount of pension expense included in the fringe charge was \$26.3 million and \$25.1 million for the years ended June 30, 2017 and 2016, respectively.

Actuarial Assumptions The total pension liability for the June 30, 2016 measurement date which is the date reported in the June 30, 2017 financial statements, was determined by an actuarial valuation as of January 1, 2016 rolled forward to June 30, 2016. 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 4.0% to 9.0% depending on group and length of service.
3. Chapter 176 of the Acts of 2011 created a one-time election for eligible members of the Optional Retirement Plan ("ORP") to transfer to the State Employees' Retirement System ("SERS") and purchase service for the period while members of the ORP. As a result, the total pension liability of SERS has increased by \$400.0 million as of June 30, 2016.
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)
5. Experience studies were performed as follows:
 - Dated February 27, 2014 and encompasses the period January 1, 2006 to December 31, 2011

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% 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. 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 for SERS has increased by \$230.0 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)

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, 2016 and 2015 are summarized in the following tables:

As of June 30, 2016

Asset Class	Target Allocation	Long-term Expected Real Rate of Return 2014
Global Equity	40.00%	6.90%
Core Fixed Income	13.00%	1.60%
Private Equity	10.00%	8.70%
Real Estate	10.00%	4.60%
Value Added Fixed Income	10.00%	4.00%
Hedge Funds	9.00%	4.00%
Portfolio Completion Strategies	4.00%	3.60%
Timber/Natural Resources	4.00%	5.40%
Total	100.00%	

As of June 30, 2015

Asset Class	Target Allocation	Long-term Expected Real Rate of Return 2014
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	100.00%	

Discount Rate The discount rate used to measure the total pension liability was 7.5% at June 30, 2016 and June 30, 2015. 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. In particular, the table presents the University net 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, 2017	\$609,836	\$429,871	\$347,731
June 30, 2016	\$606,780	\$408,418	\$308,037

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

The University reported a liability of \$429.9 and \$408.4 million for its proportionate share of MSERS's net pension liability as of June 30, 2017 and 2016, respectively. The net pension liability was measured as of June 30, 2016 and 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.

The following table shows the components of pension expense as of June 30, 2017 and 2016 (in thousands):

	2017	2016
Proportionate Share of Plan Pension Expense	\$58,723	\$45,628
Net Amortization of Deferred Amounts from Change in Proportion	2,935	11,224
Payments	(25,618)	(22,386)
Pension Expense	\$36,040	\$34,466

At June 30, 2017, 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 (in thousands):

	Deferred Inflows of Resources	Deferred Outflows of Resources
Changes of Assumptions	\$ -	\$ 47,670
Changes in Proportion Due to Internal Allocation	-	35,625
Employer Contributions after measurement date	-	25,618
Differences Between Expected and Actual Experience	-	20,418
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	-	28,854
Changes in Proportion From Commonwealth	37,671	-
	\$37,671	\$158,185

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 (in thousands):

	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
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	11,736	8,072
Changes in Proportion From Commonwealth	314	-
	\$12,050	\$147,153

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 (in thousands):

Year Ended June 30	2017
2018	\$21,201
2019	21,201
2020	32,788
2021	18,758
2022	951
Thereafter	-

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, 2017 and 2016, there were 1,674 and 1,626 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 \$7.2 million and \$8.3 million in 2017 and 2016, respectively. University employees contributed \$15.8 million and \$24.4 million in 2017 and 2016, 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, 2017 and 2016 plan assets totaled \$2.5 million and \$1.5 million, respectively.

13. 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 9.4% and 11.2% of total accounts receivable for the University at June 30, 2017 and 2016, respectively. The University also had uncollateralized receivables from the Executive Office of Health and Human Services comprising 11.5% of the total outstanding receivables at June 30, 2017 and uncollateralized receivables from The Executive Office of Health and Human Services comprising 12% of the total outstanding receivables at June 30, 2016.

14. COMMITMENTS CONTINGENCIES

The Building Authority, University, and WCCC have outstanding purchase commitments under construction contracts and real estate agreements of \$283.6 million and \$157.3 million at June 30, 2017 and 2016, respectively. In connection with the investments in certain limited partnership agreements, the Foundation has \$92.9 million and \$84.7 million in committed calls as of June 30, 2017 and 2016, 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, 2017 and 2016 in the amount of \$27.1 million and \$28.2 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 \$15.2 million as of June 30, 2017 and \$15.4 million as of June 30, 2016. 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 UMMMM, 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, UMMMM 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 UMMMM, and its subsequent amendments and the indemnification provisions in these Agreements, may be required to indemnify UMMMM 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.

15. SUBSEQUENT EVENTS

For purposes of determining the effects of subsequent events on these financial statements, management has evaluated events subsequent to June 30, 2017 through December 14, 2017, 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.

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Required Supplementary Information — Unaudited

LAST 10 YEARS¹

Schedule of the University's Proportionate Share of the Net Pension Liability Massachusetts State Employees' Retirement System

	June 30, 2017	June 30, 2016	June 30, 2015
University's proportion of the net pension liability	3.394%	3.922%	3.489%
University's proportionate share of the net pension liability	\$ 429,871	\$ 408,418	\$ 237,134
University's covered-employee payroll	\$1,156,082	1,139,719	1,061,132
University's proportionate share of the net pension liability as a percentage of its covered-employee payroll	37.18%	35.83%	22.35%
Plan fiduciary net position as a percentage of total pension liability	63.48%	67.87%	76.32%

Schedule of the University's Contributions Massachusetts State Employees' Retirement System

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

¹ Until a full 10-year trend is compiled, the University is presenting only information for years for which information is available.

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REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

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"), an enterprise fund of the Commonwealth of Massachusetts, as of and for the years ended June 30, 2017 and 2016, and the related notes to the financial statements, which collectively comprise the University's basic financial statements, and our report thereon dated December 14, 2017 expressed unmodified opinions on these financial statements. Our audits were performed for the purpose of forming opinions on the financial statements that collectively comprise the University's basic financial statements.

The accompanying Combining Statements of Net Position for University Related Organizations and of Revenues, Expenses, and Changes in Net Position as of and for the years ended June 30, 2017 and 2016 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 supplementary information has been subjected to the auditing procedures applied in the audits 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.

Grant Thornton LLP

Boston, Massachusetts
December 14, 2017

Grant Thornton LLP
U.S. member firm of Grant Thornton International Ltd

Combining Statements of Net Position for University Related Organizations

AS OF JUNE 30, 2017 AND 2016 (IN THOUSANDS OF DOLLARS) — SUPPLEMENTAL SCHEDULE I

	June 30, 2017				June 30, 2016			
	Total	Eliminations and Adjustments	The University of Massachusetts Foundation, Inc.	The University of Dartmouth Foundation, Inc.	Total	Eliminations and Adjustments	The University of Massachusetts Foundation, Inc.	The University of Dartmouth Foundation, Inc.
ASSETS								
Current Assets								
Cash and Cash Equivalents								
Accounts, Grants and Loans Receivable, Net	\$ 1,424	\$ —	\$ 116	\$ 1,308	\$ 1,475	\$ —	\$ 98	\$ 1,377
Pledges Receivable, net	1,515	(11,480)	12,211	784	371	(7,296)	6,635	1,032
Due from Related Organizations	123	123	—	—	193	193	—	—
Other Assets					55		55	
Total Current Assets	3,052	(11,357)	12,327	2,092	2,094	(7,103)	6,788	2,409
Noncurrent Assets								
Pledges Receivable, net	737	(12,190)	12,287	640	1,690	(19,392)	19,904	1,178
Investments	532,605	(685,728)	1,160,597	57,736	468,260	(641,121)	1,056,774	52,657
Other Assets	2,487	—	2,487	—	2,528	—	2,528	—
Investment in Plant, net	17,421	—	17,421	—	8,090	—	8,090	—
Total Noncurrent Assets	553,250	(697,918)	1,190,305	60,863	480,568	(660,563)	1,084,768	56,363
Total Assets	556,312	(709,275)	1,202,632	62,955	482,662	(667,666)	1,091,556	587,772
LIABILITIES								
Current Liabilities								
Accounts Payable	53	(21)	52	22	64	—	63	—
Due To Related Organization	21	(7,668)	7,689	—	69	(6,575)	—	6,644
Assets Held on Behalf of the University	—	(632,665)	632,665	—	—	(593,116)	593,116	—
Assets Held on Behalf of Others	27,408	—	27,408	—	27,837	—	27,837	—
Unearned Revenues and Credits	1,162	—	1,162	—	1,224	—	1,224	—
Total Current Liabilities	28,644	(640,354)	(664,051)	7,711	29,194	(599,691)	622,240	6,645
Noncurrent Liabilities								
Other Liabilities	2,764	—	—	—	3,502	—	3,502	—
Total Noncurrent Liabilities	2,764	—	—	—	3,502	—	3,502	—
Total Liabilities	31,408	(640,354)	(664,051)	7,711	32,696	(599,691)	625,742	6,645
NET POSITION								
Invested in Capital Assets	17,421	17,421	—	—	8,090	8,090	—	—
Net of Related Debt								
Restricted								
Nonexpendable	385,856	(58,728)	407,979	36,605	374,566	(37,235)	374,566	37,235
Expendable	98,145	(10,193)	92,219	16,119	46,275	(30,740)	64,380	12,635
Unrestricted	23,482	(17,421)	38,383	2,520	21,035	(8,090)	26,868	2,257
Total Net Position	\$524,904	\$(68,921)	\$538,581	\$55,244	\$449,966	\$(67,975)	\$465,814	\$52,127

Combining Statements of Revenues, Expenses and Changes in Net Position for University Related Organizations

FOR THE YEARS ENDED JUNE 30, 2017 AND 2016 (IN THOUSANDS OF DOLLARS) — SUPPLEMENTAL SCHEDULE II

	June 30, 2017				June 30, 2016			
	Total	Eliminations and Adjustments	The University of Massachusetts Foundation, Inc.	The University of Massachusetts Dartmouth Foundation, Inc.	Total	Eliminations and Adjustments	The University of Massachusetts Foundation, Inc.	The University of Massachusetts Dartmouth Foundation, Inc.
EXPENSES								
Operating Expenses								
<i>Educational and General</i>								
Public Service	\$ 11,278	\$ 5,202	\$ 13,749	\$ 2,731	\$ 16,502	\$(971)	\$ 13,927	\$ 3,546
Depreciation	314	—	314	—	202	—	202	—
Scholarships and Fellowships	2,498	—	1,504	994	364	(1,497)	811	1,050
Total Operating Expenses	14,090	(5,202)	15,567	3,725	17,068	(2,468)	14,940	4,596
Total Operating Income/(Loss)	(14,090)	5,202	(15,657)	(3,725)	(17,068)	2,468	(14,940)	(4,596)
NONOPERATING REVENUES/(EXPENSES)								
Gifts	3,620	611	—	3,009	8,306	1,074	—	6,322
Investment Income	(219)	(219)	—	—	182	(79)	126	135
Endowment Income Distributed for Operations	—	—	—	—	1,386	40,568	(39,182)	—
Other Non-Operating Revenue	10,011	(3,204)	13,215	—	11,387	—	11,387	—
Net Non-operating Revenues	13,412	(2,812)	13,215	3,009	20,351	41,563	(27,669)	6,457
Income/(Loss) Before Other Revenues, Expenses, Gains and Losses	(678)	2,390	(2,352)	(716)	3,283	44,031	(42,609)	1,861
OTHER REVENUES, EXPENSES, GAINS, AND LOSSES								
Additions to Permanent Endowments	(42,173)	2,612	40,011	—	25,864	(3,094)	28,958	—
Less: Amounts Earned/Received on Behalf of the University	—	38,633	(38,633)	—	—	(36,498)	36,498	—
Less: Amounts Earned/Received on Behalf of Others	—	489	(489)	—	—	(1,831)	1,831	—
Endowment Return Net Amount Used in Operations	30,441	(78,833)	104,599	4,675	(36,524)	(34,671)	—	(1,853)
Distribution to University	—	32,299	(32,299)	—	—	28,637	(28,637)	—
Other Additions/Deductions	3,002	1,914	1,930	(842)	3,958	3,170	1,382	(594)
Total Other Revenues, Expenses, Gains, and Losses	75,616	(3,336)	75,119	3,833	(6,702)	(44,287)	40,032	(2,447)
Total Increase/(Decrease) in Net Assets	74,938	(946)	72,767	3,117	(3,419)	(256)	(2,577)	(586)
NET POSITION								
Net Position at Beginning of Year	449,966	(67,975)	465,814	52,127	453,385	(67,719)	468,391	52,713
Net Position at End of Year	\$524,904	\$(68,921)	\$535,581	\$55,244	\$449,966	\$(67,975)	\$465,814	\$52,127

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

UNIVERSITY OF MASSACHUSETTS

June 30, 2017 and 2016

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, 2017 and 2016, and the related notes to the financial statements, which collectively comprise the University's basic financial statements as listed in the table of contents.

Management's responsibility for the financial statements

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

Auditor's responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the University's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the

circumstances, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and the aggregate discretely presented component units of the University of Massachusetts as of June 30, 2017 and 2016, 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 13 and the Schedule 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 50 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, 2017, as required by Title 2 *U.S. Code of Federal Regulations (CFR) Part 200*, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such supplementary information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures. These additional procedures included comparing and reconciling the information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in

accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Emphasis of Matter

The financial statements of the University are intended to present the financial position, the changes in financial position and cash flows that are attributable to the transactions of the University. They do not purpose to, and do not present fairly the position of the Commonwealth of Massachusetts as of June 30, 2017 and 2016, the changes in its financial position, or where applicable, its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Other reporting required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report, dated December 14, 2017, on our consideration of the University's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the University's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the University's internal control over financial reporting and compliance.

Grant Thornton LLP

Boston, Massachusetts
December 14, 2017

**University of Massachusetts
Management's Discussion and Analysis (unaudited)
June 30, 2017**

Introduction

The University of Massachusetts 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, 2017 with comparative information as of June 30, 2016 and June 30, 2015. 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 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 2016, the University enrolled 63,978 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 \$250 million from \$2.8 billion in fiscal year 2016 to \$3.1 billion in fiscal year 2017. Net position at June 30, 2015 was \$2.7 billion.

From fiscal year 2016 to fiscal year 2017, the University's operating revenues increased by \$39.5 million driven by an increase in tuition & fee and auxiliary revenue from both a rate increase and enrollment increases and grant revenue due to new government and private grant activity. Operating expenses increased by \$22.6 million primarily driven by a collective bargaining rate increase, a state fringe rate increase and depreciation associated with the University's capital plan. Non-operating revenues increased \$68.4 million primarily attributed to strong double-digit investment gains and two changes in state laws. The first allowed for the University to retain tuition revenue without remitting a portion back to the Commonwealth, and adjusted State Appropriations as a result. The second change in state law relates to learning contracts entered into by the Medical School and certain medical students. These contracts give students the option of deferring a portion of their tuition until after residency training, and cancelling all or a portion of their tuition if they practice primary care medicine in the Commonwealth for a prescribed time period. As a result of changes in legislation, outstanding balances from these learning contracts were recorded as non-operating income in 2017.

Using the Annual Financial Report

The Statement of Net Position, Statement of Revenues, Expenses and Changes in Net Position and the Statement of Cash Flows 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 present 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 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 Statements of Net Position - University (excludes Related Organizations)

University of Massachusetts Condensed Statements of Net Position As of June 30, 2017, 2016, and 2015 (in thousands of dollars)				
	University June 30, 2017	University June 30, 2016	FY17-16 Change	University June 30, 2015
ASSETS				
Current Assets	\$ 739,847	\$ 677,927	\$ 61,920	\$ 692,679
Noncurrent Assets				
Investment in Plant Net of Accumulated Depreciation	4,930,912	4,615,776	315,136	4,333,761
All Other Noncurrent Assets	1,283,546	1,294,028	(10,482)	1,501,421
Total Assets	6,954,305	6,587,731	366,574	6,527,861
DEFERRED OUTFLOWS OF RESOURCES				
	275,725	293,432	(17,707)	178,410
LIABILITIES				
Current Liabilities	619,250	774,837	(155,587)	856,460
Noncurrent Liabilities	3,522,756	3,294,183	228,573	3,133,710
Total Liabilities	4,142,006	4,069,020	72,986	3,990,170
DEFERRED INFLOWS OF RESOURCES				
	37,671	12,050	25,621	48,753
NET POSITION				
Invested in Capital Assets Net of Related Debt	2,204,001	2,013,966	190,035	1,887,941
Restricted				
Nonexpendable	27,443	18,384	9,059	18,378
Expendable	201,710	218,272	(16,562)	169,591
Unrestricted	617,199	549,471	67,728	591,438
Total Net Position	\$ 3,050,353	\$ 2,800,093	\$ 250,260	\$ 2,667,348

At June 30, 2017, total University net position was \$3.1 billion. The University's largest asset continues to be its net investment in its physical plant of \$4.9 billion at June 30, 2017, \$4.6 billion at June 30, 2016 and \$4.3 billion at June 30, 2015.

University liabilities totaled \$4.1 billion at June 30, 2017, an increase of \$73 million over fiscal year 2016. Long-term liabilities represent 85.0% of the total liabilities which primarily consist of bonds payable amounting to \$3.1 billion and net pension liability of \$429.9 million at June 30, 2017.

The University's current assets as of June 30, 2017 of \$739.8 million were above the current liabilities of \$619.3 million, and as a result the current ratio was \$1.19 in assets to every one dollar in liabilities. Current assets of \$677.9 million at June 30, 2016 were below the current liabilities of \$774.8 million, resulting in a current ratio of 0.9.

The unrestricted and restricted expendable net position totaled \$818.9 million in fiscal year 2017, which represents 26% of total operating expenditures of \$3.2 billion for fiscal year 2017. The unrestricted and restricted expendable net position totaled \$767.7 million in fiscal year 2016, which represented 24% of total operating expenditures of \$3.1 billion in 2016. The unrestricted and restricted expendable net position totaled \$761 million in fiscal year 2015, which represents 27% of total operating expenditures of \$2.9 billion in 2015.

Condensed Statements of Net Position - Related Organizations

University of Massachusetts Condensed Statements of Net Position for Related Organizations As of June 30, 2017, 2016, and 2015 (in thousands of dollars)				
	University Related Organizations June 30, 2017	University Related Organizations June 30, 2016	FY17-16 Change	University Related Organizations June 30, 2015
ASSETS				
Current Assets	\$ 3,062	\$ 2,094	\$ 968	\$ 1,373
Noncurrent Assets				
Investment in Plant Net of Accumulated Depreciation	17,421	8,090	9,331	8,293
All Other Noncurrent Assets	535,829	472,478	63,351	478,645
Total Assets	556,312	482,662	73,650	488,311
LIABILITIES				
Current Liabilities	28,644	29,194	(550)	31,421
Noncurrent Liabilities	2,764	3,502	(738)	3,505
Total Liabilities	31,408	32,696	(1,288)	34,926
NET POSITION				
Invested in Capital Assets Net of Related Debt	17,421	8,090	9,331	8,293
Restricted				
Nonexpendable	385,856	374,566	11,290	330,301
Expendable	98,145	46,275	51,870	90,413
Unrestricted	23,482	21,035	2,447	24,378
Total Net Position	\$ 524,904	\$ 449,966	\$ 74,938	\$ 453,385

Statement of Revenues, Expenses and Changes in Net Position

Total operating revenues for fiscal year 2017 were \$2.4 billion. This represents a \$39.5 million (1.6%) increase from the \$2.4 billion in operating revenues in fiscal year 2016. 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 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 below, is used almost exclusively to fund payroll for University employees.

In fiscal year 2017, operating expenditures, including depreciation and amortization, totaled \$3.2 billion. Of this total, \$1.8 billion or 53% was used to support the academic core activities of the University, including \$447.4 million in research. The Academic Core represents functional expenses in the following categories: Instruction, Research, Public Service, Academic Support, and Student Services. In fiscal year 2016, operating expenditures, including depreciation and amortization, totaled \$3.1 billion.

Condensed Statements of Revenues, Expenses, and Changes in Net Position - University (excludes Related Organizations)

University of Massachusetts				
Condensed Statements of Revenues, Expenses, and Changes in Net Position				
For the Years Ended June 30, 2017, 2016 and 2015				
(in thousands of dollars)				
	University June 30, 2017	University June 30, 2016	FY17-16 Change	University June 30, 2015
Operating Revenues				
Tuition and Fees (net of scholarship allowances)	\$ 847,832	\$ 826,815	\$ 21,017	\$ 765,218
Grants and Contracts	560,081	528,352	31,729	510,741
Auxiliary Enterprises	400,822	383,281	17,541	362,193
Other Operating Revenues	634,245	665,048	(30,803)	474,632
Total Operating Revenues	2,442,980	2,403,496	39,484	2,112,784
Operating Expenses	3,163,322	3,140,753	22,569	2,782,297
Operating Loss	(720,342)	(737,257)	16,915	(669,513)
Nonoperating Revenues/(Expenses)				
Federal Appropriations	6,602	6,827	(225)	6,619
State Appropriations	720,817	669,748	51,069	621,200
Interest on Indebtedness	(110,069)	(105,276)	(4,793)	(100,332)
Other Nonoperating Income	114,437	90,443	23,994	74,892
Nonoperating Federal Grants	74,050	75,743	(1,693)	76,539
Net Nonoperating Revenues	805,837	737,485	68,352	678,918
Income Before Other Revenues, Expenses, Gains and Losses	85,495	228	85,267	9,405
Capital Appropriations, Grants and Other Sources	150,412	172,557	(22,145)	118,405
Disposal of Plant Facilities	(4,274)	(10,462)	6,188	(12,120)
Other Additions/(Deductions)	18,627	(29,578)	48,205	(27,731)
Total Other Revenues, Expenses, Gains and Losses	164,765	132,517	32,248	78,554
Total Increase in Net Position	250,260	132,745	117,515	87,959
Net Position				
Net Position at the Beginning of the Year	2,800,093	2,667,348	132,745	2,818,295
Cumulative effect of change in accounting principle **	-	-	-	(238,906)
Net Position at the Beginning of the Year, adjusted	2,800,093	2,667,348	132,745	2,579,389
Net Position at the End of the Year	\$ 3,050,353	\$ 2,800,093	\$ 250,260	\$ 2,667,348

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

Condensed Statements of Revenues, Expenses, and Changes in Net Position - Related Organizations

University of Massachusetts				
Condensed Statements of Revenues, Expenses, and Changes in Net Position for University Related Organizations				
For the Years Ended June 30, 2017, 2016 and 2015				
(in thousands of dollars)				
	University Related Organizations June 30, 2017	University Related Organizations June 30, 2016	FY17-16 Change	University Related Organizations June 30, 2015
Operating Expenses	\$ 14,090	\$ 17,068	\$ (2,978)	\$ 16,709
Operating Loss	(14,090)	(17,068)	(2,978)	(16,709)
Nonoperating Revenues/(Expenses)				
Other Nonoperating Income	13,631	20,351	(6,720)	18,480
Net Nonoperating Revenues	13,631	20,351	(6,720)	18,480
Income Before Other Revenues, Expenses, Gains and Losses	(459)	3,283	(3,742)	1,771
Additions to Permanent Endowments	42,173	25,864	16,309	21,618
Other Additions/Deductions	33,224	(32,566)	65,790	(15,798)
Total Other Revenues, Expenses, Gains and Losses	75,397	(6,702)	82,099	5,820
Total Increase in Net Position	74,938	(3,419)	78,357	7,591
Net Position				
Net Position at the Beginning of the Year	449,966	453,385	(3,419)	445,794
Net Position at the End of the Year	\$ 524,904	\$ 449,966	\$ 74,938	\$ 453,385

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. 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. Finally, Public Service Activity expenditures also include payments made to the Commonwealth of Massachusetts pursuant to requirements of legislation enacted by the State Legislature of Massachusetts. See footnote 1 for additional information regarding "Other Operating Revenues and Expenditures, Sales and Services, Public Service Activities".

State Appropriations

	FY2017	FY2016	FY2015
Gross Commonwealth Appropriations	\$ 512,900	\$ 546,952	\$ 516,794
Plus: Fringe Benefits*	207,917	178,032	159,403
	720,817	724,984	676,197
Less: Mandatory Waivers	-	(24,653)	(23,942)
Less: Tuition Remitted	-	(30,583)	(31,055)
Net Commonwealth Support	\$ 720,817	\$ 669,748	\$ 621,200

*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 items 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.

In July 2015, the Legislature passed and the Governor signed into law, provisions in the fiscal year 2016 State budget that would give the University the tools to adopt a new system of billing that conforms to national norms across higher education, known as tuition retention. The passage of this legislation allowed for 100% of tuition to be retained by the University (out of state tuition retention was granted in FY04). As a result, the gross appropriation was reduced in 2017 to reflect the \$30.6 million in tuition that the University retained. In addition, the amounts that were previously deducted from the appropriation in the form of mandatory waivers are now reflected in gross tuition revenue and the offsetting scholarship allowances.

In fiscal year 2017, state appropriations represented 22% 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 \$51.1 million from fiscal year 2016, with the increase attributable to a higher level of State Appropriation and related fringe benefit support and a change in policy regarding the treatment of mandatory waivers and tuition remitted as a result of full Tuition Retention implemented in FY17 as discussed above. 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 table above. The University pays the Commonwealth for the fringe benefit cost of the employees paid from funding sources other than Commonwealth operating appropriations (details of the payment are referenced in footnote 11). The table above details the Commonwealth operating appropriations and the change as a result of full tuition retention.

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 2017, there was \$121.4 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 2017 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. Major construction and deferred maintenance projects are underway at all five of the University's campuses. These projects are funded by a combination of University and State funds.

Grant and Contract Revenue

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

Collectively, the University's Amherst Campus and Medical School in Worcester account for 78% of University grant and contract activity. The following table details the University's grant and contract revenues:

	FY2017	FY2016	FY2015
Federal Grants and Contracts	\$ 354,110	\$ 329,403	\$ 313,754
State Grants and Contracts	78,417	75,306	70,871
Local Grants and Contracts	2,489	2,445	1,717
Private Grants and Contracts	125,065	121,198	124,399
Total Grants and Contracts	\$ 560,081	\$ 528,352	\$ 510,741

Discretely Presented Component Units

University of Massachusetts Foundation, Inc.

The combined University and Foundation endowment has increased to \$819.7 million at June 30, 2017 from \$734.2 million at June 30, 2016 and from \$768.4 million at June 30, 2015.

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 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 funds that exist during each quarter-end are included in the calculation. In addition, a prudence rule is utilized to limit spending from a particular endowment fund to no lower than 93% of its book value. The Foundation distributed \$28.4 million (4%) and \$27.3 million (4%) in fiscal year 2017 and 2016, respectively.

The total investment gain of the Foundation for fiscal year 2017 was \$104.6 million as compared to 2016, which was a net loss of \$39.1 million.

University of Massachusetts Dartmouth Foundation, Inc.

Total investments of the Dartmouth Foundation were \$57.7 million at June 30, 2017 up from \$52.7 million at June 30, 2016, which are held by the University of Massachusetts Foundation, Inc. The Dartmouth Foundation total investment gain for fiscal year 2017, including realized and unrealized investment activity, was a net gain of \$4.7 million as compared to a net loss of \$1.9 million in 2016.

Tuition and Fees

For academic year 2016-2017, tuition was raised an average 5.6% for in-state undergraduate students. 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 years 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. 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 2017, semester, Massachusetts residents accounted for approximately 82.3% and 52.4% of the University's total undergraduate and graduate enrollment, respectively. Total enrollment in the fall of 2017 was 64,533 FTE (74,655 headcount students) an increase of 8.7%. Enrollments at the University have shown significant increases over the last five years (59,480 FTE in fall 2011). The 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.

The online learning consortium of the University, UMassOnline, has also 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 160 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 2017, UMassOnline and the Continuing Education' units at the five campuses collaboratively generated tuition revenue in excess of \$104 million and supported 75,565 course enrollments, an increase of 9.2% for revenue and an increase of 6.6% for course enrollments as compared to fiscal year 2016.

Degrees Awarded

The University awards four levels of degrees, as follows: associate, bachelors, masters and doctoral/professional degrees. A total of 18,023 degrees were awarded in the 2015-2016 academic year reflecting a 1.0% increase from the previous year. Of these awards, 67.3% were at the undergraduate level and 21.0% were at the graduate level. The remaining were associates degrees and undergraduate certificates.

Bonds Payable

As of June 30, 2017, the University had outstanding bonds of \$3.1 billion. The principal issuer of the University's debt is the University of Massachusetts Building Authority. A relatively small portion of the total (\$46.8 million) was financed through the Massachusetts Health and Educational Facilities Authority ("MHEFA"), and \$8.0 million financed through the Worcester City Campus Corporation (the "WCCC Bonds"). Bonds payable is the University's largest liability at June 30, 2017.

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 January 31, 2017, the Building Authority issued \$165.1 million of tax-exempt Project Revenue Bonds, Senior Series 2017-1 (the "2017-1 Bonds"), \$19.5 million of federally taxable Project Revenue Bonds, Senior Series 2017-2 (the "2017-2 Bonds"), and \$187.7 million of Refunding Revenue Bonds, Senior Series 2017-3 (the "2017-3 Bonds"). The Series 2017-3 Bonds were issued to refinance a portion of the MHEFA's Revenue Bonds, University of Massachusetts Issue, Series D (2007), the MHEFA's Revenue Bonds, Worcester City Campus Corporation Issue (University of Massachusetts Project), Series E & F (2007), the University of Massachusetts Building Authority Project Revenue Bonds, Senior Series 2008-2, and the University of Massachusetts Building Authority Project Revenue Bonds, Senior Series 2009-1.

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, 2017 and 2016 was \$115.3 million and \$117.4 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 \$2.3 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.

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.

In spite of investing more than \$3.5 billion on capital improvements over the last decade, the University's 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 and State funding will be utilized to fund renovations, new construction, and deferred maintenance projects as illustrated in the capital plan.

Factors Impacting Future Periods

There are a number of issues of University-wide importance that directly impact the financial operations of the University. Many of these issues, such as improving academic quality, realizing strong financial results, investing in capital assets, expanding fundraising capacity, operating more efficiently, being the most effective University for students and the Commonwealth given the available resources, and measuring performance are ongoing activities of continuous importance to the Board and University leadership that impact the financial and budget planning each year. The level of state support, the impact of collectively bargained wage increases, and the ability of student-fee supported activities to meet inflationary pressures determine the limits of program expansion, new initiatives and strategic investments, as well as the ability of the University to meet its core mission and ongoing operational needs.

Contacting the University

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

University of Massachusetts
Consolidated Statements of Net Position
As of June 30, 2017 and 2016
(In thousands of dollars)

	University June 30, 2017	University Related Organizations June 30, 2017	University June 30, 2016	University Related Organizations June 30, 2016
ASSETS				
Current Assets				
Cash and Cash Equivalents	\$ 92,344	\$ 1,424	\$ 101,207	\$ 1,475
Cash Held by State Treasurer	15,114	-	8,888	-
Accounts, Grants and Loans Receivable, net	275,166	-	244,178	-
Pledges Receivable, net	7,091	1,515	7,464	371
Short-Term Investments	286,171	-	206,266	-
Inventories, net	19,137	-	18,006	-
Accounts Receivable from UMass Memorial	33,818	-	35,724	-
Due From Related Organizations	21	123	69	193
Other Assets	10,985	-	56,125	55
Total Current Assets	739,847	3,062	677,927	2,094
Noncurrent Assets				
Cash Held By State Treasurer	7,599	-	8,342	-
Cash and Securities Held by Trustees	438,585	-	486,015	-
Accounts, Grants and Loans Receivable, net	48,775	-	38,526	-
Pledges Receivable, net	13,346	737	17,595	1,690
Investments	766,392	532,605	734,205	468,260
Other Assets	8,849	2,487	9,345	2,528
Investment in Plant, net	4,930,912	17,421	4,615,776	8,090
Total Noncurrent Assets	6,214,458	553,250	5,909,804	480,568
Total Assets	\$ 6,954,305	\$ 556,312	\$ 6,587,731	\$ 482,662
DEFERRED OUTFLOWS OF RESOURCES				
Change in Fair Value of Interest Rate Swaps	\$ 37,768	\$ -	\$ 65,428	\$ -
Loss on Debt Refunding	79,772	-	80,851	-
Pensions	158,185	-	147,153	-
Total Deferred Outflows of Resources	275,725	-	293,432	-
LIABILITIES				
Current Liabilities				
Accounts Payable	\$ 111,808	\$ 53	\$ 105,652	\$ 64
Accrued Salaries and Wages	83,543	-	112,521	-
Accrued Compensated Absences	81,357	-	80,730	-
Accrued Workers' Compensation	2,640	-	3,252	-
Accrued Interest Payable	22,694	-	21,976	-
Bonds Payable	206,696	-	332,996	-
Capital Lease Obligations	203	-	169	-
Accelerated Variable Rate Debt, Current	-	-	5,000	-
Assets Held on behalf of Others	-	27,408	-	27,837
Accounts Payable to UMass Memorial	4,422	-	3,707	-
Due to Related Organizations	123	21	193	69
Unearned Revenues and Credits	44,128	1,162	44,041	1,224
Advances and Deposits	8,375	-	6,712	-
Other Liabilities	53,261	-	57,888	-
Total Current Liabilities	619,250	28,644	774,837	29,194
Noncurrent Liabilities				
Accrued Compensated Absences	30,395	-	35,671	-
Accrued Workers' Compensation	11,946	-	12,160	-
Bonds Payable	2,885,146	-	2,646,626	-
Capital Lease Obligations	389	-	429	-
Interest Rate Swaps	61,839	-	90,478	-
Net Pension Liability	429,871	-	408,418	-
Unearned Revenues and Credits	32,597	-	23,936	-
Advances and Deposits	29,140	-	27,705	-
Other Liabilities	41,433	2,764	48,760	3,502
Total Noncurrent Liabilities	3,522,756	2,764	3,294,183	3,502
Total Liabilities	\$ 4,142,006	\$ 31,408	\$ 4,069,020	\$ 32,696
DEFERRED INFLOWS OF RESOURCES				
Pensions	\$ 37,671	\$ -	\$ 12,050	\$ -
Net Position:				
Invested in Capital Assets Net of Related Debt	\$ 2,204,001	\$ 17,421	\$ 2,013,966	\$ 8,090
Restricted				
Nonexpendable	27,443	385,856	18,384	374,566
Expendable	201,710	98,145	218,272	46,275
Unrestricted	617,199	23,482	549,471	21,035
Total Net Position	\$ 3,050,353	\$ 524,904	\$ 2,800,093	\$ 449,966

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, 2017 and 2016
(in thousands of dollars)

	University June 30, 2017	University Related Organizations June 30, 2017	University June 30, 2016	University Related Organizations June 30, 2016
REVENUES				
Operating Revenues				
Tuition and Fees (net of scholarship allowances of \$288,708 at June 30, 2017 and \$244,025 at June 30, 2016)	\$ 847,832	\$ -	\$ 826,815	\$ -
Federal Grants and Contracts	354,110	-	329,403	-
State Grants and Contracts	78,417	-	75,306	-
Local Grants and Contracts	2,489	-	2,445	-
Private Grants and Contracts	125,065	-	121,198	-
Sales and Service, Educational	28,910	-	27,500	-
Auxiliary Enterprises	400,822	-	383,281	-
Other Operating Revenues:				
Sales and Service, Independent Operations	79,261	-	47,613	-
Sales and Service, Public Service Activities	418,726	-	476,831	-
Other	107,348	-	113,104	-
Total Operating Revenues	2,442,980	-	2,403,496	-
EXPENSES				
Operating Expenses				
Educational and General				
Instruction	824,042	-	794,691	-
Research	447,370	-	434,213	-
Public Service	68,083	11,278	71,457	16,502
Academic Support	177,173	-	181,057	-
Student Services	151,033	-	141,915	-
Institutional Support	247,740	-	248,379	-
Operation and Maintenance of Plant	240,501	-	228,406	-
Depreciation and Amortization	249,669	314	240,865	202
Scholarships and Fellowships	47,710	2,498	44,645	364
Auxiliary Enterprises	306,850	-	297,089	-
Other Expenditures				
Independent Operations	57,276	-	47,930	-
Public Service Activities	345,875	-	410,106	-
Total Operating Expenses	3,163,322	14,090	3,140,753	17,068
Operating Loss	(720,342)	(14,090)	(737,257)	(17,068)
NONOPERATING REVENUES/(EXPENSES)				
Federal Appropriations	6,602	-	6,827	-
State Appropriations	720,817	-	669,748	-
Gifts	26,253	3,620	42,415	7,396
Investment Income	28,756	(219)	29,381	182
Unrealized Gain/(Loss) on Investments	15,466	-	(7,633)	-
Endowment Income Distributed for Operations	26,877	-	24,740	1,386
Interest on Indebtedness	(110,069)	-	(105,276)	-
Nonoperating Federal Grants	74,050	-	75,743	-
Other Nonoperating Income	17,085	10,011	1,540	11,387
Net Nonoperating Revenues	805,837	13,412	737,485	20,351
Income Before Other Revenues, Expenses, Gains, and Losses	85,495	(678)	228	3,283
OTHER REVENUES, EXPENSES, GAINS, AND LOSSES				
Capital Appropriations	121,380	-	121,298	-
Capital Grants and Contracts	29,080	-	51,259	-
Endowment Return, Net of Amount Used for Operations	21,278	30,441	(28,958)	(36,524)
Additions to Permanent Endowments	-	42,173	-	25,864
Capital Contribution	-	-	2,985	-
Disposal of Plant Facilities	(4,274)	-	(10,462)	-
Other Additions/(Deductions)	(2,699)	3,002	(3,605)	3,958
Total Other Revenues, Expenses, Gains, and Losses	164,765	75,616	132,517	(6,702)
Total Increase in Net Position	250,260	74,938	132,745	(3,419)
NET POSITION				
Net Position at Beginning of Year	2,800,093	449,966	2,667,348	453,385
Net Position at End of Year	\$ 3,050,353	\$ 524,904	\$ 2,800,093	\$ 449,966

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, 2017 and 2016
(in thousands of dollars)**

	University June 30, 2017	University June 30, 2016
CASH FLOWS FROM OPERATING ACTIVITIES		
Tuition and Fees	\$ 852,889	\$ 829,654
Grants and Contracts	814,018	791,533
Payments to Suppliers	(1,131,219)	(1,295,707)
Payments to Employees	(1,461,100)	(1,444,036)
Payments for Benefits	(401,143)	(354,120)
Payments for Scholarships and Fellowships	(47,675)	(44,635)
Loans Issued to Students and Employees	(8,105)	(5,596)
Collections of Loans to Students and Employees	6,989	7,099
Auxiliary Enterprises Receipts	357,968	369,715
Sales and Service, Educational	25,118	24,328
Sales and Service, Independent Operations	76,221	57,451
Sales and Service, Public Service Activities	428,012	493,461
Net Cash Used for Operating Activities	(488,027)	(570,853)
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES		
State Appropriations	720,819	724,985
Tuition Remitted to the State	-	(30,583)
Federal Appropriations	6,602	6,827
Gifts and Grants for Other Than Capital Purposes	32,854	26,831
Nonoperating Federal Grants	74,050	75,743
Student Organization Agency Transactions	155	527
Net Cash Provided by Noncapital Financing Activities	834,480	804,330
CASH FLOWS FROM CAPITAL AND OTHER FINANCING ACTIVITIES		
Proceeds from Capital Debt	236,666	8,668
Bond Issuance Costs Paid	(620)	2
Capital Appropriations	121,333	121,297
Capital Grants and Contracts	9,332	58,759
Purchases of Capital Assets and Construction	(105,493)	(191,039)
Principal Paid on Capital Debt and Leases	(120,353)	(78,287)
Interest Paid on Capital Debt and Leases	(115,201)	(113,746)
Use of Debt Proceeds on Deposit with Trustees	(369,995)	(321,964)
Net Cash Used for Capital Financing Activities	(344,331)	(516,310)
CASH FLOWS FROM INVESTING ACTIVITIES		
Proceeds from Sales and Maturities of Investments	1,124,176	1,138,588
Interest on Investments	10,605	8,862
Purchase of Investments	(1,187,713)	(1,090,191)
Net Cash (Used for) Provided by Investing Activities	(52,932)	57,259
NET (DECREASE) IN CASH AND CASH EQUIVALENTS	(50,810)	(225,574)
Cash and Cash Equivalents - Beginning of the Year	604,452	830,026
Cash and Cash Equivalents - End of Year	\$ 553,642	\$ 604,452
RECONCILIATION OF OPERATING LOSS TO NET CASH USED BY OPERATING ACTIVITIES		
Operating Loss	\$ (720,342)	\$ (737,257)
Adjustments to reconcile loss to net cash used by Operating Activities:		
Depreciation and Amortization Expense	249,669	240,865
Changes in Assets and Liabilities:		
Receivables, net	(36,615)	(2,969)
Inventories	(1,131)	(534)
Due to Related Organizations	(118)	-
Accounts Receivable/Payable UMass Memorial	2,621	(17,341)
Other Assets	45,821	(44,077)
Accounts Payable (non-capital)	8,412	(17,821)
Accrued Liabilities	(34,453)	(5,835)
Deferred Revenue	8,748	(4,374)
Advances and Deposits	3,098	(395)
Other Liabilities	(13,737)	18,885
Net Cash Used for Operating Activities	\$ (488,027)	\$ (570,853)
SUPPLEMENTAL DISCLOSURE OF NONCASH ACTIVITIES:		
Bonds to refund existing debt	\$ 130,325	\$ -
Assets acquired and included in accounts payable and other liabilities	60,853	63,109

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

University of Massachusetts
Notes to Consolidated Financial Statements
June 30, 2017 and 2016

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 ("US GAAP") as prescribed by the Governmental Accounting Standards Board ("GASB") using the economic resources measurement focus and the accrual basis of accounting. These financial statements are reported on a 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 US GAAP 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, valuation of derivatives, 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. GASB 35 establishes standards for external financial reporting by public colleges and universities that resources be classified into the following net position categories:

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

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*. The University is required to adopt this standard in fiscal year 2018. 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.

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, 2017 and 2016 was \$131.6 million and \$119 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 funds that exist during each quarter-end are included in the calculation. 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 2017 and 2016. 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 2017 and 2016, the deficiencies were \$0.5 million and \$3.2 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. Prior to the fiscal year ended June 30, 2017, the University recorded a full year of depreciation in the year of acquisition. Beginning in the fiscal year ended June 30, 2017, to be consistent with the Building Authority, the University applied a half-year convention to the straight-line basis of depreciation. This change in accounting estimate is reported prospectively for all depreciable assets. Management estimates that the adoption of the half-year convention reduced depreciation expense by \$5 million in fiscal year 2017.

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

Buildings	15-50 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 year ended June 30, 2016 present as tuition revenue \$30.6 million 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.

In July of 2015, the Legislature passed and the Governor signed into law provisions in the fiscal year 2016 State budget that would give the University the tools to adopt a new system of billing that conforms to national norms across higher education. The University restructured its tuition and fees in a way that is transparent and consistent with peer institutions across the nation. Beginning in the year ended June 30, 2017, the State Appropriation decreased to reflect the reduction in appropriation to offset the tuition that previously had been remitted to the State. Gross tuition and fees revenue and the related scholarship allowances on the Statement of Revenues, Expenses and Changes in Net Position increased to reflect the amounts previously credited as mandatory waivers as noted below.

Impact of Tuition Retention on State Appropriations

	Year Ended	
	2017	2016
Gross Commonwealth Appropriations	\$ 512,900	\$ 546,953
Plus: Fringe Benefits	207,919	178,032
	720,819	724,985
Less: Mandatory Waivers	-	(24,654)
Less: Tuition Remitted	-	(30,583)
Net Commonwealth Support	\$ 720,819	\$ 669,748

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, 2017 and 2016, the University recognized Auxiliary Enterprise revenue of \$400.8 million and \$383.3 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 \$296 million and \$283.8 million for the years ended June 30, 2017 and 2016, respectively. Included in expenditures are Commonwealth Medicine expenditures of \$248.8 million and \$244.1 million for the years ended June 30, 2017 and 2016, 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 \$140 million and \$209.9 million for the years ended June 30, 2017 and 2016, respectively. Finally, Public Service Activity expenditures include payments made to the Commonwealth of Massachusetts of \$96.5 million and \$166 million for the years ended June 30, 2017 and 2016, pursuant to requirements of legislation enacted by the State Legislature of Massachusetts.

Other non-operating income included revenue of \$15.2 million and \$ 0.5 million for the years ended June 30, 2017 and 2016, respectively. In 2017, other non-operating income consists of amounts due to the University Medical School campus for its learning contracts.

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, 2017 and 2016, 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 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.

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 18.7% and 23.5% of the University's investments at June 30, 2017 and 2016, 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, 2017 and 2016, 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, 2017 and 2016, the carrying amounts of bank balances with uninsured or uncollateralized operating cash deposits were \$293.9 million and \$246.9 million, respectively.

At June 30, 2017, the University held a carrying and fair market value of \$778.0 million in non-money market investments compared to a carrying and fair market value of \$737.3 million at June 30, 2016. In the event of negligence due to the University's custodian and/or investment manager(s), it is expected that investment balances of \$778.0 million and \$737.3 million at June 30, 2017 and 2016, 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, 2017 and 2016, 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, 2017 and 2016, respectively:

Asset Class	2017		2016	
	Fair Value	Average Credit Quality	Fair Value	Average Credit Quality
Short Duration	\$ 356,026	AAA	\$ 270,117	AAA
Intermediate Duration	249,365	A	239,218	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, 2017 and 2016, respectively:

Rated Debt Investments - 2017

(in thousands)

S&P Quality Ratings

	Fair Value	AAA	AA	A	BBB	BB	B	<B	Unrated
U.S. Agencies	\$ 432	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 432
U.S. Government	52,217	-	-	-	-	-	-	-	52,217
Certificates of Deposit	10,500	-	-	-	-	-	-	-	10,500
Corporate Debt	91,358	16,243	3,178	23,990	34,951	195	-	-	12,801
Municipal/Public Bonds	4,149	427	1,773	459	1,490	-	-	-	-
Bond Mutual Funds	161,355	61,128	25,099	18,617	27,621	13,038	5,683	1,225	8,944
Money Market Funds	285,380	31,276	-	-	-	-	-	269	253,835
	<u>\$ 605,391</u>	<u>\$ 109,074</u>	<u>\$ 30,050</u>	<u>\$ 43,066</u>	<u>\$ 64,062</u>	<u>\$ 13,233</u>	<u>\$ 5,683</u>	<u>\$ 1,494</u>	<u>\$ 338,729</u>

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>

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, 2017 and 2016, respectively:

<u>Asset Class</u>	<u>2017</u>		<u>2016</u>	
	<u>Allocation</u>	<u>Fair Value</u>	<u>Allocation</u>	<u>Fair Value</u>
Short Duration	34%	\$ 356,026	29%	\$ 270,117
Intermediate Duration	24%	249,365	25%	239,218
Alternatives	18%	196,376	23%	220,543
Commodities	1%	8,330	1%	9,108
Equities	21%	224,437	20%	183,027
Real Estate	2%	18,029	2%	18,458
	<u>100%</u>	<u>\$ 1,052,563</u>	<u>100%</u>	<u>\$ 940,471</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, 2017 and 2016, respectively:

INVESTMENTS - 2017

(in thousands)

Investment Type:	Investment Maturity (In Years)				
	Fair Value	Less than 1	1 to 5	6 to 10	More than 10
Debt Securities					
U.S. Agencies	\$ 432	\$ 296	\$ 136	\$ -	\$ -
U.S. Government	52,217	448	47,233	4,536	-
Certificates of Deposit	10,500	10,500	-	-	-
Corporate Debt	91,358	30,648	55,812	4,486	412
Municipal/Public Bonds	4,149	4,003	146	-	-
Bond Mutual Funds	161,355	24,751	81,212	44,488	10,904
Money Market Funds	285,380	285,380	-	-	-
Sub Total Debt Securities	\$ 605,391	\$ 356,026	\$ 184,539	\$ 53,510	\$ 11,316
Other Investments					
Alternative Assets	\$ 196,376				
Equity Securities - International	128,458				
Equity Securities - Domestic	95,979				
Commodities	8,330				
Real Estate	18,029				
Grand Total	\$ 1,052,563				

INVESTMENTS - 2016

(in thousands)

Investment Type:	Investment Maturity (in Years)				
	Fair Value	Less than 1	1 to 5	6 to 10	More than 10
Debt Securities					
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	-	-	-
Sub Total Debt Securities	\$ 509,335	\$ 270,117	\$ 180,082	\$ 45,759	\$ 13,377
Other Investments					
Alternative Assets	\$ 220,543				
Equity Securities - International	106,102				
Equity Securities - Domestic	76,925				
Commodities	9,108				
Real Estate	18,458				
Grand Total	\$ 940,471				

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, 2017, by the GASB No. 72 valuation hierarchy defined above (in thousands):

	2017	Fair Value Measurements Determined Using:		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by Fair Value Level				
Debt Securities				
U.S. Treasury Securities	\$ 49,198	\$ 49,198	\$ -	\$ -
Government Agency Bonds	432	-	432	-
Asset-Backed Securities	20,571	-	20,571	-
Commercial Mortgage-Backed Securities	5,771	-	5,771	-
Government Issued Commercial Mortgage-Backed Securities	253	-	253	-
Government Mortgage-Backed Securities	3,047	-	3,047	-
Non Government Backed CMO's	886	-	886	-
Corporate Bonds	63,866	-	63,629	237
Municipal and Provincial Bonds	4,149	-	4,149	-
Other Fixed Income	161,353	147,948	13,405	-
Total Debt Securities	<u>309,526</u>	<u>197,146</u>	<u>112,143</u>	<u>237</u>
Equity Securities				
Domestic Equities	95,979	94,729	-	1,250
International Equities	128,458	128,458	-	-
Total Equity Securities	<u>224,437</u>	<u>223,187</u>	<u>-</u>	<u>1,250</u>
Other Securities				
Commodities	8,330	8,330	-	-
REITS	18,029	18,029	-	-
Total Other Securities	<u>26,359</u>	<u>26,359</u>	<u>-</u>	<u>-</u>
Total Investments by Fair Value Level	\$ 560,322	\$ 446,692	\$ 112,143	\$ 1,487
Investments Measured at the Net Asset Value ("NAV")				
Multi-Strategy Hedge Funds				
Equity	\$ 46,681			
Long/Short	12,640			
Fixed Income	48,196			
Absolute Return	50,623			
Real Assets	11,784			
Private Equity	3,402			
Private Debt	19,221			
Private Real Estate	3,829			
Total Investments Measured at the NAV	<u>196,376</u>			
Total Investments Measured at Fair Value	\$ 756,698			
Cash and Cash Equivalents	<u>295,865</u>			
Total Investments Per Financial Statements	\$ 1,052,563			

The following table presents the investments carried at fair value, as of June 30, 2016, by the GASB No. 72 valuation hierarchy defined above (in thousands):

	2016	Fair Value Measurements Determined Using:		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by Fair Value Level				
Debt Securities				
U.S. Treasury Securities	\$ 31,873	\$ 31,873	\$ -	\$ -
Government Agency Bonds	535	-	535	-
Asset-Backed Securities	23,951	-	23,951	-
Commercial 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	151,386	137,608	13,778	-
Total Debt Securities	301,244	169,481	131,605	158
Equity Securities				
Domestic Equities	76,925	76,074	-	851
International Equities	106,102	106,102	-	-
Total Equity Securities	183,027	182,176	-	851
Other Securities				
Commodities	9,108	9,108	-	-
REITS	18,458	18,458	-	-
Total Other Securities	27,566	27,566	-	-
Total Investments by Fair Value Level	\$ 511,837	\$ 379,223	\$ 131,605	\$ 1,009
Investments Measured at the NAV				
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	3,498			
Total Investments Measured at the NAV	220,543			
Total Investments Measured at Fair Value	\$ 732,380			
Cash and Cash Equivalents	208,091			
Total Investments Per Financial Statements	\$ 940,471			

3. CASH HELD BY STATE TREASURER

Accounts payable, accrued salaries and outlays for future capital projects to be funded from state-appropriated funds totaled \$14.4 million at June 30, 2017 and \$17.3 million at June 30, 2016. 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 consist primarily 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, 2017 and 2016, there was \$1 million and \$0.9 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 \$438.6 million and \$485.1 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 (\$438.6 million at June 30, 2017 and \$437.6 million at June 30, 2016) 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):

	2017		2016
Cash	\$ 5,553	\$	4,577
Permitted money market accounts ("MMA")	426,797		475,240
Total cash and cash equivalents	<u>\$ 432,350</u>	\$	<u>479,817</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, 2017 and June 30, 2016, the bank balances of uninsured deposits totaled \$5.1 million and \$4.1 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.

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, 2017, the Building Authority had 98.8% of its investments in MMDT. As of June 30, 2016, the Building Authority had 98% of its investments in MMDT.

5. ACCOUNTS, GRANTS AND LOANS RECEIVABLE

Accounts, grants and loans receivable as of June 30, 2017 and 2016 are as follows (in thousands):

	2017	2016
Student Accounts Receivable	\$ 58,065	\$ 56,661
Less allowance for uncollectible accounts	(20,258)	(23,077)
	<u>37,807</u>	<u>33,584</u>
Grants and Contracts Receivable	94,583	98,383
Less allowance for uncollectible accounts	(1,189)	(2,108)
	<u>93,394</u>	<u>96,275</u>
Student Loans Receivable	63,660	44,760
Less allowance for uncollectible accounts	(4,499)	(303)
	<u>59,161</u>	<u>44,457</u>
Commonwealth Medicine	76,093	69,489
Less allowance for uncollectible accounts	(2,029)	(500)
	<u>74,064</u>	<u>68,989</u>
Other	60,304	39,996
Less allowance for uncollectible accounts	(789)	(597)
	<u>59,515</u>	<u>39,399</u>
Total, net	323,941	282,704
Less current portion, net	(275,166)	(244,178)
Long-term, net	<u>\$ 48,775</u>	<u>\$ 38,526</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 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, 2017 and 2016, the reimbursements for services provided to UMass Memorial were \$147.7 million and \$125.2 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 \$89.2 million and \$71.3 million for fiscal years 2017 and 2016, respectively. At June 30, 2017 and 2016, the University has recorded a receivable in the amount of \$33.8 million and \$35.7 million, respectively from UMass Memorial which includes \$19.4 million and \$22.9 million, respectively, in payroll and related fringe charges. The University has recorded a payable of \$4.4 million and \$3.6 million at June 30, 2017 and 2016, respectively, 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, 2017, the net position of the Foundation included as related organization in the accompanying financial statements of the University is \$538.6 million, of which \$500.2 million are restricted funds and \$38.4 million are unrestricted funds. During the fiscal year ended June 30, 2017, the University received \$33.0 million from the Foundation, and transferred \$11.6 million to the Foundation of which \$1.6 million related to the establishment of quasi-endowment. At June 30, 2017, the University's investments include \$331.5 million of endowment funds held in a custodial relationship at the Foundation, and \$301.1 million in ITIF.

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. At June 30, 2016, the University's investments include \$309 million of endowment funds held in a custodial relationship at the Foundation, and \$283.2 million in ITIF.

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.

7. INVESTMENT IN PLANT

Investment in plant activity for the year ended June 30, 2017 is comprised of the following (in thousands):

University:

	Beginning Balance	Additions	Retirements	Ending Balance
Buildings and Improvements	\$ 5,691,000	\$ 456,293	\$ (14,652)	\$ 6,132,641
Equipment and Furniture	658,968	80,119	(45,586)	693,501
Software	136,503	4,272	(29,737)	111,038
Library Books	65,978	-	(5,834)	60,144
	<u>6,552,449</u>	<u>540,684</u>	<u>(95,809)</u>	<u>6,997,324</u>
Accumulated Depreciation	(2,697,213)	(249,974)	82,907	(2,864,280)
Sub-Total	<u>3,855,236</u>	<u>290,710</u>	<u>(12,902)</u>	<u>4,133,044</u>
Land	84,161	14,394	(895)	97,660
Construction in Progress	676,379	478,566	(454,737)	700,208
Sub-Total	<u>760,540</u>	<u>492,960</u>	<u>(455,632)</u>	<u>797,868</u>
Total	<u>\$ 4,615,776</u>	<u>\$ 783,670</u>	<u>\$ (468,534)</u>	<u>\$ 4,930,912</u>

University Related Organizations:

	Beginning Balance	Additions	Ending Balance
Buildings and Improvements	\$ 7,942	\$ 7,900	\$ 15,842
Equipment and Furniture	168	7	175
	<u>8,110</u>	<u>7,907</u>	<u>16,017</u>
Accumulated Depreciation	(1,439)	(315)	(1,754)
Sub-Total	<u>6,671</u>	<u>7,592</u>	<u>14,263</u>
Land	1,419	1,650	3,069
Total	<u>\$ 8,090</u>	<u>\$ 9,242</u>	<u>\$ 17,332</u>

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
	<u>6,292,759</u>	<u>312,070</u>	<u>(52,380)</u>	<u>6,552,449</u>
Accumulated Depreciation	(2,494,718)	(240,957)	38,462	(2,697,213)
Sub-Total	<u>3,798,041</u>	<u>71,113</u>	<u>(13,918)</u>	<u>3,855,236</u>
Land	71,579	12,582	-	84,161
Construction in Progress	464,142	428,789	(216,552)	676,379
Sub-Total	<u>535,721</u>	<u>441,371</u>	<u>(216,552)</u>	<u>760,540</u>
Total	<u>\$ 4,333,762</u>	<u>\$ 512,484</u>	<u>\$ (230,470)</u>	<u>\$ 4,615,776</u>

University Related Organizations:

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

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, 2017 and 2016, the University capitalized net interest costs of \$20.5 million and \$22.1 million, respectively.

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.

8. BONDS PAYABLE

Amounts outstanding at June 30, 2017 are as follows (in thousands)

<u>Issue Borrowing</u>	<u>Original Borrowing</u>	<u>Maturity Date</u>	<u>Interest Rate</u>	<u>Amount Outstanding</u>
University of Massachusetts Building Authority:				
Series 2008-A	26,580	2038	variable	19,145
Series 2008-1	232,545	2038	variable	171,430
Series 2008-2	120,560	2038	4.00-5.00%	3,065
Series 2009-1	247,810	2039	3.00-5.00%	28,400
Series 2009-2	271,855	2039	6.42-6.57%	271,855
Series 2009-3	28,570	2039	5.82-6.17%	25,685
Series 2010-1	118,985	2020	5.00%	59,230
Series 2010-2	430,320	2040	3.80-5.45%	430,320
Series 2010-3	3,005	2040	5.75%	2,730
Series 2011-1	135,040	2034	variable	126,540
Series 2011-2	101,700	2034	variable	96,115
Series 2013-1	212,585	2043	2.00-5.00%	198,655
Series 2013-2	71,970	2043	0.43-2.69%	65,090
Series 2013-3	24,640	2043	4.00 - 5.00%	24,640
Series 2014-1	293,890	2044	3.00 - 5.00%	293,015
Series 2014-2	14,085	2019	0.44-2.10%	8,555
Series 2014-4	157,855	2025	0.20 - 3.38%	122,125
Series 2014-3	67,635	2029	2.00-5.00%	61,640
Series 2015-1	298,795	2036	4.00 - 5.00%	298,795
Series 2015-2	191,825	2036	3.00 - 5.00%	191,825
Series 2017-1	165,130	2047	3.25-3.77%	165,130
Series 2017-2	19,510	2027	1.58-3.37%	19,510
Series 2017-3	35,945	2038	3.00-5.00%	187,680
				<u>2,871,175</u>
			Unamortized Bond Premium	<u>164,887</u>
			SUBTOTAL	<u>3,036,062</u>
University of Massachusetts HEFA/MDFA:				
2000 Series A	\$ 20,000	2030	variable	20,000
Series 2011	29,970	2034	2.50-4.00%	25,925
				<u>45,925</u>
			Unamortized Bond Premium	<u>870</u>
				<u>46,795</u>
WCCC HEFA/MDFA:				
Series 2005-D	\$ 99,325	2029	5.00-5.25%	715
Series 2011	10,495	2023	2.00-5.00%	6,690
				<u>7,405</u>
			Unamortized Bond Premium	<u>624</u>
			SUBTOTAL	<u>8,029</u>
MDFA:				
Clean Renewable Energy Bonds	\$ 1,625	2027	3.50%	956
			TOTAL	<u>\$ 3,091,842</u>

Bond Payable activity for the year ended June 30, 2017 is summarized as follows (in thousands):

	Beginning Balance	Additions	Retirements/ Repayment/ Amortization	Ending Balance
University of Massachusetts Building Authority:				
Series 2004-1	\$ 1,515	\$ -	\$ (1,515)	\$ -
Series 2008-A	20,105	-	(960)	19,145
Series 2008-1	179,425	-	(7,995)	171,430
Series 2008-2	63,025	-	(59,960)	3,065
Series 2009-1	108,365	-	(79,965)	28,400
Series 2009-2	271,855	-	-	271,855
Series 2009-3	26,235	-	(550)	25,685
Series 2010-1	72,310	-	(13,080)	59,230
Series 2010-2	430,320	-	-	430,320
Series 2010-3	2,785	-	(55)	2,730
Series 2011-1	128,245	-	(1,705)	126,540
Series 2011-2	97,265	-	(1,150)	96,115
Series 2013-1	203,420	-	(4,765)	198,655
Series 2013-2	67,335	-	(2,245)	65,090
Series 2013-3	24,640	-	-	24,640
Series 2014-1	293,465	-	(450)	293,015
Series 2014-2	11,330	-	(2,775)	8,555
Series 2014-4	149,975	-	(27,850)	122,125
Series 2014-3	64,470	-	(2,830)	61,640
Series 2015-1	298,795	-	-	298,795
Series 2015-2	191,825	-	-	191,825
Series 2017-1	-	165,130	-	165,130
Series 2017-2	-	19,510	-	19,510
Series 2017-3	-	187,680	-	187,680
Plus: unamortized bond premium	122,146	55,987	(13,246)	164,887
Subtotal	2,828,851	428,307	(221,096)	3,036,062
UMass HEFA/MDFA:				
2000 Series A	20,000	-	-	20,000
2007 Series D	8,645	-	(8,645)	-
Series 2011	26,940	-	(1,015)	25,925
Plus: unamortized bond premium	949	-	(79)	870
Subtotal	56,534	-	(9,739)	46,795
WCCC HEFA/MDFA:				
WCCC 2005 Series D	1,335	-	(620)	715
WCCC 2007 Series E	31,250	-	(31,250)	-
WCCC 2007 Series F	51,890	-	(51,890)	-
Series 2011	7,495	-	(805)	6,690
Plus: unamortized bond premium	1,215	-	(591)	624
Subtotal	93,185	-	(85,156)	8,029
MDFA:				
Clean Renewable Energy Bonds	1,052	-	(96)	956
Total	\$ 2,979,622	\$ 428,307	\$ (316,087)	\$ 3,091,842

Principal and interest, which is estimated using rates in effect at June 30, 2017, 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>
2018	\$ 94,314	\$ 120,128
2019	100,271	116,960
2020	103,931	113,481
2021	107,866	109,470
2022	100,356	105,462
2023-2027	519,043	469,016
2028-2032	514,595	364,839
2033-2037	493,775	263,926
2038-2042	554,865	138,095
2043-2047	316,045	32,583
2048-2052	20,400	536
Total	<u>\$ 2,925,461</u>	<u>\$ 1,834,496</u>

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

	Beginning Balance	Retirements/ Repayments/ Amortization	Ending Balance
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

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 \$115.3 million and \$117.4 million at June 30, 2017 and 2016, 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 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 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 years 2017 and 2016 the Authority incurred fees in connection with the Barclays agreement in the amount of \$0.7 million and \$0.1 million, respectively. The agreement expires on April 22, 2019 and may be extended if a mutual interest exists between the 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 Authority in connection with J.P. Morgan totaled \$0.4 million for the year ended June 30, 2016.

The 2008-A bonds are supported by a standby bond purchase agreement with Barclays which requires Barclays to purchase bonds that are tendered and not remarketed. Under the terms of the Barclays standby bond purchase agreement, the Authority was 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 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 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 Authority and Barclays. Fees incurred by the Authority in connection with the Barclays agreement totaled \$0.1 million for the years ended June 30, 2017 and June 30, 2016.

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%. Under the agreement, the 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 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 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. On May 17, 2017, the agreement was extended with Wells until June 9, 2019. The facility fee under the extended agreement is 32 basis points. Fees incurred by the Authority in connection with the Wells agreement totaled \$0.4 million and \$0.4 million for the years ended June 30, 2017 and 2016, respectively.

Window Bonds In fiscal year 2011, the Authority issued its 2011-2 bonds in a variable rate Window Bond mode. As with the Authority's other variable rate bonds, the Window Bondholders can tender the bonds at any time. However, unlike the 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 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 In fiscal year 2017, the Authority issued \$187.7 million of Refunding Revenue Senior Series 2017-3 Bonds which advance refunded \$77.3 million of the WCCC Series 2007-E and 2007-F Bonds and \$8.3 million of Lowell bonds issued under the Massachusetts Health and Academic Facilities Authority (MHEFA) Series 2007-D. The Series 2017-3 bonds also refunded \$57.0 million of the Authority's 2008-2 bonds and \$65.0 million of the Authority's 2009-1 bonds. The 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 University's financial statements.

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

There were no refundings of bonds in fiscal year 2016.

Bond Premium and Issuance Expenses In fiscal year 2017, the Authority received premiums at issuance totaling \$56.0 million. The Authority amortizes the premiums received as a reduction in interest expense over the life of the respective bond issue. There were no new bond issues in fiscal year 2016, thus no bond premiums were recorded in 2016.

In connection with the Authority's bond issues in fiscal 2017, the Authority incurred certain issuance costs associated with the bond offerings. In fiscal year 2017, these costs amounted to \$2.3 million and were expensed in accordance with the provisions of GASB Statement No. 65, *Items Previously Reported as Assets and Liabilities*.

Debt Covenants There were no financial debt covenants related to the above debt instruments.

Interest Rate Swaps The 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 Authority's contracts are evaluated pursuant to GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments* ("GASB 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 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 Authority's hedging derivative instruments at June 30, 2017 and 2016 were as follows (in thousands):

	Derivative Instruments - Liability		Derivative Instruments - Liability		Type of Hedge	Financial Statement Classification for Changes in Liability
	June 30, 2016	Net Change in Liability	June 30, 2017			
Series 2008-1 Swap	\$ (38,227)	\$ 12,960	\$ (25,267)		Cash Flow	Deferred Outflow of Resources
Series 2008-A Swap	(4,338)	1,454	(2,884)		Cash Flow	Deferred Outflow of Resources
Series 2006-1 Swap	(47,913)	14,225	(33,688)		Cash Flow	Deferred Outflow of Resources
Total	<u>\$ (90,478)</u>	<u>\$ 28,639</u>	<u>\$ (61,839)</u>			

The terms of the Authority's financial derivative instruments that were outstanding at June 30, 2017 are summarized in the table below (in thousands):

	Type	Effective Date	Termination Date	Rate Authority		Original Notional Value
				Pays	Authority Receives	
Series 2008-1 Swap	Synthetic Fixed	May 1, 2008	May 1, 2038	3.39 %	70% of 1-Month LIBOR	\$ 232,545
Series 2008-A Swap	Synthetic Fixed	Nov 13, 2008	May 1, 2038	3.38 %	70% of 1-Month LIBOR	\$ 26,580
Series 2006-1 Swap	Synthetic Fixed	Apr. 20, 2006	Nov. 1, 2034	3.48 %	60% of 3-Month LIBOR + .18%	\$ 243,830

Fair Values - 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 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 non-performance 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.

Credit risk - As of June 30, 2017 and 2016, the 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 counterparty 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 U.S. 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, 2017 are as follows:

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

Basis risk - The Authority is exposed to basis risk on its pay-fixed interest rate swaps because the variable-rate payment received by the 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. The terms of the related hedging fixed rate swap transactions are summarized in the chart at the top of this page.

Termination risk - The 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 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 Authority is withdrawn, suspended or falls below certain levels or the Authority fails to have a rating. The Authority or the counterparties may terminate the swaps if the other party fails to perform under the terms of the contract. The 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 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 Authority is owed or must pay cash to close out the swap position. A negative fair value means the 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 Authority's swaps include provisions that require the Authority to post collateral in the event its credit rating falls below certain levels. In the event the Authority is rated A2 by Moody's Investors Service or A by Standard & Poor's, the 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 Authority is not rated or rated below A3 by Moody's Investors Service or below A- by Standard & Poor's, the 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 Authority does not post collateral, the derivative instrument may be terminated by the counterparty. The 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, 2015; therefore, no collateral was required to be posted.

Termination of hedge accounting - In June of 2011, the 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, 2017 is reported as a deferred outflow as the swap was determined to be effective at June 30, 2017.

Swap payments and associated debt - Using rates as of June 30, 2017, the debt service requirements of the variable-rate debt and net swap payments, assuming current interest rates remain the same for their term, were as follows (in thousands):

Fiscal Year Ending June 30,	Interest Rate			Total
	Principal	Interest	Swaps, Net	
2018	\$ 11,770	\$ 378	\$ 10,446	\$ 22,594
2019	12,215	369	10,145	22,729
2020	12,720	360	9,831	22,911
2021	28,390	341	9,315	38,046
2022	29,545	314	8,586	38,445
2022-2026	158,250	1,109	30,831	190,190
2027-2031	124,330	427	12,313	137,070
2032-2036	35,035	52	1,435	36,522
2037-2038	825	1	21	847
Total	\$ 413,080	\$ 3,351	\$ 92,923	\$ 509,354

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 \$20.0 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 1.2%. 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 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, 2017 and 2016, the University is in compliance with this covenant.

Refundings In November 2011, the University issued \$30 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. 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

included in the University's financial statements. The Series D Bonds were refunded in 2017 using proceeds from Series 2017-3.

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

The 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. 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 \$5.9 million and \$6.5 million for fiscal years 2017 and 2016, respectively.

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 \$24.6 million and \$27.1 million for the years ended June 30, 2017 and 2016, respectively. The master leases primarily consist of telecommunications, software, and co-generation systems. The University also leases space to third-party tenants. During 2017 and 2016, the amount reported as rental income was \$18.9 million and \$18.3 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, 2017(in thousands):

<u>Year</u>	<u>Operating Leases</u>
2018	\$ 26,770
2019	25,413
2020	24,602
2021	24,049
2022	22,719
2023 and thereafter	<u>134,557</u>
Total Payments	<u>\$ 258,110</u>

10. OTHER LONG-TERM LIABILITIES

During the year ended June 30, 2017, 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>
University:				
Capital lease obligations	\$ 429	\$ 180	\$ (220)	\$ 389
Compensated absences	35,671	-	(5,276)	30,395
Workers' compensation	12,160	-	(214)	11,946
Unearned revenues and credits	23,936	24,391	(15,596)	32,731
Advances and deposits	27,705	1,834	(399)	29,140
Other liabilities	48,760	800	(8,127)	41,433
University Related Organization:				
Other liabilities	\$ 3,502	\$ -	\$ (738)	\$ 2,764

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

	Beginning Balance	Additions/ Adjustments	Reductions/ Adjustments	Ending Balance
University:				
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
University Related Organization:				
Other liabilities	\$ 3,505	\$ -	\$ (3)	\$ 3,502

11. FRINGE BENEFITS

Expenditures for the years ended June 30, 2017 and 2016 include \$329.3 million and \$295.1 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, \$123.8 million for 2017 and \$117.1 million for 2016 was reimbursed to the Commonwealth and \$205.5 million and \$178 million, respectively, is included in revenue as state appropriations.

12. PENSIONS

The Massachusetts State Employees' Retirement System ("MSERS") is a public employee retirement system ("PERS") that administers a cost-sharing multi-employer defined benefit plan as defined by 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:

<u>Hire Date</u>	<u>% of Compensation</u>
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 charge amounted to \$89.9 million and \$84.5 million for the years ended June 30, 2017 and 2016, respectively. Annual covered payroll was 75.8% and 75.8% for the years ended June 30, 2017 and 2016, respectively of annual total payroll for the University. The amount of pension expense included in the fringe charge was \$26.3 million and \$25.1 million for the years ended June 30, 2017 and 2016, respectively.

Actuarial Assumptions The total pension liability for the June 30, 2016 measurement date which is the date reported in the June 30, 2017 financial statements, was determined by an actuarial valuation as of January 1, 2016 rolled forward to June 30, 2016. 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 4.0% to 9.0% depending on group and length of service.
3. Chapter 176 of the Acts of 2011 created a one-time election for eligible members of the Optional Retirement Plan ("ORP") to transfer to the State Employees' Retirement System ("SERS") and purchase service for the period while members of the ORP. As a result, the total pension liability of SERS has increased by \$400 million as of June 30, 2016.
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)
5. Experience studies were performed as follows:
 - Dated February 27, 2014 and encompasses the period January 1, 2006 to December 31, 2011

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% 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. 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 for SERS has increased by \$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)

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, 2016 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%	1.60%
Private Equity	10.00%	8.70%
Real Estate	10.00%	4.60%
Value Added Fixed Income	10.00%	4.80%
Hedge Funds	9.00%	4.00%
Portfolio Completion Strategies	4.00%	3.60%
Timber/Natural Resources	4.00%	5.40%
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, 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>	

Discount Rate The discount rate used to measure the total pension liability was 7.5% at June 30, 2016 and June 30, 2015. 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. In particular, the table presents the University net 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, 2017	\$ 609,836	\$ 429,871	\$ 347,731
June 30, 2016	\$ 606,780	\$ 408,418	\$ 308,037

Pension Liabilities, Pension Expense, Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions The University reported a liability of \$429.9 and \$408.4 million for its proportionate share of MSERS's net pension liability as of June 30, 2017 and 2016, respectively. The net pension liability was measured as of June 30, 2016 and 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.

The following table shows the components of pension expense as of June 30, 2017 and 2016 (in thousands):

	2017	2016
Proportionate Share of Plan Pension Expense	\$ 58,723	\$ 45,628
Net Amortization of Deferred Amounts from Change in Proportion	2,935	11,224
Employer Contributions after Measurement Date	(25,618)	(22,386)
Pension Expense	\$ 36,040	\$ 34,466

At June 30, 2017, 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 (in thousands):

	Deferred Inflows of Resources	Deferred Outflows of Resources
Changes of Assumptions	\$ -	\$ 47,670
Changes in Proportion Due to Internal Allocation	-	35,625
Employer Contributions after Measurement Date	-	25,618
Differences Between Expected and Actual Experience	-	20,418
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	-	28,854
Changes in Proportion From Commonwealth	37,671	-
	\$ 37,671	\$ 158,185

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 (in thousands):

	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>

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 (in thousands):

Year Ending June 30:	
2018	\$ 21,201
2019	21,201
2020	32,788
2021	18,758
2022	951
Thereafter	-
	<u>\$ 94,899</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, 2017 and 2016, there were 1,674 and 1,626 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 \$7.2 million and \$8.3 million in 2017 and 2016, respectively. University employees contributed \$15.8 million and \$24.4 million in 2017 and 2016, 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, 2017 and 2016 plan assets totaled \$2.5 million and \$1.5 million, respectively.

13. 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 9.4% and 11.2% of total accounts receivable for the University at June 30, 2017 and 2016, respectively. The University also had uncollateralized receivables from the Executive Office of Health and Human Services comprising 11.5% of the total outstanding receivables at June 30, 2017 and uncollateralized receivables from The Executive Office of Health and Human Services comprising 12% of the total outstanding receivables at June 30, 2016.

14. COMMITMENTS AND CONTINGENCIES

The Building Authority, University, and WCCC have outstanding purchase commitments under construction contracts and real estate agreements of \$283.6 million and \$157.3 million at June 30, 2017 and 2016, respectively. In connection with the investments in certain limited partnership agreements, the Foundation has \$92.9 million and \$84.7 million in committed calls as of June 30, 2017 and 2016, 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 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, 2017 and 2016 in the amount of \$27.1 million and \$28.2 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 \$15.2 million as of June 30, 2017 and \$15.4 million as of June 30, 2016. 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 UMMMC, 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, UMMMC 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 UMMMC, and its subsequent amendments and the indemnification provisions in these Agreements, may be required to indemnify UMMMC 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.

15. SUBSEQUENT EVENTS

For purposes of determining the effects of subsequent events on these financial statements, management has evaluated events subsequent to June 30, 2017 through December 14, 2017, 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
Last 10 Years¹

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

	<u>6/30/2017</u>	<u>6/30/2016</u>	<u>6/30/2015</u>
University's proportion of the net pension liability	3.394%	3.922%	3.489%
University's proportionate share of the net pension liability	\$ 429,871	\$ 408,418	\$ 237,134
University's covered-employee payroll	\$ 1,156,082	\$ 1,139,719	\$ 1,061,132
University's proportionate share of the net pension liability as a percentage of its covered-employee payroll	37.18%	35.83%	22.35%
Plan fiduciary net position as a percentage of total pension liability	63.48%	67.87%	76.32%

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

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

¹ Until a full 10-year trend is compiled, the University is presenting only information for years for which information is available.

SUPPLEMENTAL INFORMATION

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
Year Ended June 30, 2017

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Research and Development Cluster				
Department Of Agriculture				
AGRICULTURAL RESEARCH SERVICE	10.001		\$ -	\$ 159,558
ANIMAL AND PLANT HEALTH INSPECTION SERV	10.025		-	266,407
ANIMAL AND PLANT HEALTH INSPECTION SERV	10.U01	14-8130-0472-CA	9,814	12,471
BRIGHAM YOUNG UNIVERSITY	10.310	15-0422	-	18,262
CORNELL UNIVERSITY	10.200	73375-10301	-	93
CORNELL UNIVERSITY	10.304	2016-37620-25852	-	5,002
CORNELL UNIVERSITY	10.304	67826-9928	-	4,079
CORNELL UNIVERSITY	10.310	2016-67017-26462	-	18,865
CORNELL UNIVERSITY	10.310	79850-10737	-	49,365
CORNELL UNIVERSITY	10.329	73984-10394	-	951
CORNELL UNIVERSITY	10.U02	73375-10288	-	(24)
CT AGRICULTURAL EXPERIMENT STATION	10.310	CAES-AC-2011-04	-	2,605
CT AGRICULTURAL EXPERIMENT STATION	10.329	2014-70006-22484	-	2,151
JOHNS HOPKINS UNIVERSITY	10.250	2003016257	-	5,609
LOUISIANA STATE UNIVERSITY	10.310	2017-67013-26165	-	4,346
MA DEPT OF AGRICULTURAL RESOURCES	10.170	14SPECUMAFOODSAFETY0	-	39,382
MA DEPT OF AGRICULTURAL RESOURCES	10.170	F15SCBGPMA	-	34,652
MA DEPT OF AGRICULTURAL RESOURCES	10.170	116-1923	-	2,038
MA DEPT OF CONSERVATION AND RECREATION	10.664	4CTDCR3760CUMASSUNIV	-	16,053
MA DEPT OF ELEMENTARY & SECONDARY ED	10.560	CT DOE 15CT75UMASSAMHRSTERI	-	257,390
MA DEPT OF TRANSITIONAL ASSISTANCE	10.331	WEL 4400 3081 UMS 16A	-	101,527
NATL INSTITUTE OF FOOD AND AGRICULTURE	10.202		-	374,833
NATL INSTITUTE OF FOOD AND AGRICULTURE	10.203		-	1,973,861
NATL INSTITUTE OF FOOD AND AGRICULTURE	10.207		-	2,740
NATL INSTITUTE OF FOOD AND AGRICULTURE	10.303		2,905	164,407
NATL INSTITUTE OF FOOD AND AGRICULTURE	10.309		330,522	308,847
NATL INSTITUTE OF FOOD AND AGRICULTURE	10.310		123,606	1,748,391
NATL INSTITUTE OF FOOD AND AGRICULTURE	10.328		-	52,374
NATURAL RESOURCES CONSERV SERVICES	10.025		-	444
NATURAL RESOURCES CONSERV SERVICES	10.902		-	14,769
NATURAL RESOURCES CONSERV SERVICES	10.903		-	9,958
NORTH CAROLINA STATE UNIVERSITY	10.310	2015-68004-23179	-	20,653
PURDUE UNIVERSITY	10.255	59-5000-5-0011	-	12,545
RUTGERS UNIVERSITY	10.200	5735-NERISOHP	-	3,545
RUTGERS UNIVERSITY	10.200	5782-NERISOHP	-	763
SOUTH CAROLINA STATE UNIVERSITY	10.216	0000003248	-	20,079
TENNESSEE STATE UNIVERSITY	10.310	332-77-16-642	-	20,805
U.S. DEPARTMENT OF AGRICULTURE	10.001		-	6,528
U.S. DEPARTMENT OF AGRICULTURE	10.025		-	6,878
U.S. DEPARTMENT OF AGRICULTURE	10.202		-	75,436
U.S. DEPARTMENT OF AGRICULTURE	10.203		-	281,026
U.S. DEPARTMENT OF AGRICULTURE	10.207		-	4,524
U.S. DEPARTMENT OF AGRICULTURE	10.310		208,495	779,338
U.S. DEPARTMENT OF AGRICULTURE	10.329		-	203,809
U.S. DEPARTMENT OF AGRICULTURE	10.458		24,000	132,996

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
Year Ended June 30, 2017

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Agriculture, continued				
U.S. DEPARTMENT OF AGRICULTURE	10.912		\$ -	\$ 28,622
U.S. DEPARTMENT OF AGRICULTURE	10.U03	15-IE-53300-001	18,460	71,796
U.S. DEPARTMENT OF AGRICULTURE	10.U04	14-JV-11242306-117	-	10,510
U.S. FOREST SERVICE	10.652		-	277,410
U.S. FOREST SERVICE	10.664		-	36,481
U.S. FOREST SERVICE	10.680		-	193,393
U.S. FOREST SERVICE	10.693		-	73,710
U.S. FOREST SERVICE	10.U05	FS 13-JV-11242307-075 Mod 8	-	184,595
U.S. FOREST SERVICE	10.U06	FS 15-JV-11242307-097	-	211,788
UNIVERSITY OF ILLINOIS	10.310	2015-07319-01	-	9,150
UNIVERSITY OF MARYLAND	10.329	30430-Z5750002	-	2,450
UNIVERSITY OF VERMONT	10.215	2014-38640-22161	-	1,634
UNIVERSITY OF VERMONT	10.215	2015-38640-23777	21,174	37,499
UNIVERSITY OF VERMONT	10.215	GNE14-078-27806	-	12,702
UNIVERSITY OF VERMONT	10.215	LNE12-315	-	10,803
UNIVERSITY OF VERMONT	10.215	LNE15-340-29994	15,670	39,156
UNIVERSITY OF VERMONT	10.215	ONE 16-281C-29994	-	5,581
UNIVERSITY OF VERMONT	10.215	SARE LNE15-339-29994/DARBY	-	35,893
UNIVERSITY OF VERMONT	10.215	SNE-16-04-29994	-	10,188
UNIVERSITY OF VERMONT	10.215	SNE15-04-29001	-	5,140
UNIVERSITY OF VERMONT	10.215	SARE GNE16-114-29994	-	8,205
UNIVERSITY OF WISCONSIN	10.310	649K950	-	5,403
WORLD FARMERS	10.U07	2015-70017-24102	-	15,151
Department Of Agriculture Total			754,646	8,509,036
Department Of Commerce				
COLUMBIA UNIVERSITY	11.431	4GG012355	\$ -	\$ 92,450
COLUMBIA UNIVERSITY	11.431	5-23220	-	7,814
GLOBAL SCIENCE AND TECHNOLOGY, INC.	11.432	Task 002 OSTA / SA16-UMB01	-	93,886
GLOBAL SCIENCE AND TECHNOLOGY, INC.	11.U02	SA15-UOM01	-	22,408
GULF OF MAINE RESEARCH INSTITUTE	11.427	NA14NMF4270014	-	3,671
GULF OF MAINE RESEARCH INSTITUTE	11.427	NA14NMF4270085	-	27,930
GULF OF MAINE RESEARCH INSTITUTE	11.427	NA15NMF42702612	-	13,276
GULF OF MAINE RESEARCH INSTITUTE	11.472	NA15NMF4720108	-	1,429
HAZEN AND SAWYER, P.C.	11.431	31235-000	-	33,681
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	11.417	NA147OAR4170077	21,298	21,576
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	11.417	NA14OAR417007	-	87,935
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	11.417	NA14OAR4170077	53,553	288,263
MISSISSIPPI STATE UNIVERSITY	11.432	NA11OAR4320199	-	11,553
NATIONAL INSTITUTE OF STANDARDS	11.609		91,401	426,496
NATIONAL INSTITUTE OF STANDARDS	11.619		142,216	260,969

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Commerce, continued				
NATIONAL MARINE FISHERIES SERVICE	11.432		\$ -	\$ 22,673
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.011		-	20,291
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.427		1,024	690,144
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.431		19,730	118,686
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.454		-	216,535
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.459		-	63,651
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.463		-	5,000
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.472		163,568	209,881
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.482		-	26,743
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.U03	EE-133F-15-SE-1587	-	45,642
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	11.U04	WE-133F-15-SE-1480	-	53,781
NE REG ASSOC OF COASTAL OCEAN OBSERV SYS	11.012	NA11NOS0120034	-	11,464
NE REG ASSOC OF COASTAL OCEAN OBSERV SYS	11.012	NA16NOS0120023	-	61,937
NEW ENGLAND AQUARIUM	11.427	NA15NMF4270281	-	10,769
NEW ENGLAND AQUARIUM	11.427	NA15NMF4270284	-	18,243
NORTHEAST CONSORTIUM	11.441	FMA10NMF4410008	-	10,878
RUTGERS UNIVERSITY	11.012	NA11NOS0120038	-	50,041
RUTGERS UNIVERSITY	11.012	NA16NOS0120020	-	110,910
UNIVERSITY OF NEW HAMPSHIRE	11.441	PRGM 14-03	2,800	19,251
UNIVERSITY OF PUERTO RICO	11.417	2104-2015-012	-	8,246
UNIVERSITY OF PUERTO RICO	11.417	NA14OAR4170068	-	16,912
UNIVERSITY OF SOUTHERN MISSISSIPPI	11.432	NA11OAR4320199	-	2,911
UNIVERSITY OF WASHINGTON	11.011	NA16OAR0110196	-	3,942
WOODS HOLE OCEANOGRAPHIC INSTITUTION	11.417	NA14OAR4170074	-	62,566
WOODS HOLE OCEANOGRAPHIC INSTITUTION	11.417	NA14OAR4170074, Project R/O-52s	-	41,679
WOODS HOLE OCEANOGRAPHIC INSTITUTION	11.417	NA14OAR4170077	-	50,042
WOODS HOLE OCEANOGRAPHIC INSTITUTION	11.417	NA16NMF4270239	-	30,313
WOODS HOLE OCEANOGRAPHIC INSTITUTION	11.419	NA14NOS4190145	-	19,019
WOODS HOLE OCEANOGRAPHIC INSTITUTION	11.432	NA14OAR4320158	-	207,909
WOODS HOLE OCEANOGRAPHIC INSTITUTION	11.483	NA13OAR4830233	-	27,685
Department Of Commerce Total			<u>495,590</u>	<u>3,630,904</u>
Department Of Defense				
ACADEMY OF APPLIED SCIENCE	12.U01	Rsch-Eng Apprentice Pgm	\$ -	\$ 4,000
AEROSPACE CORPORATION	12.U02	FA8802-14-C-0001	-	17,365
AIR FORCE CIVIL ENGINEER CENTER	12.U03	21695	-	43,444
AIR FORCE OFFICE OF SCIENTIFIC RESEARCH	12.800		-	1,154,849
AIR FORCE RESEARCH LABORATORY	12.300		-	1,201,132
AIR FORCE RESEARCH LABORATORY	12.630		-	38,169
AIR FORCE RESEARCH LABORATORY	12.800		-	155,829
ARIZONA STATE UNIVERSITY	12.300	N00014-16-1-2532	-	41,435
ARMY RESEARCH INSTITUTE	12.U04	W5J9CQ-11-C-0047	167,541	317,274
ARMY RESEARCH LAB	12.431		-	63,174
AZIMUTH CORPORATION	12.U05	117-0365	-	32,413
BAE SYSTEMS	12.U06	901131	-	82,247
BAE SYSTEMS	12.U07	906704 / 961574	-	190,591

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Defense, continued				
BOSTON ENGINEERING	12.U08	W31P4Q-13-C-0136	\$ -	\$ (4,414)
BROWN UNIVERSITY	12.431	00000822	-	259,104
CALIFORNIA INSTITUTE OF TECHNOLOGY	12.910	HROOI 11720035	-	26,185
CARNEGIE MELLON UNIVERSITY	12.300	1150139-354945	-	92,835
CDM SMITH	12.U09	W9126G-11-D-0027 DB01	-	30,173
COLORADO SCHOOL OF MINES	12.431	400231	-	(32,200)
CORNELL UNIVERSITY	12.431	66220-9902	-	182,610
DCS CORP	12.U10	PO 161511	-	316,611
DEFENSE ADV RESEARCH PROJECTS AGENCY	12.910		1,530,659	6,087,039
DEFENSE ADV RESEARCH PROJECTS AGENCY	12.U11	IPA #237	-	266,853
DEFENSE LOGISTICS AGENCY	12.002		-	311,483
DEFENSE THREAT REDUCTION AGENCY	12.351		97,190	273,399
DEPARTMENT OF THE ARMY MEDICAL DIVISION	12.420		527,346	2,418,826
DUKE UNIVERSITY	12.431	313-0589	-	203,738
ENERGY RESEARCH CONSULTANTS	12.U12	FA865 0-1 6-C-2723	-	12,025
ENGILITY CORPORATION	12.U13	14463-PETTT	-	41,481
FTL LABS CORPORATION	12.U14	D15PC00145	-	(47)
FTL LABS CORPORATION	12.U15	D16PC00092	-	39,044
FTL LABS CORPORATION	12.U16	FA8501-14-P-0032	-	864
GE GLOBAL RESEARCH	12.U17	401039445	-	59,688
GOVERNMENT OF ISRAEL	12.U18	4440672138	-	76,222
HENRY M. JACKSON FOUNDATION	12.420	PR: W81XWH-15-2-0079 / SB: 857395 PO: 3170	-	569,314
HEWLETT PACKARD ENTERPRISE COMPANY	12.U19	CW417995 PO# HPE272806	-	249,983
HYPRES, INC.	12.U20	Hybrid Temperature Heterogenous Technology Data	-	150,589
HYPRES, INC.	12.U21	Hybrid Temperature Heterogenous Technology Data	-	4,134
IBM CORPORATION	12.630	5004950716	-	118,487
KARAGOZIAN & CASE	12.U22	FA8651-15-M-0229	-	(502)
KARAGOZIAN & CASE	12.U23	FA8651-16-C-0230	-	15,521
LAWRENCE LIVERMORE NATL LAB U-CALIFORNIA	12.351	No. B602042	-	133,931
LEIDOS, INC.	12.U24	P010184242	-	393,349
LOWELL DIGISONDE INTERNATIONAL, LLC	12.U25	FA8650-16-C-9104	-	251,731
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	12.800	5710003633	-	106,546
MICROBIOTIX	12.U26	19865	-	38,030
MIT LINCOLN LABORATORY	12.U27	7000296667	-	11,090
MIT LINCOLN LABORATORY	12.U28	7000344518	-	5,081
MIT LINCOLN LABORATORY	12.U29	7000344532	-	56,180
MIT LINCOLN LABORATORY	12.U30	FA8721-05-C0002	-	15,683
MONTANA STATE UNIVERSITY	12.431	W911NF-16-1-0463	-	38,753
NANO-BIO MANUFACTURING CONSORTIUM	12.U31	Project # 16-10	55,464	223,423
NATIONAL SECURITY AGENCY	12.900		-	58,258
NATIONAL SECURITY AGENCY	12.905		-	22,769
NATL INST OF AEROSPACE	12.431	W911NF-16-2-0229	-	12,353
NAVAL AIR WARFARE CENTER	12.U32	N00421-16-P-0521	-	88,860
NAVAL RESEARCH LABORATORY	12.300		-	47,789
NAVAL RESEARCH LABORATORY	12.U33	N00173-16-P-0747	-	30,849

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UNIVERSITY OF MASSACHUSETTS
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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Defense, continued				
NEXTFLEX	12.U34	FA8650-15-2-5401	\$ 61,628	\$ 496,449
NORTHEASTERN UNIVERSITY	12.431	504062-78051	-	98,767
NORTHEASTERN UNIVERSITY	12.431	504081-78050A	-	99,922
NORTHEASTERN UNIVERSITY	12.431	504081-78050B	-	407,828
OCEAN STATE RESEARCH INSTITUTE, INC.	12.420	PR: W81XWH-16-2-0065 / SB: 292206	-	173,084
OFFICE OF NAVAL RESEARCH	12.300		36,223	2,994,079
OFFICE OF NAVAL RESEARCH	12.431		85,712	301,182
OFFICE OF NAVAL RESEARCH	12.630		-	95,194
PHOTON SPOT, INC	12.U35	702-1	-	47,844
PRAXIS, INC.	12.U36	N00173-05-C-2084	-	666
RADECT CO.	12.U37	FA8051-15-P0010	-	33,045
RAYTHEON BBN TECHNOLOGIES CORP	12.431	13765021	-	250,984
RAYTHEON BBN TECHNOLOGIES CORP	12.910	500013240	-	82,640
RAYTHEON BBN TECHNOLOGIES CORP	12.U38	HROO 111 7C0049	-	9,068
RAYTHEON BBN TECHNOLOGIES CORP	12.U39	W911NF09D0006	-	27,788
RAYTHEON COMPANY	12.U40	FA8650-12-2-7230	-	99,576
RIVERSIDE RESEARCH	12.U41	DRC.CO1299P.UMASS.IDIQ.15	-	12,324
SARNOFF CORP.	12.U42	206000031	-	37,646
SI2 TECHNOLOGIES, INC.	12.U43	N68335-16-C0045	-	147,361
SI2 TECHNOLOGIES, INC.	12.U44	FA8650-15-2-5401	-	41,776
SI2 TECHNOLOGIES, INC.	12.U45	W31P4Q-16-C-0122	-	19,900
SILICON SPACE TECHNOLOGY	12.U46	FA9453-09-C0029	-	3,360
SOLID STATE SCIENTIFIC CORPORATION	12.116	W911NF-14-P-0024	-	(4,526)
SOLID STATE SCIENTIFIC CORPORATION	12.800	1504-09	-	64,556
SPAWAR SYSTEMS CENTER PACIFIC	12.910		171,740	427,471
SRI INTERNATIONAL	12.U47	D11PC20155	-	5,298
SYSTEMS & TECHNOLOGY RESEARCH	12.U48	2014-1047	-	386,046
TEQNOVATIONS LLC	12.U49	702-1	-	19,818
TRITON SYSTEMS, INC.	12.U50	W911QY-14-C-0078	-	45,685
U.S. ARMY CORPS OF ENGINEERS	12.300		-	63,672
U.S. ARMY CORPS OF ENGINEERS	12.U51	W912HQ-14-C-0035 P00006	199,903	406,629
U.S. ARMY CORPS OF ENGINEERS	12.U52	W912HQ-12-C-0035	9,952	13,526
U.S. ARMY CORPS OF ENGINEERS	12.U53	W912HQ-15-C-0052	182,472	307,630
U.S. ARMY MEDICAL RESEARCH	12.420		-	816,917
U.S. ARMY NATICK SOLDIER RD&E CENTER	12.431		34,379	757,792
U.S. ARMY NATICK SOLDIER RD&E CENTER	12.U54	W911QY-13-2-0002	-	(1)
U.S. ARMY NATICK SOLDIER RD&E CENTER	12.U55	W911QY-16-P-0235	-	31,737
U.S. ARMY NATICK SOLDIER RD&E CENTER	12.U56	W911QY-15-C-0068	-	69,071
U.S. ARMY RESEARCH OFFICE	12.431		399,247	2,079,270
U.S. DEPARTMENT OF DEFENSE	12.420		89,112	1,575,697
U.S. DEPARTMENT OF DEFENSE	12.U57	W912HQ-13-C-0067	-	71,516
U.S. DEPARTMENT OF INTERIOR	12.910		-	85,866
U.S. DEPARTMENT OF THE ARMY	12.910		-	91,953
U.S. DEPARTMENT OF THE ARMY	12.U58	W911W5-11-C-0010	-	1,016,376
U.S. DEPARTMENT OF THE ARMY	12.U59	NAFBA1-13-M-0323	-	6
U.S. DEPARTMENT OF THE ARMY	12.U60	W911W5-16-C-0006	-	3,187,410

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Defense, continued				
UES, INC.	12.U61	FA8650-15-D-5405	\$ -	\$ 8,385
UES, INC.	12.U62	FA8650-11-D-5801	-	133,732
UNITED TECHNOLOGIES RESEARCH CENTER	12.U63	N66001-16-C-4050	-	31,699
UNIVERSITY OF CALIFORNIA	12.910	W91CRB-10-1-0006	-	(1,393)
UNIVERSITY OF CALIFORNIA SANTA BARBARA	12.800	KK1235	-	102,109
UNIVERSITY OF CONNECTICUT	12.420	UCH6-74814610	-	69,085
UNIVERSITY OF MISSOURI	12.431	W911NF-14-1-0359	-	192,865
UNIVERSITY OF RHODE ISLAND	12.800	PR: W81XWH-16-2-0031 / SB: 0005427/102316	-	128,415
UNIVERSITY OF SOUTHERN CALIFORNIA	12.431	W911NF-11-1-0268	-	(18,964)
UNIVERSITY OF TEXAS AT AUSTIN	12.910	FA8750-13-2-0026	-	40,578
UNIVERSITY OF WASHINGTON	12.420	W81XWH-11-1-0588	-	(31,550)
UNIVERSITY OF WASHINGTON	12.431	UWSC8585	-	6,666
UNIVERSITY OF WISCONSIN	12.800	FA95501410128	-	131,999
VECTOR CONTROLS, INC.	12.U64	N00014-11-C-0475	-	63,997
WORCESTER POLYTECHNIC INSTITUTE	12.420	PR: W81XWH-12-10541 / SB: 14-215700-00	-	6,193
WORCESTER POLYTECHNIC INSTITUTE	12.431	16-TMP-00-215461	-	21,845
WORCESTER POLYTECHNIC INSTITUTE	12.431	W911NF1520024	-	230,814
WYSS INST FOR BIOLOGICALLY INSPIRED ENG	12.910	HR0011-13-C-0025	-	26,561
YALE UNIVERSITY	12.431	C17J12516 (J00255)	-	106,844
Department Of Defense Total			<u>3,648,568</u>	<u>34,895,420</u>
Department Of Housing And Urban Development				
CITY OF LOWELL, DIV. OF PLANNING & DEV.	14.900	FR-5700-N-04	\$ 610	\$ 15,414
CITY OF LOWELL, DIV. OF PLANNING & DEV.	14.900	PO# 32750303	-	4,763
HEALTHY HOUSING SOLUTIONS, INC.	14.U01	DU203NP-15-D-06	-	90
MA DEPARTMENT OF PUBLIC HEALTH	14.906	INTF3056HH2500224031	-	3,191
PIONEER VALLEY PLANNING COMMISSION	14.228	00775	-	14,171
PIONEER VALLEY PLANNING COMMISSION	14.228	115-1241	-	31,175
U.S. DEPT OF HOUSING & URBAN DEVELOPMENT	14.906		23,328	215,799
Department Of Housing And Urban Development Total			<u>23,938</u>	<u>284,603</u>
Department Of The Interior				
ARKANSAS GAME AND FISH COMMISSION	15.634	T41-01	\$ -	\$ 485
BUREAU OF OCEAN ENERGY MANAGEMENT	15.424		-	67,321
BUREAU OF SAFETY AND ENVIRON ENFORCEMENT	15.U01	E16PC00008	-	32,134
MA DEPARTMENT OF FISH & GAME	15.634	1434-HQ-11-RU-01575	-	160,957
MA DEPARTMENT OF FISH & GAME	15.634	UM16COOP0000000000	-	1,632
MA DIV OF ECOLOGICAL RESTORATION (DER)	15.153	42671 / FC. A062	-	41,394
MA DIVISION OF FISHERIES AND WILDLIFE	15.608	1434-HQ-11-RU-01575	22,214	22,350
MA DIVISION OF FISHERIES AND WILDLIFE	15.634	1434-HQ-11-RU-01575	-	95,224
MA DIVISION OF FISHERIES AND WILDLIFE	15.U02	F17AP00015	-	35,053
NATIONAL FISH AND WILDLIFE FOUNDATION	15.663	NFWF45607	-	16,619
NATIONAL PARK SERVICE	15.945		-	211,569
NATIONAL PARK SERVICE	15.954		-	(217)
NATIONAL WRITING PROJECT	15.954	PI4AC01415	-	4,800
PORTLAND STATE UNIVERSITY	15.232	L14AC00157	-	17,980
SPERO DEVICES, INC.	15.U03	D16PC0084	-	26,475

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Department Of The Interior, continued				
U.S. DEPARTMENT OF INTERIOR	15.914		\$ -	\$ (12,149)
U.S. DEPARTMENT OF INTERIOR	15.945		-	19,237
U.S. DEPARTMENT OF INTERIOR	15.946		-	(1,068)
U.S. DEPARTMENT OF INTERIOR	15.954		-	459,047
U.S. DEPARTMENT OF INTERIOR	15.U04	Task Agrmt P11AT40829 (Coop Agrmt H1780070004)	-	9,326
U.S. FISH AND WILDLIFE SERVICE	15.650		15,000	102,306
U.S. FISH AND WILDLIFE SERVICE	15.655		-	204,473
U.S. FISH AND WILDLIFE SERVICE	15.669		-	257,642
U.S. FISH AND WILDLIFE SERVICE	15.672		-	16,233
U.S. FISH AND WILDLIFE SERVICE	15.677		97,941	263,570
U.S. FISH AND WILDLIFE SERVICE	15.678		-	27,427
U.S. GEOLOGICAL SURVEY	15.805		30,000	76,352
U.S. GEOLOGICAL SURVEY	15.808		-	212,129
U.S. GEOLOGICAL SURVEY	15.810		34,947	61,252
U.S. GEOLOGICAL SURVEY	15.812		-	45,445
U.S. GEOLOGICAL SURVEY	15.814		-	1,205
U.S. GEOLOGICAL SURVEY	15.820		775,922	1,956,457
UNIVERSITY OF CALIFORNIA DAVIS	15.232	201501679-02	-	22,422
WILDLIFE MANAGEMENT INSTITUTE	15.664	F15AC01052-0001-LCCO	-	49,908
WILDLIFE MANAGEMENT INSTITUTE	15.664	NALCC 2015-06	-	32,406
Department Of The Interior Total			<u>976,024</u>	<u>4,537,396</u>
Department Of Justice				
ADMINISTRATIVE OFFICE OF THE TRIAL COURT	16.812	2015-RW-BX-0006	\$ -	\$ 1,946
BOSTON PUBLIC HEALTH COMMISSION	16.730	2011-MU-MU_K003 / 14013684	-	1,779
CITY OF SPRINGFIELD	16.817	2013-AJ-BX-0007	-	20,969
ESSEX COUNTY SHERIFF'S DEPARTMENT	16.812	2014-RW-BX-01	-	26,485
FEDERAL BUREAU OF INVESTIGATION	16.U01	FBI DJF-17-1200-D-0000377	-	42,580
FEDERAL BUREAU OF INVESTIGATION	16.U02	FBI DJF-15-1200-D-0000828	-	3,967
FEDERAL BUREAU OF INVESTIGATION	16.U03	FBI DJF-16-1200-D-0001522	-	398,403
JOHN FINN INSTITUTE FOR PUBLIC SAFETY	16.560	2013-U-CX-0018	-	2,325
MA DEPARTMENT OF PUBLIC HEALTH	16.589	INTF3222M04W40188034	-	42,309
MA EXEC OFC OF PUBLIC SAFETY & SECURITY	16.U04	2015 LARP	-	15,014
MA OFFICE FOR VICTIM ASSISTANCE	16.575	VOCA2016EVWC00000000	-	1,967
NATIONAL 4-H COUNCIL	16.726	4-H COUNCIL 2015	-	109,616
NATIONAL 4-H COUNCIL	16.726	DOJ2016JUF0022	-	4,208
SPECTRUM HEALTH SYSTEMS, INC.	16.812	OJJDP-2013-3637	-	(201)
TOWN OF AMHERST	16.U05	13001125	-	9,969
TOWN OF AMHERST	16.U06	2610-15	-	92,714
U.S. DEPARTMENT OF JUSTICE	16.525		-	89,842
U.S. DEPARTMENT OF JUSTICE	16.540		-	99,422
U.S. DEPARTMENT OF JUSTICE	16.541		-	54,933
U.S. DEPARTMENT OF JUSTICE	16.560		532,913	818,464
U.S. DEPARTMENT OF JUSTICE	16.566		32,860	84,278
U.S. DEPARTMENT OF JUSTICE	16.726		33,003	18,526
UNIVERSITY OF IOWA HEALTH CARE	16.560	W000630365	-	19,681
WELLESLEY COLLEGE	16.560	2015-U-CX-0009	-	62,372
Department Of Justice Total			<u>598,776</u>	<u>2,021,568</u>

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
Year Ended June 30, 2017

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Labor				
U.S. DEPARTMENT OF LABOR	17.791		\$ -	\$ 3,858
Department Of Labor Total			-	3,858
Department Of State				
BEDFORD VA MEDICAL CENTER	19.440	Schutt-IPA\	\$ -	\$ 12,436
INSTITUTE FOR TRAINING AND DEVELOPMENT	19.408	S-ECAGD-15-CA-1078	-	20,701
INSTITUTE FOR TRAINING AND DEVELOPMENT	19.408	S-ECAGD-16-CA-1084	-	10,844
INSTITUTE FOR TRAINING AND DEVELOPMENT	19.U01	S-ECAGD-14CA-1149	-	22,157
INT'L RESEARCH AND EXCHANGES BOARD	19.021	SIZ-100-15-GR025	-	49,618
INT'L RESEARCH AND EXCHANGES BOARD	19.408	S-ECAGD-16-CA-1019	-	205,507
MITRE CORPORATION	19.U02	SAQMMA13C0255	-	14,470
U.S. DEPARTMENT OF STATE	19.033		-	128,299
U.S. EMBASSY IN MOSCOW, RUSSIA	19.900		-	31,415
Department Of State Total			-	495,447
Department Of Transportation				
EARTH SCIENCE SYSTEMS, LLC	20.U01	117-0607	\$ -	\$ 22,311
FEDERAL AVIATION ADMINISTRATION	20.108		-	72,017
FEDERAL HIGHWAY ADMINISTRATION	20.215		-	34,991
FEDERAL MOTOR CARRIER SAFETY ADMIN	20.232		-	189,531
FEDERAL RAILROAD ADMINISTRATION	20.U02	DTRFR5316C00020	-	84,454
MA DEPARTMENT OF TRANSPORTATION	20.200	76826 PARS# YM139092P12	46,480	52,318
MA DEPARTMENT OF TRANSPORTATION	20.U03	92801	-	111,354
MA DEPARTMENT OF TRANSPORTATION	20.U04	94445	-	55,764
MA DEPT OF STATE POLICE	20.218	ISAPOL81000212UMS16A	-	45,088
MA DEPT OF STATE POLICE	20.218	ISAPOL81002010UMS17A	-	13,598
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.701	5700003804	-	81,899
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.701	5710003604	-	209,828
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.701	5710003798	-	64,958
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.701	5710003799	-	29,489
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.701	5710003800	-	89,482
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.701	5710003801	-	61,838
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.701	5710003802	-	64,440
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20.701	5710003803	-	59,769
OHIO STATE UNIVERSITY	20.701	60040605	-	176,627
PENNSYLVANIA STATE UNIVERSITY	20.U05	DTRFR5316C00023	-	13,234
U.S. DEPARTMENT OF TRANSPORTATION	20.931		203,931	328,618
UNIVERSITY OF IOWA HEALTH CARE	20.701	W000546107	-	406,369
UNIVERSITY OF VERMONT	20.U06	26014SUB51981	-	74,860
Department Of Transportation Total			250,411	2,342,837
National Aeronautics And Space Administration				
AURORA FLIGHT SCIENCES CORPORATION	43.U01	NNX15VJ13C	\$ -	\$ 107,778
BAE SYSTEMS	43.U02	NNX14AG86G	-	63,811
BERMUDA INSTITUTE OF OCEAN SCIENCES	43.001	NNX16AB05G	-	116,602
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.001	1545132	-	12,084
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.001	NNN12AAO1C	-	40,986
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.001	[JPL]: 1560781	-	46,219

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
Year Ended June 30, 2017

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
National Aeronautics And Space Administration, continued				
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U03	[JPL]: 1377297	\$ -	\$ 2,471
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U04	[JPL]: 1366741	-	1,483
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U05	[JPL]: 1509300	-	1,105
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U06	[JPL]: 1440160	-	88
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U07	[JPL]: 1472817	-	92
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U08	[JPL]: 1472831	-	6,117
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U09	[JPL]: 1479338	-	1
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U10	[JPL]: 1486198	-	67,280
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U11	[JPL]: 1489384	-	158
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U12	[JPL]: 1539558	-	32,214
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U13	108-0446	-	1,262
CALIFORNIA INSTITUTE OF TECHNOLOGY	43.U14	[JPL]: 1429075	-	5,278
DELAWARE STATE UNIVERSITY	43.008	NNX15AP84A	-	142,057
GEORGIA STATE UNIVERSITY	43.001	NNX16AB77G	-	13,219
MICHIGAN TECHNOLOGICAL UNIVERSITY	43.001	NNX14AB80G	-	9,744
MIT LINCOLN LABORATORY	43.U15	7000377396	-	29,310
MIT LINCOLN LABORATORY	43.U16	7000336186	-	49,177
MOUNT HOLYOKE COLLEGE	43.001	GD8861	-	86,759
MOUNT HOLYOKE COLLEGE	43.U17	GD8761	-	59,859
NASA GODDARD SPACE FLIGHT CENTER	43.001		99,363	1,270,991
NASA GODDARD SPACE FLIGHT CENTER	43.008		-	14,672
NASA GODDARD SPACE FLIGHT CENTER	43.012		-	151,133
NATIONAL AERO AND SPACE ADMINISTRATION	43.001		651,125	3,014,864
NATIONAL AERO AND SPACE ADMINISTRATION	43.003		-	337,387
NATIONAL AERO AND SPACE ADMINISTRATION	43.007		-	201,770
NATIONAL AERO AND SPACE ADMINISTRATION	43.008		-	55,515
NATIONAL AERO AND SPACE ADMINISTRATION	43.U18	NNX12AO23G	-	9,334
NATL INST OF AEROSPACE	43.008	NNL09AA00A	-	70,204
NORTHEASTERN UNIVERSITY	43.012	NNX16AC48A	-	94,509
OHIO STATE UNIVERSITY	43.001	60050055	-	50,048
SETI INSTITUTE	43.001	SC 3153	-	2,517
SETI INSTITUTE	43.001	SC3139	-	13,844
SMITHSONIAN ASTROPHYSICAL OBSERVATORY	43.001	NAS8-03060	-	47,243
SMITHSONIAN ASTROPHYSICAL OBSERVATORY	43.001	TM3-14006X	-	48,048
SPACE TELESCOPE SCIENCE INSTITUTE	43.001	HST-AR-14299.001-A	-	42,271
SPACE TELESCOPE SCIENCE INSTITUTE	43.001	HST-GO-13342.002-A	-	23,585
SPACE TELESCOPE SCIENCE INSTITUTE	43.001	HST-GO-14066.004-A	-	25,928
SPACE TELESCOPE SCIENCE INSTITUTE	43.001	HST-GO-14227.003-A	-	17,794
SPACE TELESCOPE SCIENCE INSTITUTE	43.001	HST-GO-14460.003-A	-	5,345
SPACE TELESCOPE SCIENCE INSTITUTE	43.001	HST-GO-14653.004-A	-	33,972
SPACE TELESCOPE SCIENCE INSTITUTE	43.001	NAS5-26555	-	14,011
SPACE TELESCOPE SCIENCE INSTITUTE	43.001	STSI: HST-AR-14285.001-A	-	53,501
SPACE TELESCOPE SCIENCE INSTITUTE	43.002	HST-AR-13924.003-A	-	5,195
SPACE TELESCOPE SCIENCE INSTITUTE	43.002	HST-GO-12060.16-A	-	5,724
SPACE TELESCOPE SCIENCE INSTITUTE	43.002	HST-GO-13309.007-A	-	3,479

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
Year Ended June 30, 2017

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
National Aeronautics And Space Administration, continued				
SPACE TELESCOPE SCIENCE INSTITUTE	43.002	HST-GO-13364.01-A	\$ -	\$ 42,523
SPACE TELESCOPE SCIENCE INSTITUTE	43.U19	HST-AR-13894.002-A	-	21,118
SPACE TELESCOPE SCIENCE INSTITUTE	43.U20	HST-GO-13743.004-A	-	24,359
SPACE TELESCOPE SCIENCE INSTITUTE	43.U21	HST-GO-13773.005-A	-	8,868
SPACE TELESCOPE SCIENCE INSTITUTE	43.U22	STSI: HST-GO-13846.001-A	-	67,548
SPACE TELESCOPE SCIENCE INSTITUTE	43.U23	STSI: HST-HF2-51368.001 A	-	115,515
TUFTS UNIVERSITY	43.001	NNX15AH85G	-	7,526
UNIVERSITY OF CALIFORNIA REGENTS	43.001	NNX14AD86G	-	(332)
UNIVERSITY OF COLORADO	43.001	1551866	-	38,632
UNIVERSITY OF MICHIGAN	43.001	3003766302	-	15,473
UNIVERSITY OF NEW HAMPSHIRE	43.001	NNX16AN34G	-	9,871
UNIVERSITY OF SOUTH FLORIDA	43.001	NNX14AM63G	-	72,572
WOODS HOLE OCEANOGRAPHIC INSTITUTION	43.001	NNX14AR71G	-	1,657
National Aeronautics And Space Administration Total			<u>750,488</u>	<u>6,933,368</u>
National Endowment For The Humanities				
AMERICAN COUNCIL OF LEARNED SOCIETIES	45.160	115-1629	\$ -	\$ 26,078
NATIONAL ENDOWMENT FOR THE HUMANITIES	45.149		-	1,002
NATIONAL ENDOWMENT FOR THE HUMANITIES	45.160		-	7,116
NATIONAL ENDOWMENT FOR THE HUMANITIES	45.161		-	190,958
NATIONAL ENDOWMENT FOR THE HUMANITIES	45.163		-	89,682
NATIONAL ENDOWMENT FOR THE HUMANITIES	45.169		24,736	105,852
National Endowment For The Humanities Total			<u>24,736</u>	<u>420,688</u>
National Science Foundation				
AMERICAN ASSOC FOR THE ADVMNT OF SCIENCE	47.049	WIRC for MSI	\$ -	\$ (101)
AMERICAN PHYSICAL SOCIETY	47.049	PHY-0808790	4,600	15,876
ASSOCIATION OF PUBLIC & LAND-GRANT UNIV	47.U01	115-0977	-	129,041
BLACK HILLS STATE UNIVERSITY	47.076	BP1100005	-	66,360
BRANDEIS UNIVERSITY	47.049	MRSEC	-	71,783
BROWN UNIVERSITY	47.070	CCF-1408745	-	105,386
BROWN UNIVERSITY	47.075	SES-1338751	-	3,883
CAST, INC.	47.076	DRL-1620904	-	51,119
CENTRAL MICHIGAN UNIVERSITY	47.050	OCE-1230261	-	(46)
CIVILIAN RESEARCH & DEVELOPMENT FDN	47.079	OISE-9531011	-	28,529
CIVILIAN RESEARCH & DEVELOPMENT FDN	47.079	USB1-31149-XX-13	-	69,068
COLD SPRING HARBOR LABORATORY	47.074	IOS-1546837	-	45,017
COLUMBIA UNIVERSITY	47.050	111-1227	-	178,156
COLUMBIA UNIVERSITY	47.050	OCE 1450528	-	14,630
CORNELL UNIVERSITY	47.070	CCF1522054	-	39,919
EDUCATION DEVELOPMENT CENTER, INC.	47.076	CNS-1339300	-	40,464
HARVARD FOREST	47.074	DEB-1617075	-	81,404
HARVARD UNIVERSITY	47.070	I23777-5065147	-	15,351
HARVARD UNIVERSITY	47.075	SES-1430505	-	(122)
HARVARD UNIVERSITY	47.075	SES-1559125	-	16,378
HOLYOKE COMMUNITY COLLEGE HCC	47.076	DUE 1400500	-	73,660
KANSAS STATE UNIVERSITY	47.049	DMS-1265228	-	24,805
MARINE BIOLOGICAL LABORATORY	47.050	OCE-1637630	-	17,664

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
Year Ended June 30, 2017

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
National Science Foundation, continued				
NATIONAL SCIENCE FOUNDATION	47.041		\$ 249,490	\$ 8,204,916
NATIONAL SCIENCE FOUNDATION	47.049		210,481	6,763,257
NATIONAL SCIENCE FOUNDATION	47.050		376,381	4,055,611
NATIONAL SCIENCE FOUNDATION	47.070		794,767	12,555,386
NATIONAL SCIENCE FOUNDATION	47.074		391,421	5,085,074
NATIONAL SCIENCE FOUNDATION	47.075		35,031	1,518,651
NATIONAL SCIENCE FOUNDATION	47.076		1,895,943	9,617,701
NATIONAL SCIENCE FOUNDATION	47.078		-	107,898
NATIONAL SCIENCE FOUNDATION	47.079		-	62,823
NATIONAL SCIENCE FOUNDATION	47.U02	AST-1517503	-	52,112
NATIONAL SCIENCE FOUNDATION	47.U03	HP- 1560913	-	18,842
NATIONAL SCIENCE FOUNDATION	47.U04	CNS- 1740558	-	88,001
NATIONAL SCIENCE FOUNDATION	47.U05	IOS-1539803-001	-	141,008
NATIONAL SCIENCE FOUNDATION	47.U06	CBET- 1619792	-	302,857
NATIONAL SCIENCE FOUNDATION	47.U07	CSE-1523309-002	-	436,641
NEW YORK UNIVERSITY	47.070	CNS-1405927	-	41,435
NORTHEASTERN UNIVERSITY	47.041	CMMI-112039	-	6,699
OREGON STATE UNIVERSITY	47.070	1125228-IIS	-	5,334
PURDUE UNIVERSITY	47.070	CNS-1111512	-	2,285
RAYTHEON BBN TECHNOLOGIES CORP	47.070	CNS-1536090	-	101,186
RAYTHEON COMPANY	47.070	CNS 1346688	5,488	8,637
SMITH COLLEGE	47.076	SC 636522	-	66,498
SMITHSONIAN ASTROPHYSICAL OBSERVATORY	47.049	AST 1440254	-	196,058
SMITHSONIAN ASTROPHYSICAL OBSERVATORY	47.076	12-SUBC-400-SV2-82003	-	(1,420)
SOLARGASOLINE LLC	47.041	1549710	-	43,427
SOUTHERN CALIFORNIA EARTHQUAKE CENTER	47.050	Y86198	-	45,880
SPRINGFIELD TECHNICAL COMMUNITY COLLEGE	47.076	1223460	-	53,148
THE BROAD INSTITUTE	47.050	PR: 226231 / SB: 5400000052	-	2,077
TUFTS UNIVERSITY	47.076	DRL-1657218	-	2
UNIQARTA, INC.	47.U08	IIP 1632387	-	83,110
UNIVERSITY OF ARIZONA	47.050	EAR-1338553	-	63,868
UNIVERSITY OF CALIFORNIA	47.041	EEC-1449305	-	52,900
UNIVERSITY OF CALIFORNIA DAVIS	47.074	1344187	-	34,833
UNIVERSITY OF CONNECTICUT	47.076	116-0727	-	21,676
UNIVERSITY OF CONNECTICUT	47.076	PR: 1619629 / SB: 135339	-	29,197
UNIVERSITY OF FLORIDA	47.075	SMA-1540888	-	85,344
UNIVERSITY OF GEORGIA	47.074	1564366	-	95,482
UNIVERSITY OF ILLINOIS	47.041	1542864	-	74,950
UNIVERSITY OF MARYLAND	47.074	DBI- 1458748	-	6,798
UNIVERSITY OF MARYLAND	47.074	PR: IOS-1355119 / SB: 23108-Z4229001	-	(4,508)
UNIVERSITY OF MARYLAND	47.076	1463898	-	13,381
UNIVERSITY OF MICHIGAN	47.070	CNS-1405612	-	6,297
UNIVERSITY OF MINNESOTA	47.050	1246761	-	53,607
UNIVERSITY OF MINNESOTA	47.075	1539833	-	27,004
UNIVERSITY OF NEW HAMPSHIRE	47.041	CBET-1231326	-	3,060

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
National Science Foundation, continued				
UNIVERSITY OF NORTH TEXAS	47.041	CMMI-1266251	\$ -	\$ 4,148
UNIVERSITY OF OKLAHOMA	47.075	SES-1421580	-	15,638
UNIVERSITY OF TENNESSEE AT CHATTANOOGA	47.070	CNS-1229213	-	6,329
UNIVERSITY OF TEXAS AT ARLINGTON	47.070	CCF-1442735	-	68,158
UNIVERSITY OF UTAH	47.049	DMS-1552238	-	26,180
UNIVERSITY OF UTAH	47.070	CNS-1419199	-	146,512
UNIVERSITY OF WISCONSIN	47.076	DUE-1231286	-	13,288
WASHINGTON STATE UNIVERSITY	47.041	120239 G003229	-	67,163
WOODS HOLE OCEANOGRAPHIC INSTITUTION	47.050	AGS-1518503	-	29,939
WOODS HOLE OCEANOGRAPHIC INSTITUTION	47.050	OCE-1332666	-	43,453
WORCESTER POLYTECHNIC INSTITUTE	47.070	PR: IIS-1065298 / SB: 12-202760-00-03	-	6,262
WORCESTER POLYTECHNIC INSTITUTE	47.076	DGE1144804	-	11,722
National Science Foundation Total			<u>3,963,602</u>	<u>51,756,039</u>
Small Business Administration				
SMALL BUSINESS ADMINISTRATION	59.037		\$ 559,784	\$ 1,095,656
Small Business Administration Total			<u>559,784</u>	<u>1,095,656</u>
Department Of Veterans Affairs				
DEPARTMENT OF VETERANS AFFAIRS	64.009		\$ -	\$ 57,052
DEPARTMENT OF VETERANS AFFAIRS	64.010		-	(61)
DEPARTMENT OF VETERANS AFFAIRS	64.015		-	25,610
DEPARTMENT OF VETERANS AFFAIRS	64.U01	VA241-14-J-1477	-	92,847
DEPARTMENT OF VETERANS AFFAIRS	64.U02	VA IPA_BROWN	-	56,308
DEPARTMENT OF VETERANS AFFAIRS	64.U03	VA257-13-C0093 / PO# 671D52005	-	26,987
DEPARTMENT OF VETERANS AFFAIRS	64.U04	NCT01249625	-	4,088
Department Of Veterans Affairs Total			<u>-</u>	<u>262,831</u>
Environmental Protection Agency				
MA DEPT OF AGRICULTURAL RESOURCES	66.714	CTAGR15	\$ -	\$ 127,410
MA DEPT OF AGRICULTURAL RESOURCES	66.714	CTAGR15	-	30,362
MA DEPT OF ENVIRONMENTAL PROTECTION	66.605	QAPP FFY 2015-2020	-	34,027
THE CADMUS GROUP, INC.	66.U01	EP-C-15-022	-	7,761
U.S. ENVIRONMENTAL PROTECTION AGENCY	66.129		-	102,426
U.S. ENVIRONMENTAL PROTECTION AGENCY	66.461		-	141,577
U.S. ENVIRONMENTAL PROTECTION AGENCY	66.509		717,450	1,390,973
U.S. ENVIRONMENTAL PROTECTION AGENCY	66.514		-	16,693
U.S. ENVIRONMENTAL PROTECTION AGENCY	66.516		-	63,800
U.S. ENVIRONMENTAL PROTECTION AGENCY	66.708		-	38,990
U.S. ENVIRONMENTAL PROTECTION AGENCY	66.714		-	13,818
UNIVERSITY OF CONNECTICUT	66.437	96172701	-	(4,144)
UNIVERSITY OF CONNECTICUT	66.437	LI-96290913-1	-	80,608
Environmental Protection Agency Total			<u>717,450</u>	<u>2,044,301</u>
Nuclear Regulatory Commission				
U.S. NUCLEAR REGULATORY COMMISSION	77.008		\$ -	\$ 199,967
Nuclear Regulatory Commission Total			<u>-</u>	<u>199,967</u>

See accompanying notes to Schedule of Expenditures of Federal Awards

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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Energy				
ARGONNE NATIONAL LABS	81.U01	DE-AC02-06CH11357	\$ -	\$ 39,125
BECHTEL MARINE PROPULSION CORP	81.U02	PO# 7013868	-	1,781
BROOKHAVEN NATIONAL LABORATORY	81.U03	233969	-	43,027
FERMI NATIONAL ACCELERATOR LABORATORY	81.U04	PO 622828	-	9,485
GEORGE MASON UNIVERSITY	81.113	DE-NA0001123	-	(100)
GINER, INC.	81.049	DE-SC00113077	-	40,627
KSE, INC.	81.049	DE-SC0017219	-	724
KSE, INC.	81.049	KSE232	-	3,521
LAWRENCE BERKELEY NATL LAB U-CALIFORNIA,	81.U05	7251704	-	21,630
LITTORAL POWER SYSTEMS, INC	81.087	DE-EE0007243	-	98,014
MARINE BIOLOGICAL LABORATORY	81.049	47812	-	159,884
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	81.135	571000-4079	-	225,615
MICHIGAN TECHNOLOGICAL UNIVERSITY	81.086	DE-EE0007292	-	28,820
NATIONAL RENEWABLE ENERGY LAB	81.087	AFC-5-52004-01	-	4,914
NATIONAL RENEWABLE ENERGY LAB	81.U06	DE-AC36-080028308	-	56,784
NATIONAL RENEWABLE ENERGY LAB	81.U07	DE-AC36-08GO28308	-	534
OAK RIDGE NATIONAL LABORATORY	81.U08	4000135366	-	73,529
OAK RIDGE NATIONAL LABORATORY	81.U09	4000136881	-	103,283
PACE UNIVERSITY	81.117	DE-EE0006279	-	159,225
PACIFIC NORTHWEST NATIONAL LABORATORY	81.U10	DE-AC05-76RL01830	-	55,797
PHDS COMPANY	81.049	DE-SC0009639	-	40,527
SANDIA NATIONAL LABS	81.U11	DE-AC04-94AL85000	-	105,174
STANFORD UNIVERSITY	81.049	DE-SC0016544	-	37,850
U.S. DEPARTMENT OF ENERGY	81.049		33,869	3,220,267
U.S. DEPARTMENT OF ENERGY	81.057		-	82,416
U.S. DEPARTMENT OF ENERGY	81.087		-	7,869
U.S. DEPARTMENT OF ENERGY	81.104		-	60,670
U.S. DEPARTMENT OF ENERGY	81.112		-	167,248
U.S. DEPARTMENT OF ENERGY	81.117		-	236,342
U.S. DEPARTMENT OF ENERGY	81.121		81,314	302,949
U.S. DEPARTMENT OF ENERGY	81.135		-	18
UNITED TECHNOLOGIES RESEARCH CENTER	81.086	EERE DE-EE0005775	-	531
UNIVERSITY OF DELAWARE	81.049	37776	-	204,938
UNIVERSITY OF NEVADA	81.049	DE-SC0014275	-	21,825
UNIVERSITY OF NORTH CAROLINA	81.049	DE-SC0015376	-	4,945
Department Of Energy Total			<u>115,183</u>	<u>5,619,788</u>
Department Of Education				
ASSOCIATION ON HIGHER ED AND DISABILITY	84.116	PI16D150005	\$ -	\$ 9,980
BOSTON PLAN FOR EXCELLENCE	84.336	U336S140088	-	342,332
BOSTON PLAN FOR EXCELLENCE	84.336	U336S14088	-	(222,237)
CITY OF LOWELL, PUBLIC SCHOOLS	84.215	S215E150154	-	24,578
CITY OF LOWELL, PUBLIC SCHOOLS	84.215	U215J150023	-	42,358
LANGSTON UNIVERSITY	84.129	P0011266	-	66,473
LANGSTON UNIVERSITY	84.133	Z126346	-	(9,440)
MA CHARTER PUBLIC SCHOOL ASSOCIATION	84.282	115-0299	-	90,951

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Education, continued				
MA COMMISSION FOR THE BLIND	84.126	H126A140029	\$ 45,441	\$ 45,501
MA DEPT OF ELEMENTARY & SECONDARY ED	84.366	150-009-7-1261-R	48,810	58,608
MA DEPT OF ELEMENTARY & SECONDARY ED	84.366	150-015-6-1261-Q	15,735	77,702
NATIONAL WRITING PROJECT	84.367	PR: 94-MA02-SEED2012 / SB: 114-1075	-	320
NATIONAL WRITING PROJECT	84.367	U367D150004	-	11,563
NEBRASKA DEPARTMENT OF EDUCATION	84.235	37200	-	48,544
NEBRASKA DEPARTMENT OF EDUCATION	84.235	H235N15004	-	74,656
TRANSCEN, INC.	84.133	H133B140043	-	(66,228)
U.S. DEPARTMENT OF EDUCATION	84.021		130,566	261,614
U.S. DEPARTMENT OF EDUCATION	84.129		-	192,674
U.S. DEPARTMENT OF EDUCATION	84.200		-	498,714
U.S. DEPARTMENT OF EDUCATION	84.235		2,023,479	3,502,912
U.S. DEPARTMENT OF EDUCATION	84.305		21,017	754,235
U.S. DEPARTMENT OF EDUCATION	84.325		-	805,433
U.S. DEPARTMENT OF EDUCATION	84.365		-	697,880
U.S. DEPARTMENT OF EDUCATION	84.407		183,479	2,022,748
U.S. DEPARTMENT OF EDUCATION	84.411		203,215	482,091
UNIVERSITY OF VERMONT	84.305	PR: R305A150438 / SB: 29338SUBUMASS	-	9,082
VANDERBILT UNIVERSITY	84.324	R324A160086	-	27,115
Department Of Education Total			2,671,742	9,850,159
Department Of Health And Human Services				
ADMINISTRATION ON AGING	93.110		\$ -	\$ (146,573)
ADMINISTRATIVE OFFICE OF THE TRIAL COURT	93.243	I H79 SM061663-01	-	1,146
AGENCY FOR HEALTHCARE RESEARCH & QUALITY	93.226		769,832	2,006,652
AGILTRON, INC.	93.U01	IR43ES022884-01A1	-	(250)
ALBERT EINSTEIN COLLEGE OF MEDICINE	93.859	310743	-	142,572
ALBERT EINSTEIN COLLEGE OF MEDICINE	93.866	PR: K23 AG049466-02 / SB: 311108	-	13,430
ALTARUM INSTITUTE	93.U02	PR: HHSS2832012000011 / SB: SC-16-013	-	8,853
ALTIUS INSTITUTE FOR BIOMEDICAL SCIENCES	93.172	PR: 7U54HG007010-05 / SB: PF1292	-	46,196
ALTIUS INSTITUTE FOR BIOMEDICAL SCIENCES	93.172	U54 HG007010-05	-	35,549
AMERICAN COLLEGE OF RADIOLOGY	93.395	I U24 CA18083-04	-	584,482
AMERICAN COLLEGE OF RADIOLOGY	93.395	PR: U24CA180803 / SB: 1612	-	829,649
AMERICAN PSYCHIATRIC ASSOCIATION	93.243	SM060562-05	-	10,334
AMERICAN THROMBOSIS & HEMOSTASIS NETWORK	93.080	PR: NU2 DD001155-01-00 / SB: ATHN2015001-1-2	128,830	225,494
AMERICAN THROMBOSIS & HEMOSTASIS NETWORK	93.184	U27 DD000862-02	-	7,043
ANTAGEN PHARMACEUTICALS, INC.	93.U03	200-2015-64147	-	106,585
ASSOC FOR PREVENTION TEACHING & RESEARCH	93.283	PR: SU36OE000005 / SB: 15-25-IPE-03	-	(8)
ASSOC OF MATERNAL & CHILD HEALTH PROGRAM	93.424	I-U38-OT000140-03	-	10,736
ASSOC OF UNIV CENTERS ON DISABILITIES	93.283	IU38OT000140-02	-	12,947
ASSOC OF UNIV CENTERS ON DISABILITIES	93.314	CDC-RFA-DD16-1604	-	702
AUBURN UNIVERSITY	93.852	R01 NS093941	-	232,203
BANNER HEALTH	93.866	0435-02-43681	-	22,394
BAYLOR COLLEGE OF MEDICINE	93.U04	PR: HHSA-290201500002C / SB: 102038483	-	31,789

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Health And Human Services, continued				
BAYSTATE MEDICAL CENTER, INC.	93.243	2U79SM059472-04	\$ -	\$ 1,542
BAYSTATE MEDICAL CENTER, INC.	93.243	U79 SM063204	-	18,625
BAYSTATE MEDICAL CENTER, INC.	93.847	PR: 1 R18 HL1055110 / SB: 705-11230-001	-	8,480
BAYSTATE MEDICAL CENTER, INC.	93.847	R18 HL08810-05	-	48,174
BECKMAN RESEARCH INSTITUTE CITY OF HOPE	93.847	PR: U01DK104162.-02 / SB: 51504.2000556.6	-	15,029
BETH ISRAEL DEACONESS MEDICAL CENTER	93.837	UM1HL108724-02	-	891
BETH ISRAEL DEACONESS MEDICAL CENTER	93.853	U01 NS074425-01	-	37,291
BETH ISRAEL DEACONESS MEDICAL CENTER	93.855	PR: 5 UMI A1124377-02 / SB: 01028929	-	111,307
BETH ISRAEL DEACONESS MEDICAL CENTER	93.855	U19 AO095985-02	-	(840)
BETH ISRAEL DEACONESS MEDICAL CENTER	93.859	2 R01 GM104987	-	73,932
BOSTON COLLEGE	93.310	5U54GM119023-03	7,034	22,586
BOSTON COLLEGE	93.310	8U54GM119023-02	-	(35)
BOSTON COLLEGE	93.310	BU: 5101963-5	-	29,736
BOSTON COLLEGE	93.859	660-10/2R01GM060418	-	(147)
BOSTON COLLEGE	93.859	AG048962	-	109,336
BOSTON COLLEGE	93.865	R03HD080195	-	(99)
BOSTON COLLEGE	93.U05	5101962-10	-	1,871
BOSTON MEDICAL CENTER	93.847	R01 DK106531-02	-	37,236
BOSTON PUBLIC HEALTH COMMISSION	93.311	PAWOS000017	-	32,956
BOSTON PUBLIC HEALTH COMMISSION	93.738	1 U58 DP005629-01	-	867
BOSTON UNIVERSITY	93.243	IH79TI026380-02	-	10,487
BOSTON UNIVERSITY	93.307	7R24MD008819-02 Revised	-	81,559
BOSTON UNIVERSITY	93.307	R24MD008819	-	(81,559)
BOSTON UNIVERSITY	93.393	PR: 3R01CA181392-025 / SB: 4500001969	-	18,424
BOSTON UNIVERSITY	93.393	R01 CA181392-02	-	305,423
BOSTON UNIVERSITY	93.516	4500001666	-	56,941
BOSTON UNIVERSITY	93.837	1R01HL136660	-	22,212
BOSTON UNIVERSITY	93.853	R05 NS073947-02	-	65,387
BOSTON UNIVERSITY	93.U06	4500001819	-	16,468
BRANDEIS UNIVERSITY	93.433	PR: 90DPGE0001-01-01 / SB: 403315	-	10,160
BRANDEIS UNIVERSITY	93.865	PR: 7 R01 HD082105-02 / SB: 403193	-	18,033
BRANDEIS UNIVERSITY	93.865	PR: 7R01 HD074581 / SB: 4036160	-	3,557
BRIGHAM AND WOMEN'S HOSPITAL	93.121	1R34DE025908-01	-	18,206
BRIGHAM AND WOMEN'S HOSPITAL	93.286	PR: P41 EB015902 / SB:109443	-	7,060
BRIGHAM AND WOMEN'S HOSPITAL	93.837	113892	-	21,469
BRIGHAM AND WOMEN'S HOSPITAL	93.846	PR: R01AR069557 / SB: 115810	-	99,220
BRIGHAM AND WOMEN'S HOSPITAL	93.855	PR: 2P01 A1073748 / SB: 112669	-	366,258
BRIGHAM AND WOMEN'S HOSPITAL	93.866	5 U01 AG048270-02	108,384	184,732
BROWN UNIVERSITY	93.213	1 UH2 AT008145-02	-	210,334
BROWN UNIVERSITY	93.273	PR: 1 I24 DA041123-01 / SB: 00000831	-	31,879
BROWN UNIVERSITY	93.866	5 R01AG048940-03	-	375,937
CALIFORNIA INSTITUTE OF TECHNOLOGY	93.310	DP5 OD12190-06	-	127,070
CELLERANT THERAPEUTICS, INC.	93.U07	HHSO 100201000051C	-	2,921
CENTERS FOR DISEASE CONTROL & PREVENTION	93.068		-	414,282
CENTERS FOR DISEASE CONTROL & PREVENTION	93.135		-	782,571

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Health And Human Services, continued				
CENTERS FOR DISEASE CONTROL & PREVENTION	93.262		\$ 558,519	\$ 1,819,467
CENTERS FOR DISEASE CONTROL & PREVENTION	93.318		4,670,510	7,499,644
CENTERS FOR DISEASE CONTROL & PREVENTION	93.542		-	20,523
CENTERS FOR DISEASE CONTROL & PREVENTION	93.865		-	2,721
CENTERS FOR DISEASE CONTROL & PREVENTION	93.U08	Contract No. 211-2013-M-57158	-	15,044
CENTERS FOR MEDICARE & MEDICAID SERVICES	93.638		810,876	5,071,867
CHILDREN'S FRIEND AND SERVICE	93.600	EHSCCP-Eval-001	-	29,679
CHILDREN'S HOSPITAL	93.110	6 T73MC000202402 / PO# 0001204102	-	117,878
CHILDREN'S HOSPITAL	93.266	75-0350-0-1-550	-	11,381
CHILDREN'S HOSPITAL	93.632	90DD0013-03-00	2,500	1,300
CHILDREN'S HOSPITAL	93.632	90DD0013-04-00, PO# 0000704943	7,500	304,342
CHILDREN'S HOSPITAL	93.847	2R01DK077195-06	-	78,888
CHILDREN'S HOSPITAL	93.855	PR: R01A1116577 / SB: RSTFD0000678743	-	192,814
CHILDREN'S HOSPITAL OF PHILADELPHIA	93.395	PR: NCTN / SB: U10 CA180886	-	41,940
CHILDREN'S HOSPITAL OF PHILADELPHIA	93.395	U10CA0180886	-	17,943
CINCINNATI CHILDREN'S HOSPITAL MEDCL CTR	93.865	1R01HD084430-01A1	-	34,655
CLEVELAND CLINIC FOUNDATION	93.273	U01 AA021893-05	-	462,082
COLUMBIA UNIVERSITY	93.865	PR: P01 HD080642-01 / SB: PO #G0545	-	20,410
COMMONWEALTH HLTH INS CONNECTOR AUTH	93.525	1 HBEIE130143-01-00	-	36,821
DANA FARBER CANCER INSTITUTE	93.397	5P50CA090381-13	-	(12,781)
DARTMOUTH COLLEGE	93.135	PR: U48DP005018 / SB: 1614	-	5,735
DARTMOUTH COLLEGE	93.279	5 R01 DA032533-03	-	(26,215)
DARTMOUTH COLLEGE	93.393	PR: 5 R01 CA168778-02 / SB: R186	-	2,303
DUKE UNIVERSITY	93.837	5 U01 HL107023-04	-	8,201
DUKE UNIVERSITY	93.847	5R01DK093829-04	-	38,922
DUKE UNIVERSITY	93.U09	PR: HSH272200900023C / SB: CT1300043	-	12,639
EMERSON COLLEGE	93.173	PR: 1 R01 DC012774-03 / SB: 3452-UMMS	-	39,872
EMMES CORPORATION	93.853	PR: NS026835 / SB: CT1000064	-	18,883
EMORY UNIVERSITY	93.859	1R01GM105813	-	142,805
EMORY UNIVERSITY	93.859	1R01GM105813 - 01	-	(28,986)
ENFORMIA	93.U10	113-1486	-	(374)
FAMILY SERVICE, INC.	93.086	90FM0109-01-00	-	7,407
FLORIDA DEVELOPMENT DISABILITIES COUNCIL	93.630	950EM15D	8,000	53,183
FLORIDA DEVELOPMENT DISABILITIES COUNCIL	93.630	973EM16	10,000	59,775
FLORIDA INTERNATIONAL UNIVERSITY	93.279	PR: 9 R01 DA035160-06 / SB: 800001069-02	-	43,362
FOCALCOOL LLC	93.837	R43-NS095573-01A1	-	56,361
FORDHAM UNIVERSITY	93.866	1R21AG050018-01A1	-	22,706
FTL LABS CORPORATION	93.433	90B1003301	-	18,255
GENTUITY, LLC	93.837	1 R34 NS100163-01A1	-	6,125
GEORGE WASHINGTON UNIVERSITY	93.610	PR: C1MS331343-01-00 / SB: 14-M83	-	10,363
GEORGE WASHINGTON UNIVERSITY	93.847	1R01DK100916-01A1	-	38,433
GEORGE WASHINGTON UNIVERSITY	93.847	5R01DK100916-02	-	5,619
GEORGE WASHINGTON UNIVERSITY	93.847	R01DK100916	-	104,767
GEORGE WASHINGTON UNIVERSITY	93.866	R01AG051752	-	26,008
GROUP HEALTH RESEARCH INSTITUTE	93.U11	R215-084.030-T04	-	56,901

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Department Of Health And Human Services, continued				
HARVARD MEDICAL SCHOOL	93.837	1R01HL126896-01A1	\$ -	\$ 141,942
HARVARD MEDICAL SCHOOL	93.879	G08 LM012154	-	42,625
HARVARD MEDICAL SCHOOL	93.879	PR:-7R25LM012284-02 / SB: 153062	-	14,256
HARVARD PILGRIM HEALTH CARE, INC.	93.084	U54CK000484	-	71,979
HARVARD PILGRIM HEALTH CARE, INC.	93.103	HHSF22301001T	-	5,058
HARVARD PILGRIM HEALTH CARE, INC.	93.113	R01 ES024765-02	-	10,188
HARVARD PILGRIM HEALTH CARE, INC.	93.172	PR: R21HG008510 / SB: AH000581	-	18,314
HARVARD PILGRIM HEALTH CARE, INC.	93.226	R18HS021424	-	85,935
HARVARD PILGRIM HEALTH CARE, INC.	93.310	1UG3 OD023286-01	-	33,150
HARVARD PILGRIM HEALTH CARE, INC.	93.865	AH000453	-	20,242
HARVARD PILGRIM HEALTH CARE, INC.	93.U12	HHSF2232009100061	-	2,452
HARVARD PILGRIM HEALTH CARE, INC.	93.U13	HHSF22301007T	-	29,518
HARVARD PILGRIM HEALTH CARE, INC.	93.U14	HHSF2232014000021	-	17,663
HARVARD PILGRIM HEALTH CARE, INC.	93.U15	PR: HHSF2232009100061 / SB: HHSF2201007T-0021	-	13,460
HARVARD PILGRIM HEALTH CARE, INC.	93.U16	HHSF223201400301	-	165,247
HARVARD PILGRIM HEALTH CARE, INC.	93.U17	HHSF2232014000421	-	64,356
HARVARD SCHOOL OF PUBLIC HEALTH	93.113	PR: 2R01EA014370 / SB: 112176-5095841	-	15,683
HARVARD SCHOOL OF PUBLIC HEALTH	93.262	T42 OH008416	-	(3,067)
HARVARD SCHOOL OF PUBLIC HEALTH	93.393	5R01 CA50385-27	-	40,531
HARVARD SCHOOL OF PUBLIC HEALTH	93.853	114512-5097014	-	24,034
HARVARD SCHOOL OF PUBLIC HEALTH	93.855	PR: U19 AI107774 / SB: 109708-5064861	-	438,206
HARVARD UNIVERSITY	93.847	1DP3DK111898	-	222,707
HARVARD UNIVERSITY	93.853	PR: R01 NS082525 / SB: 138074-5085856	-	203,977
HARVARD UNIVERSITY	93.865	5P01HD082032-02	-	21,591
HARVARD UNIVERSITY	93.884	6 UH1 HP29962-01-01	-	133,236
HEALTH RESOURCES IN ACTION	93.610	CMS331039-01-00	-	(176)
HEALTH RESOURCES SERVICE ADMINISTRATION	93.107		516,822	633,396
HEALTH RESOURCES SERVICE ADMINISTRATION	93.110		234,094	1,231,404
HEALTH RESOURCES SERVICE ADMINISTRATION	93.145		1,902,283	2,409,217
HEALTH RESOURCES SERVICE ADMINISTRATION	93.178		-	802,322
HEALTH RESOURCES SERVICE ADMINISTRATION	93.247		310,257	936,506
HEALTH RESOURCES SERVICE ADMINISTRATION	93.265		-	(281)
HEALTH RESOURCES SERVICE ADMINISTRATION	93.358		-	273,155
HEALTH RESOURCES SERVICE ADMINISTRATION	93.884		-	(2,553)
HEALTH RESOURCES SERVICE ADMINISTRATION	93.918		-	484,288
HEBREW REHAB	93.866	2R01AG025037	-	17,986
HENRY FORD HEALTH SYSTEM	93.310	PR: 1OT2ODO24610-01 / SB: B11149UMASS	-	56,793
HIGHLAND VALLEY ELDER SERVICES, INC.	93.052	116-0125	-	3,683
HOLYOKE HEALTH CENTER INC	93.289	75-0120-0-1-551	-	11,499
HOSPICE OF HENDERSON COUNTY, INC.	93.U18	1C1CMS331331	-	23,363
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	93.242	PR: 5R01MH104341-02 / SB: 0255-0091-4809	-	59,519
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	93.242	PR: U01MH103392-01 / SB: 0255-7231-4609	-	284,938
ILLINOIS INSTITUTE OF TECHNOLOGY	93.837	PR: R01 HL122484-04 / SB: SA557-0614-8907	-	431,428
INDIANA UNIVERSITY	93.397	P30 CA082709-17S3 / SB: IN4687577UMASS	-	13,783

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Department Of Health And Human Services, continued				
INDIANA UNIVERSITY	93.397	P30 CA082709-17S4 / SB:IN4687567UMASS	\$ -	\$ 19,297
INDIANA UNIVERSITY	93.397	PR: 5 U54 CA190151-03 / SB: PO # 1571596	-	16,603
INDIANA UNIVERSITY	93.847	PR: 2R01DK060581 / SB: IN-4681920-UMA	-	52,415
JACKSON LABORATORY	93.351	U54 OD020351	-	23,508
JOHNS HOPKINS UNIVERSITY	93.855	4 R1 A1102939-4	-	295,246
JOHNS HOPKINS UNIVERSITY	93.936	5 R01 HD080474-04	-	264,483
JOHNS HOPKINS UNIVERSITY	93.U19	2001820334	-	(71,802)
JOHNS HOPKINS UNIVERSITY	93.U20	HHSN2682011000081 / HHSN26800002	-	30,334
JOSLIN DIABETES CENTER	93.847	PR: UC4DK101108-01 / SB: PERL Study	-	11,082
KAISER FOUNDATION RESEARCH INSTITUTE	93.279	5 UGI DA040314-02	-	9,936
KAISER FOUNDATION RESEARCH INSTITUTE	93.393	PR: 5 U24CA17524-05 / SB: RNG200623-MPCI-01	-	190,456
KAISER FOUNDATION RESEARCH INSTITUTE	93.866	U01 AG034661-04	-	40,269
KANSAS STATE UNIVERSITY	93.859	5 R01 GM107487-03	-	51,918
KLEIN BUENDEL, INC.	93.393	PR: R01CA192652 / SB: 0301-0154-000	-	164,965
LANGSTON UNIVERSITY	93.110	90AR5029-01-00	-	5,222
LANGSTON UNIVERSITY	93.433	90RT5024-01-01	-	1,223
LANGSTON UNIVERSITY	93.U21	90AR5029-01-00	-	74,657
LAWRENCE BERKELEY NATL LAB U-CALIFORNIA,	93.U22	PR: 1UM1HG009421-01 / SB:7339894	-	23,520
LUK CRISIS CENTER, INC.	93.652	90C01057	-	83,303
MA DEPARTMENT OF MENTAL HEALTH	93.U23	32103559UMASS5	4,939	92,251
MA DEPARTMENT OF PUBLIC HEALTH	93.110	PR: CYSHCN SIB / SB: INTF3050HH2500224026	-	60,509
MA DEPARTMENT OF PUBLIC HEALTH	93.136	INTF3401M03700115043	-	254,314
MA DEPARTMENT OF PUBLIC HEALTH	93.243	1H79SM062910-01	-	73,472
MA DEPARTMENT OF PUBLIC HEALTH	93.243	IU79SP020794	-	103,596
MA DEPARTMENT OF PUBLIC HEALTH	93.296	3043H78500224028	-	(3,602)
MA DEPARTMENT OF PUBLIC HEALTH	93.994	INTF3054M03300819017124499	-	25,960
MA DEPARTMENT OF PUBLIC HEALTH	93.994	INTF7900MM3701516150	-	136,241
MA DEPT OF ELEMENTARY & SECONDARY ED	93.084	CTDOEISCT75UMASSBOSSURVEY	-	(155)
MA DEPT OF PUBLIC HEALTH, BSAS	93.243	INTF2400HH78500224216	-	15,345
MA DEVELOPMENTAL DISABILITIES COUNCIL	93.360	CT 010016G14CS62BCSNF0	-	4,950
MA EXECUTIVE OFFICE OF HLTH & HUMAN SVC	93.628	14UMMSSONECARETRANS5W	-	1,152
MA EXECUTIVE OFFICE OF HLTH & HUMAN SVC	93.628	16UMMSFALLONSURV5W	-	48,125
MA EXECUTIVE OFFICE OF HLTH & HUMAN SVC	93.644	16UMMSCONTRACEPTIV5W	-	45,647
MAHIDOL UNIVERSITY	93.989	IU01TW010091-01	-	11,633
MASSACHUSETTS GENERAL HOSPITAL	93.242	1 R01MH106577-01A1	-	87,516
MASSACHUSETTS GENERAL HOSPITAL	93.396	4UH3CA189901-3	-	187,929
MASSACHUSETTS GENERAL HOSPITAL	93.396	UH2CA189901	-	87,763
MASSACHUSETTS GENERAL HOSPITAL	93.837	226216	-	8,146
MASSACHUSETTS GENERAL HOSPITAL	93.837	PR: 1R01HL136685 / SB: 230189	-	17,419
MASSACHUSETTS GENERAL HOSPITAL	93.837	R21DK109548	-	32,277
MASSACHUSETTS GENERAL HOSPITAL	93.847	P01 DK033506-26A1	-	46,528
MASSACHUSETTS GENERAL HOSPITAL	93.853	1 U10 NS086729-04	-	1,586
MASSACHUSETTS GENERAL HOSPITAL	93.853	R21NS096402	-	48,571
MASSACHUSETTS GENERAL HOSPITAL	93.855	PR: R01 A1103055 / SB: 223544	-	60,678
MASSACHUSETTS GENERAL HOSPITAL	93.866	5K01AG0550711-01	-	99,894

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Department Of Health And Human Services, continued				
MAYO CLINIC ROCHESTER	93.396	PR: 2R01CA136526 / PO: 64195304 / SB: UNI-203270	\$ -	\$ 8,945
MCLEAN HOSPITAL	93.242	PR: 5 R01 MH105608-02 / SB: 401122	-	30,990
MEDICAL COLLEGE OF WISCONSIN	93.855	5R01AI101898-02	-	(2,678)
MICHAEL E DEBAKEY VA MEDICAL CENTER	93.U24	1R21AG043883	-	15,752
MIRIAM HOSPITAL	93.213	PR: 4 R01 AT006948-05 / SB: 710-9907	-	8,436
MIRIAM HOSPITAL	93.213	R21AT008830	-	11,970
MIRIAM HOSPITAL	93.393	5 R01 CA156699-04	-	(1,630)
MONTANA STATE UNIVERSITY	93.286	G173-15-W5173	-	51,384
MOUNT HOLYOKE COLLEGE	93.837	GD8871	-	49,852
MOUNT SINAI MEDICAL CENTER	93.110	PR: H30 MC24048-02 / SB: 0253-6544-4609	-	32,036
NAT'L DEVELOP AND RESEARCH INSTITUTES	93.279	R01DA035 146	-	14,219
NATL INST FOR OCCUPATIONAL SAFETY&HEALTH	93.262		124,102	917,514
NEW ENGLAND RESEARCH INSTITUTE, INC.	93.837	PR: U01HL107407 / SB: CT15000	-	312
NEW YORK UNIVERSITY SCHOOL OF MEDICINE	93.393	5 R21 CA187612-02	-	69,854
NEW YORK UNIVERSITY SCHOOL OF MEDICINE	93.855	1 P01 AI100151-04	-	467,403
NIH-FOGARTY INTERNATIONAL CENTER	93.989		50,162	74,944
NIH-NATIONAL EYE INSTITUTE	93.867		-	1,332,687
NIH-NATIONAL INSTITUTE OF AGING	93.866		668,124	2,022,007
NIH-NATIONAL INSTITUTES OF HEALTH	93.113		244,016	2,704,514
NIH-NATIONAL INSTITUTES OF HEALTH	93.121		102,980	682,955
NIH-NATIONAL INSTITUTES OF HEALTH	93.142		211,984	285,124
NIH-NATIONAL INSTITUTES OF HEALTH	93.172		-	323,529
NIH-NATIONAL INSTITUTES OF HEALTH	93.173		21,888	953,038
NIH-NATIONAL INSTITUTES OF HEALTH	93.226		-	7,049
NIH-NATIONAL INSTITUTES OF HEALTH	93.233		-	477,548
NIH-NATIONAL INSTITUTES OF HEALTH	93.242		39,852	456,750
NIH-NATIONAL INSTITUTES OF HEALTH	93.273		45,234	442,125
NIH-NATIONAL INSTITUTES OF HEALTH	93.279		16,002	608,619
NIH-NATIONAL INSTITUTES OF HEALTH	93.286		302,144	1,140,631
NIH-NATIONAL INSTITUTES OF HEALTH	93.307		259,822	955,433
NIH-NATIONAL INSTITUTES OF HEALTH	93.310		738,896	3,570,470
NIH-NATIONAL INSTITUTES OF HEALTH	93.350		-	361,556
NIH-NATIONAL INSTITUTES OF HEALTH	93.351		-	116,277
NIH-NATIONAL INSTITUTES OF HEALTH	93.361		-	318,001
NIH-NATIONAL INSTITUTES OF HEALTH	93.393		318,155	502,198
NIH-NATIONAL INSTITUTES OF HEALTH	93.394		11,548	606,786
NIH-NATIONAL INSTITUTES OF HEALTH	93.395		-	352,370
NIH-NATIONAL INSTITUTES OF HEALTH	93.396		586,003	1,320,165
NIH-NATIONAL INSTITUTES OF HEALTH	93.397		29,948	776,661
NIH-NATIONAL INSTITUTES OF HEALTH	93.837		325,620	859,945
NIH-NATIONAL INSTITUTES OF HEALTH	93.846		21,947	236,612
NIH-NATIONAL INSTITUTES OF HEALTH	93.847		362,098	1,434,162
NIH-NATIONAL INSTITUTES OF HEALTH	93.853		43,274	543,585
NIH-NATIONAL INSTITUTES OF HEALTH	93.855		305,608	1,138,659
NIH-NATIONAL INSTITUTES OF HEALTH	93.859		701,029	8,028,852
NIH-NATIONAL INSTITUTES OF HEALTH	93.865		359,004	2,640,342

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Health And Human Services, continued				
NIH-NATIONAL INSTITUTES OF HEALTH	93.866		\$ 177,420	\$ 1,131,455
NIH-NATIONAL INSTITUTES OF HEALTH	93.867		-	89,136
NIH-NATIONAL INSTITUTES OF HEALTH	93.879		-	285,536
NIH-NATIONAL INSTITUTES OF HEALTH	93.989		173,514	242,992
NIH-NATIONAL INSTITUTES OF HEALTH	93.U25	HHSN275200900451P	-	1
NIH-NATIONAL INSTITUTES OF HEALTH	93.U26	I R01 HD083311-01A1	214,677	735,044
NIH-NATIONAL LIBRARY OF MEDICINE	93.879		63,131	1,522,349
NIH-NATL CANCER INSTITUTE	93.393		173,700	2,477,817
NIH-NATL CANCER INSTITUTE	93.394		281,745	1,251,087
NIH-NATL CANCER INSTITUTE	93.395		26,142	1,484,759
NIH-NATL CANCER INSTITUTE	93.396		78,485	2,348,216
NIH-NATL CANCER INSTITUTE	93.398		7,406	1,027,828
NIH-NATL CANCER INSTITUTE	93.U27	HHSN261201500029C	110,585	373,958
NIH-NATL CTR ADVANCING TRANSLATIONAL SCI	93.310		395,987	2,068,028
NIH-NATL CTR ADVANCING TRANSLATIONAL SCI	93.350		277,582	4,409,544
NIH-NATL CTR FOR COMPLEMENT & INT HEALTH	93.213		179,121	1,397,499
NIH-NATL HEART, LUNG & BLOOD INSTITUTE	93.837		681,833	9,091,512
NIH-NATL HEART, LUNG & BLOOD INSTITUTE	93.838		-	2,309,364
NIH-NATL HEART, LUNG & BLOOD INSTITUTE	93.839		145,641	1,640,383
NIH-NATL HUMAN GENOME RESEARCH INSTITUTE	93.172		1,087,626	4,428,879
NIH-NATL HUMAN GENOME RESEARCH INSTITUTE	93.U28	HHSN302201600025M	-	226
NIH-NATL INST OF ALLERGY & INFEC DISEASE	93.855		1,325,466	27,913,856
NIH-NATL INST OF ALLERGY & INFEC DISEASE	93.856		-	701,825
NIH-NATL INST OF ALLERGY & INFEC DISEASE	93.U29	HHSN272201600011C	43,397	169,521
NIH-NATL INST OF ALLERGY & INFEC DISEASE	93.U30	HHSN272201300031C	-	469,889
NIH-NATL INST OF ALLERGY & INFEC DISEASE	93.U31	I R13 A1129301	-	6,000
NIH-NATL INST OF ARTHRITIS & MUSCULOSKEL	93.846		432,924	3,056,665
NIH-NATL INST OF BIOMED IMAG & BIOENGRNG	93.286		782,047	2,186,042
NIH-NATL INST OF BIOMED IMAG & BIOENGRNG	93.310		100,555	400,025
NIH-NATL INST OF CHILD HLTH & HUMAN DEVL	93.865		1,790,162	7,130,689
NIH-NATL INST OF CHILD HLTH & HUMAN DEVL	93.U32	HHSN275201500009U/HHSN27500001	-	1,236
NIH-NATL INST OF DENTAL & CRANIOFA RSCH	93.310		-	104,417
NIH-NATL INST OF DIAB & DIGEST KIDNEY DI	93.847		547,941	12,286,466
NIH-NATL INST OF ENVIR HEALTH SCIENCES	93.113		-	23,675
NIH-NATL INST OF ENVIR HEALTH SCIENCES	93.142		347,004	1,066,176
NIH-NATL INST OF ENVIR HEALTH SCIENCES	93.310		-	638,784
NIH-NATL INST OF GENERAL MEDICAL SCIENCE	93.310		73,201	521,784
NIH-NATL INST OF GENERAL MEDICAL SCIENCE	93.859		1,199,004	23,038,840
NIH-NATL INST OF NEUROLO DISORD & STROKE	93.853		940,538	11,133,938
NIH-NATL INST ON ALCO ABUSE & ALCOHOLISM	93.273		70,341	3,186,557
NIH-NATL INST ON DEAFNESS & OTH COM DIS	93.173		20,538	206,521
NIH-NATL INST ON MINORITY & HEALTH DISPA	93.307		278,246	1,215,293
NIH-NATL INSTITUTE OF MENTAL HEALTH	93.242		738,105	4,155,219
NIH-NATL INSTITUTE OF NURSING RES	93.361		-	200,904
NIH-NATL INSTITUTE ON DRUG ABUSE	93.279		68,423	4,302,653

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Health And Human Services, continued				
NIH-OFFICE OF THE DIRECTOR	93.310		\$ -	\$ 416,890
NIH-OFFICE OF THE DIRECTOR	93.351		355,116	1,504,689
NORTHEASTERN UNIVERSITY	93.273	IR01AA021136-01A1	-	9,502
NORTHWESTERN UNIVERSITY	93.397	PR:1U54CA193419-01 / SB: 6003974 UM	-	82,318
NORTHWESTERN UNIVERSITY	93.859	4 R01 GM107209-04	-	45,009
NORTHWESTERN UNIVERSITY	93.859	60035565 UMA	-	(6,621)
OFFICE OF MINORITY HEALTH	93.137		-	62,605
OREGON SOCIAL LEARNING CENTER, INC.	93.279	R01 DA041425-01	-	99,712
PARTNERS RESEARCH MANAGEMENT	93.103	PR: 5 R01 FD0004127-04 / SB: 226881	-	3,623
PENNINGTON BIOMEDICAL RESEARCH CTR (LSU)	93.262	R210H010785-01A1S1	-	869
PENNINGTON BIOMEDICAL RESEARCH CTR (LSU)	93.U33	HD073807-50352-S01	-	(1,184)
PENNSYLVANIA STATE UNIVERSITY	93.242	5 R01 MH098003-04	-	29,161
PENNSYLVANIA STATE UNIVERSITY	93.865	1R01HD083381-01A1	-	26,144
PLANET BIOTECHNOLOGY, INC.	93.855	PR: 1 R41 AI129106-01 / SB: R41 FH-Fc UMASSMED	-	37,857
PLYMOUTH STATE UNIVERSITY	93.243	G02HP28005-01-03	-	119,000
PRAXIS, INC.	93.121	1R42DE020979-01A1	-	153
PRAXIS, INC.	93.865	2R42HD069070-02	-	104,623
PRISM	93.U34	720201	-	68,250
PURDUE UNIVERSITY	93.395	1R01CA196947-01A1	-	18,577
PURDUE UNIVERSITY	93.855	1 R2 I AI 121994-01	-	2,699
PURDUE UNIVERSITY	93.859	PR: R21 GM114853-01 / SB: 4102-64396	-	17,976
PURDUE UNIVERSITY	93.936	4301-80198	-	5,582
RECLAIMRX LLC	93.859	1R43GM 116211-0 IA 1	-	44,314
RESEARCH FOUNDATION OF SUNY	93.853	1 R01 NS093097-02	-	269,105
RESEARCH TRIANGLE INTERNATIONAL	93.U35	HHS283201200006V/HHSS2834204T	-	248,749
RHODE ISLAND HOSPITAL	93.361	5 R01 NR014782-03	-	21,027
RUSH UNIVERSITY MEDICAL CENTER	93.361	1 R01 NR013910-03	-	14,276
RUTGERS UNIVERSITY	93.145	PR: 6U10HA28686 / SB: 815570	-	35,020
RUTGERS UNIVERSITY	93.847	PR: 1R01DK102934 / SB: 5471	-	46,721
SANFORD BURNHAM PREBYS MED DISCOVERY INS	93.396	PR: R01 CA207177 / SB: 60025-12917-UMASS	-	11,056
SEVEN HILLS FOUNDATION	93.243	1 SP021244-01	-	54,557
SIGMOVIR BIOSYSTEMS, INC.	93.855	2R42-A1109926-02	-	246,862
SIGNABLOK, INC.	93.273	1R34AA024355-01A1	-	5,828
SIGNABLOK, INC.	93.837	5 R44HL110417-03	-	130,561
SIMON FRASER UNIVERSITY	93.856	R01 AI097051-01	-	(1,999)
SOCIAL & SCIENTIFIC SYSTEMS, INC.	93.U37	PR: HHSN261200800001E / SB: CRB-SSS-16-004803	-	14,039
SOCIAL & SCIENTIFIC SYSTEMS, INC.	93.U38	HHSN261200800001E	-	66
SPAN, INC.	93.959	1H79T1024794-01	-	5,741
SPEECH TECHNOLOGY AND APPLIED RESEARCH	93.173	R44-DC011668	-	79,377
STANFORD UNIVERSITY	93.286	1U01EB017140-01A1	-	65,654
STANFORD UNIVERSITY	93.286	5U01EB017140 / U01EB017140	-	26,736
STANFORD UNIVERSITY	93.286	5U01EB017140-03 / U01EB017140	-	16,965
STANFORD UNIVERSITY	93.859	PR: 1R01GMI12720-01 / SB: 60893476-114988	-	11,206
STATE OF RHODE ISLAND	93.624	SRI/RFP Number: 7549877	-	1,517,032
STATE OF VERMONT	93.624	PR: G1CMS 331181-01-00	-	119,514
SUBSTANCE ABUSE AND MENTAL HEALTH SERV	93.243		162,705	866,403
SWEDISH MEDICAL CENTER	93.U39	SMC: 223004 B.01	-	455,387

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Health And Human Services, continued				
TCG, INC.	93.853	2R44NS074540-02A1	\$ -	\$ 69,855
TCG, INC.	93.853	PR: 2 R44 NS074540-02 / SB: UM-20160927-01-TCG	-	71,730
TEXAS A&M UNIVERSITY	93.855	1 P01 1A1095208-04	-	88,034
THE BROAD INSTITUTE	93.172	PR: 1R01 HG008742-01A1 / SB: 500530-550000908	-	18,626
THE BROAD INSTITUTE	93.351	PR: R24 OD018250-01A1 / SB: 5400000054	-	20,354
THE CTR FOR CONSTRUCTION RESEAR & TRAIN	93.262	U60 OH 009762	-	254,420
THE GENERAL HOSPITAL CORPORATION	93.837	4 R01 HL112661-04	-	262,958
THE J. DAVID GLADSTONE INSTITUTE	93.853	5 R01 NS079725-04	-	239,784
THE MARY IMOGENE BASSETT HOSPITAL	93.262	2 U54 OH007542-16	-	114,571
THE MARY IMOGENE BASSETT HOSPITAL	93.262	5 U54 OH007542-14	-	(15)
THE MARY IMOGENE BASSETT HOSPITAL	93.262	5 U54 OH007542-15	-	26,323
THE SCRIPPS RESEARCH INSTITUTE	93.855	PR: 4 P01 A1100263-05 / SB: PO 5-20598	-	222,827
THE SCRIPPS RESEARCH INSTITUTE	93.855	PR: 5P01A1100263 / SB: 5-20718	-	263,625
THE UNIVERSITY OF TEXAS AT TYLER	93.838	PR: 1 U01 HL133536-01 / SB: 6104360165-02	-	11,665
TRANSCEN, INC.	93.433	90RT5034-02-00	-	145,041
TRIDIUUM, INC.	93.273	2 R42 AA022035-04	14,267	212,310
TRIDIUUM, INC.	93.393	PR: R24 CA174048-03 / SB: SBC Project	-	169,682
TUFTS MEDICAL CENTER	93.839	PR: 5 P50 HL110789-05 / SB: 6013015-SERV	-	4,590
TUFTS MEDICAL CENTER	93.839	PR: P50 HL110789-05 / SB: 6013016-SERV	-	4,700
TUFTS MEDICAL CENTER	93.865	R01HD072778-01A1	-	7,248
TUFTS UNIV CUMMINGS SCH OF VET MED	93.865	PR: 1R21HD086361 / SB: 1012913-00001	-	39,674
TUFTS UNIVERSITY	93.855	PR: 1R01A116969-01 / SB:101315-00001	-	25,676
TUFTS UNIVERSITY	93.859	4K12GM074869-10	-	17,376
TUFTS UNIVERSITY	93.859	5K12GM074869-09	-	9,264
TULANE UNIVERSITY	93.847	5 R01 DK099598-04	-	16,739
U OF TEXAS M.D. ANDERSON CANCER CENTER	93.286	1 R01 EB020658-01	-	162,682
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.103		-	219,730
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.242		383,420	705,896
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.433		591,163	2,420,354
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.631		86,992	567,185
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.632		22,507	588,610
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.638		-	15,215
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.866		72,934	280,789
U.S. FOOD AND DRUG ADMINISTRATION	93.103		20,000	74,674
UNIVERSITY OF ALABAMA	93.226	5 U19 HS021110-05	-	4,145
UNIVERSITY OF ALABAMA	93.846	PR: 5 R01 AR060240-05 / SB: 000401984-004	-	11,941
UNIVERSITY OF ALABAMA	93.855	PR: 5 R01 A1109001-02 / SB: 000503587-001	-	331,950
UNIVERSITY OF ALABAMA	93.865	2 R01 HD061959-10	-	32,863
UNIVERSITY OF ALABAMA	93.989	PR: 4 R01 TW009272-05 / SB: 000421737-0001	-	17,482
UNIVERSITY OF ALABAMA	93.U40	PR: HHSN268200900047C / SB: CTI100012	-	2,731
UNIVERSITY OF ALABAMA	93.U41	PR: HHSN268201300025C / SB: 000501394-02	-	91,530
UNIVERSITY OF CALIFORNIA	93.121	2R01DE016402-10	-	74,969
UNIVERSITY OF CALIFORNIA	93.855	PR: HL / SB: VEST/PREDICTS	-	5,482
UNIVERSITY OF CALIFORNIA	93.859	PR: R01GM117189 / SB: 9185sc	-	140,587
UNIVERSITY OF CALIFORNIA	93.865	55962754	-	11,468

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Health And Human Services, continued				
UNIVERSITY OF CALIFORNIA BERKELEY	93.859	2R01GM094402-06	\$ -	\$ 49,315
UNIVERSITY OF CALIFORNIA IRVINE	93.226	2015-3303	-	14,285
UNIVERSITY OF CALIFORNIA IRVINE	93.310	UH3AII 13337	-	50,235
UNIVERSITY OF CALIFORNIA REGENTS	93.243	U79 SM080001-01	-	137,934
UNIVERSITY OF CALIFORNIA REGENTS	93.279	5 U24 DA041123-02	-	40,193
UNIVERSITY OF CALIFORNIA REGENTS	93.855	5 R21 AI101566-02	-	34,503
UNIVERSITY OF CALIFORNIA REGENTS	93.989	PR: 2 U19 TW007401-10 / SB: 61686358	-	28,275
UNIVERSITY OF CALIFORNIA SAN FRANCISCO	93.121	2E01DE19638-06A1	-	131,922
UNIVERSITY OF CALIFORNIA SAN FRANCISCO	93.213	PR: 1 R34 AT08948-01A1 / SB: 9560sc	-	138,849
UNIVERSITY OF CALIFORNIA SAN FRANCISCO	93.242	9168SC	-	7,424
UNIVERSITY OF CALIFORNIA SAN FRANCISCO	93.855	PR: 1UM1 AI126611 / SB: 9617sc	-	229,438
UNIVERSITY OF CALIFORNIA SAN FRANCISCO	93.865	1 R21 HD082330-01A1	-	7,198
UNIVERSITY OF CINCINNATI	93.U42	200-2015-M-63859	-	2,600
UNIVERSITY OF COLORADO AT DENVER	93.846	PR: 5 UH2 AR067681-03 / SB: FY17.090.002_AMD3	-	154,747
UNIVERSITY OF COLORADO AT DENVER	93.846	PR: UH2AR067681-01 / SB: FY15.090.004	-	26,533
UNIVERSITY OF CONNECTICUT	93.624	1 G1CMS331404	-	9,817
UNIVERSITY OF CONNECTICUT	93.866	PR: P01 AG021600-09 / SB: USHS6-62703698	-	411,649
UNIVERSITY OF FLORIDA	93.286	5 R01 EB014869-04	-	23,693
UNIVERSITY OF FLORIDA	93.360	PR: 2 R01 EB014869-05 / SB: UFDSP00011615	-	88,780
UNIVERSITY OF FLORIDA	93.846	1 R01AR069660-02	-	139,184
UNIVERSITY OF LOUISVILLE	93.847	120597	-	(95)
UNIVERSITY OF MARYLAND	93.067	PR: 3U2GGH000099-05 / PO: SR00004247	-	77,617
UNIVERSITY OF MARYLAND	93.243	16-16034G	-	10,346
UNIVERSITY OF MARYLAND	93.853	PR: 5 R21 NS086902-02 / SB: 1500188/12976	-	5,213
UNIVERSITY OF MEDICINE & DENTISTRY OF NJ	93.433	PR: H133A120152 / SB: 8094	-	71,145
UNIVERSITY OF MEMPHIS	93.286	5-40312	-	275,352
UNIVERSITY OF MICHIGAN	93.859	PR: R01GM116960 / SB: 30038554238	-	138,144
UNIVERSITY OF MICHIGAN	93.866	5P01AG029409-08	-	31,850
UNIVERSITY OF MINNESOTA	93.226	P005171401	-	6,541
UNIVERSITY OF MINNESOTA	93.262	7 U01 OH010730-03	-	70,617
UNIVERSITY OF MINNESOTA	93.361	N002994701	-	9,316
UNIVERSITY OF MINNESOTA	93.433	90RT5019-01-00	-	49,569
UNIVERSITY OF MINNESOTA	93.859	PR: P01 GM091743 / SB: H001786602	-	(690)
UNIVERSITY OF MINNESOTA	93.U43	90RT5019-02-00	-	32,968
UNIVERSITY OF MISSISSIPPI	93.U44	PR: HHSN268201300046C/SB: 66102700414-04UMASS	-	33,699
UNIVERSITY OF MISSISSIPPI MEDICAL CENTER	93.855	PR: 7R01AI095740 / SB: 66103650115-UM	-	10,275
UNIVERSITY OF MISSISSIPPI MEDICAL CENTER	93.U45	HHSN268201300047C	-	25,175
UNIVERSITY OF NEBRASKA	93.279	24-0524-0054-004	-	35,085
UNIVERSITY OF NEW HAMPSHIRE	93.865	5 R01 HD064576	-	(153)
UNIVERSITY OF NEW MEXICO	93.273	PR: 1 R34 AA023304-02 / SB: 028326-871G	-	12,640
UNIVERSITY OF NORTH CAROLINA	93.242	PR: 1R01MH110427 / SB: 516171	-	5,837
UNIVERSITY OF NORTH CAROLINA	93.310	PR: 1UG3OD023348 / SB: 5106194	-	114,582
UNIVERSITY OF NORTH CAROLINA	93.847	PR: 5 R01 DK103546-03 / SB: 510150	-	65,333
UNIVERSITY OF NORTH CAROLINA	93.855	5 R01 AI121558-02	-	132,711
UNIVERSITY OF NORTH CAROLINA	93.855	5 R21 AI115752-02	-	14,530

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Health And Human Services, continued				
UNIVERSITY OF NORTH CAROLINA	93.855	PR: 5 U19 A1109965-02 / SB: 5103507	\$ -	\$ 55,304
UNIVERSITY OF PENNSYLVANIA	93.393	5 R01 CA202699-02	-	229,451
UNIVERSITY OF PENNSYLVANIA	93.393	5R01CA196131-02	-	12,248
UNIVERSITY OF PENNSYLVANIA	93.838	5 P30 DK047757-22	-	83,750
UNIVERSITY OF PENNSYLVANIA	93.839	2-R56-HL-090774-05A1	-	(1,233)
UNIVERSITY OF PENNSYLVANIA	93.855	PR: 1R01 A1120821-02 / SB: 566489	-	41,191
UNIVERSITY OF PITTSBURGH	93.846	2 R01 AR060744-07	-	23,274
UNIVERSITY OF PITTSBURGH	93.847	PR: 1 R01 DK095748-01A1/SB: 0028057(123009-1)	-	24,532
UNIVERSITY OF PITTSBURGH	93.855	5 UH2 A122295-02	-	232,251
UNIVERSITY OF PITTSBURGH	93.866	PR: 5 U01 AG12533-22 / SB: 0040521(124995-5)	-	212,998
UNIVERSITY OF RHODE ISLAND	93.855	2 P01 A1034533-23	-	1,697
UNIVERSITY OF RHODE ISLAND	93.855	4 P01 A134533-24	-	101,404
UNIVERSITY OF ROCHESTER	93.121	1R01DE025447-01	-	29,323
UNIVERSITY OF ROCHESTER	93.280	4R33A1116180-03	-	4,206
UNIVERSITY OF ROCHESTER	93.837	PR: 5R01 HL127891 / SB: 416917-G	-	150,217
UNIVERSITY OF ROCHESTER	93.837	PR: U01 HL096607-05 / SB: 415588-G	-	11,344
UNIVERSITY OF ROCHESTER	93.U46	PR: HHSN272201400005C / SB: 416428	-	56,568
UNIVERSITY OF SOUTH CAROLINA	93.283	PR: 5U01 DD001007-05 / SB: 17-3249	-	24,295
UNIVERSITY OF SOUTH CAROLINA	93.393	PR: R01CA151304-03 / SB: 14-2701	-	(1,281)
UNIVERSITY OF SOUTH FLORIDA	93.853	PR: 1R01NS095563 / SB: 6125-1076-00B	-	51,221
UNIVERSITY OF TENNESSEE	93.865	R01HD083431	-	116,990
UNIVERSITY OF TEXAS AT SAN ANTONIO	93.855	PR: 1R21A1114762-01 / SB: 10000753	-	47,191
UNIVERSITY OF TORONTO	93.242	PR: R01 MH099167-01	-	40,322
UNIVERSITY OF UTAH	93.837	PR: U54 HL12311 / SB:10023730-01	45,639	502,517
UNIVERSITY OF VERMONT	93.103	30689SUB52094	-	3,732
UNIVERSITY OF VERMONT	93.393	7 P01 CA082834-05	-	131,073
UNIVERSITY OF WASHINGTON	93.855	PR: 5 R01 A112640-03 / SB: UWSC8525	-	59,644
UNIVERSITY OF WISCONSIN	93.847	U54DK104310	-	217,000
UNIVERSITY OF WISCONSIN	93.855	PR: R01 A112135 / SUB: 617K536	-	31,335
UNIVERSITY OF WISCONSIN	93.865	153405508	-	(14)
VETERANS MEDICAL RESEARCH FOUNDATION	93.855	1R01A1129706-01A1	-	37,120
VIRGINIA POLYTECHNIC INST AND STATE UNIV	93.279	5R01 DA036017-05	-	577
WAKE FOREST UNIVERSITY	93.393	PR: R01 CA199137 / SB: WFUHS114040	-	109,086
WASHINGTON STATE UNIVERSITY	93.846	PR: R01 AR062279-01A1	-	17,328
WASHINGTON UNIVERSITY	93.855	PR: 2 R01A1081803-06A1	-	83,269
WASHINGTON UNIVERSITY	93.855	PR: R01 A1072195 / SB: WU-14-364-MOD-2	-	117,319
WASHINGTON UNIVERSITY	93.855	PR: R01A1125045-01 / SB: WU-16-307	-	310,609
WASHINGTON UNIVERSITY	93.859	WU-HT-12-16	-	(211)
WEILL CORNELL MEDICAL COLLEGE	93.103	1 U01 FD005478-02	-	46,866
WEILL CORNELL MEDICAL COLLEGE	93.866	5K24AG022399-10	-	14,024
WESTAT, INC.	93.U47	6182-506	-	(420)
WISTAR INSTITUTE	93.855	5 U19 A1109646-03	-	616,481
WOMEN'S & INFANTS HOSPITAL OF R.I.	93.865	R01 HD074751	-	25,688
WOODS HOLE OCEANOGRAPHIC INSTITUTION	93.113	5P01ES021923-02	-	1,928
WORCESTER POLYTECHNIC INSTITUTE	93.226	PR: 1 R21 HS024003-01 / SB: 15-21084-00	-	40,132

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
Year Ended June 30, 2017

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Health And Human Services, continued				
WORCESTER POLYTECHNIC INSTITUTE	93.394	PR: I-R01-CA166379-01A1 / SB:14-210730-02	\$ -	\$ 109,953
WRIGHT STATE UNIVERSITY	93.279	5R01DA039454-03	-	13,099
YALE UNIVERSITY	93.266	4U18HS016978-09	26,667	68,484
YALE UNIVERSITY	93.266	5U18HS016978-10	20,298	234,388
YALE UNIVERSITY	93.837	5 R01 HL115295-04	-	53,023
YALE UNIVERSITY	93.866	C15A12281(A10334)	-	9,634
Department Of Health And Human Services Total			<u>30,574,015</u>	<u>238,491,915</u>
Corporation For National And Community Service				
CORP FOR NATIONAL AND COMMUNITY SERVICE	94.007		\$ -	\$ (18,800)
Corporation For National And Community Service Total			<u>-</u>	<u>(18,800)</u>
Social Security Administration				
MATHEMATICA POLICY RESEARCH	96.007	PR: DRC12000001-01-00 / SB 40112S03049	\$ -	\$ 5,192
U.S. SOCIAL SECURITY ADMINISTRATION	96.008		-	264,694
Social Security Administration Total			<u>-</u>	<u>269,886</u>
Department Of Homeland Security				
MA EMERGENCY MANAGEMENT AGENCY	97.039	FEMA-DR-4110-MA	\$ -	\$ 212,475
MA EMERGENCY MANAGEMENT AGENCY	97.039	HMGP 1994-10	64,936	72,003
MA EMERGENCY MANAGEMENT AGENCY	97.047	ISA-CDAPDMC1104UMS12A	-	3,287
U.S. DEPARTMENT OF HOMELAND SECURITY	97.061		-	(1,062)
UNIVERSITY OF SOUTHERN CALIFORNIA	97.061	2010-ST-061-RE0001-06	-	987
Department Of Homeland Security Total			<u>64,936</u>	<u>287,690</u>
Agency For International Development				
EDUCATION DEVELOPMENT CENTER, INC. FHI 360	98.U01	GS-10F-0406P	\$ -	\$ 427,181
INTERFAITH MEDIATION CENTRE	98.U02	AID-306-A-1 3-00009-00	242,494	4,704,444
INTERFAITH MEDIATION CENTRE	98.001	AID-620-A-12-00003	-	127,153
NATIONAL ACADEMY OF SCIENCES	98.001	AID-620-A-12-00003	-	(42,082)
TETRA TECH, INC.	98.012	ESP-A-00-05-0000 1-00	-	39,818
TETRA TECH, INC.	98.U03	SAR Task Force-India	-	982
TETRA TECH, INC.	98.U04	1072-1601	-	49,431
Agency For International Development Total			<u>242,494</u>	<u>5,306,927</u>
Research and Development Cluster Total			<u>46,432,383</u>	<u>379,241,484</u>
Student Financial Assistance Cluster				
Department Of Education				
U.S. DEPARTMENT OF EDUCATION	84.007	SEOG	\$ -	\$ 3,120,362
U.S. DEPARTMENT OF EDUCATION	84.033	Federal Work Study	-	5,053,616
U.S. DEPARTMENT OF EDUCATION	84.063	Pell Grants	-	70,995,563
U.S. DEPARTMENT OF EDUCATION	84.379	TEACH Grants	-	228,251
U.S. DEPARTMENT OF EDUCATION	84.268	William D. Ford Federal Direct Loans	-	184,016,295
U.S. DEPARTMENT OF EDUCATION	84.268	William D. Ford Federal Direct Parent Loans for Undergraduates	-	151,619,905
U.S. DEPARTMENT OF EDUCATION	84.038	Perkins Loan	-	-
		Loans Outstanding at Begin of Fiscal Year	-	39,685,134
		Dispersed During the Fiscal Year	-	8,078,989
		Administrative Cost Allowance	-	441,345
Department Of Education Total			<u>-</u>	<u>463,239,460</u>

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
Year Ended June 30, 2017

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Health And Human Services				
Department Of Health And Human Services	93.264	Nurse Faculty Loan Program		
		Loans Outstanding at Begin of Fiscal Year	\$ -	\$ 3,535,847
		Dispersed During the Fiscal Year	-	840,895
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.342	Health Professions Student Loans		
		Primary Care Loans Outstanding at Begin of Fiscal Year	-	1,012,663
		Primary Care Loans Dispersed During the Fiscal Year	-	172,500
		Loans for Disadvantaged Students Outstanding at Begin of FY	-	164,012
		Loans for Disadvantaged Students Dispersed During FY	-	150,000
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.364	Nursing Student Loan Program		
		Nursing Studen Loans Outstanding at Begin of Fiscal Year	-	28,380
		Nursing Studen Loans Dispersed During the Fiscal Year	-	10,600
Department Of Health And Human Services Total			<u>-</u>	<u>5,914,897</u>
Student Financial Assistance Cluster Total			<u>-</u>	<u>469,154,357</u>
Other Clustered Federal Assistance				
Department Of Agriculture				
SNAP Cluster				
MA DEPT OF TRANSITIONAL ASSISTANCE	10.551	CTISAWEL44003064UMS13A	\$ 21,536	\$ 3,540,532
Department Of Agriculture Total			<u>21,536</u>	<u>3,540,532</u>
Department Of Commerce				
Economic Development Cluster				
ECONOMIC DEVELOPMENT ADMINISTRATION	11.307		\$ -	\$ 124,390
Department Of Commerce Total			<u>-</u>	<u>124,390</u>
Department Of Housing And Urban Development				
CDBG - Entitlement Grant Cluster				
CITY OF SPRINGFIELD	14.218	20170069	\$ -	\$ 8,384
Department Of Housing And Urban Development Total			<u>-</u>	<u>8,384</u>
Department Of Labor				
Employment Service Cluster				
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.207	ES-27496-15-55-A-25	\$ -	\$ 71,022
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.207	ES-29418-16-55-A-25	-	247,372
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.801	DV-26628-15-55-5-25	-	17,812
MA EXEC OFFICE OF LABOR & WORKFORCE DEV	17.207	3250 DEIIC100	-	(43,645)
MA EXEC OFFICE OF LABOR & WORKFORCE DEV	17.207	325015DEWWL00000000000000	-	74,832
MA EXEC OFFICE OF LABOR & WORKFORCE DEV	17.207	EOLJ250	-	98,220
Employment Service Cluster Total			<u>-</u>	<u>465,613</u>
WIA/WIOA Cluster				
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.258	AA-26785-15-55-A-25	\$ -	\$ 94,135
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.258	AA-28322-16-55-A-25	-	345,942
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.278	AA-26785-15-55-A-25	-	86,283
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.278	AA-28322-16-55-A-25	-	375,159
GREATER NB WORKFORCE INVESTMENT AREA	17.258	DOL 17CCNBEDWIOA	-	1,235
GREATER NB WORKFORCE INVESTMENT AREA	17.278	17 NBEDWIA	-	57,293
GREATER NB WORKFORCE INVESTMENT AREA	17.278	DOL 17CCNBEDWIOA	-	22,696
MA EXEC OFFICE OF LABOR & WORKFORCE DEV	17.278	CT EOL 3250 17WWLDISABILITY0000	-	21,397
WIA/WIOA Cluster Total			<u>-</u>	<u>1,004,140</u>
Department Of Labor Total			<u>-</u>	<u>1,469,753</u>

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
Year Ended June 30, 2017

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Transportation				
Highway Planning and Construction Cluster				
MA DEPARTMENT OF TRANSPORTATION	20.205	72580	\$ -	\$ 193,680
MA DEPARTMENT OF TRANSPORTATION	20.205	77077	-	101,743
MA DEPARTMENT OF TRANSPORTATION	20.205	83190	-	11,000
MA DEPARTMENT OF TRANSPORTATION	20.205	HIS-002S(591)X	-	3,641
MA DEPARTMENT OF TRANSPORTATION	20.205	INTF00X002012A0073160	-	129,858
MA DEPARTMENT OF TRANSPORTATION	20.205	INTF00X002014A0082301	-	(39,496)
MA DEPARTMENT OF TRANSPORTATION	20.205	INTF00X20150086036 or 85828	-	(79,665)
MA DEPARTMENT OF TRANSPORTATION	20.205	ISA INTF00X002012A00	-	9,118
MA DEPARTMENT OF TRANSPORTATION	20.205	ISA INTF00X02015A83600	-	77,480
Highway Planning and Construction Cluster Total			<u>-</u>	<u>407,359</u>
Highway Safety Cluster				
MA EXEC OFC OF PUBLIC SAFETY & SECURITY	20.616	ISACT2016UMASSCRDATA	\$ -	\$ 31,168
MA EXEC OFC OF PUBLIC SAFETY & SECURITY	20.616	ISACTEPSUMSCRASHFY15	-	59,346
Highway Safety Cluster Total			<u>-</u>	<u>90,514</u>
Transit Services Programs Cluster				
MA DEPARTMENT OF TRANSPORTATION	20.513	INTF00X02016P0092758	\$ -	\$ 96,466
MA DEPARTMENT OF TRANSPORTATION	20.521	MA-57-X031	-	(148)
Transit Services Programs Cluster Total			<u>-</u>	<u>96,318</u>
Department Of Transportation Total			<u>-</u>	<u>594,191</u>
Department Of Education				
Special Education Cluster (IDEA)				
MA DEPT OF ELEMENTARY & SECONDARY ED	84.027	17CT6500UMASSAIRCTR	\$ -	\$ 51,171
MA DEPT OF ELEMENTARY & SECONDARY ED	84.027	DOE 14CT8300UMASSAIRCTR	-	(545)
MA DEPT OF ELEMENTARY & SECONDARY ED	84.027	FH027130143	-	(586)
Special Education Cluster (IDEA) Total			<u>-</u>	<u>50,040</u>
TRIO Cluster				
U.S. DEPARTMENT OF EDUCATION	84.042		\$ -	\$ 840,775
U.S. DEPARTMENT OF EDUCATION	84.044		-	416,964
U.S. DEPARTMENT OF EDUCATION	84.047		105,928	1,919,985
U.S. DEPARTMENT OF EDUCATION	84.217		-	230,127
TRIO Cluster Total			<u>105,928</u>	<u>3,407,851</u>
Department Of Education Total			<u>105,928</u>	<u>3,457,891</u>
Other Federal Assistance				
Department Of Agriculture				
KANSAS STATE UNIVERSITY	10.500	2013-48696-21184	\$ -	\$ 14,310
KANSAS STATE UNIVERSITY	10.500	S16062	-	9,121
MA DEPT OF ELEMENTARY & SECONDARY ED	10.560	CT-DOE-15CT7500UMASSMAKECOUN	-	135,039
NATL INSTITUTE OF FOOD AND AGRICULTURE	10.500		23,600	2,369,069
U.S. DEPARTMENT OF AGRICULTURE	10.001		-	35,592
U.S. DEPARTMENT OF AGRICULTURE	10.435		-	14,528
U.S. DEPARTMENT OF AGRICULTURE	10.500		47,200	1,528,752
Department Of Agriculture Total			<u>70,800</u>	<u>4,106,411</u>
Department Of Defense				
NATIONAL SECURITY AGENCY	12.900		\$ -	\$ 70,222
Department Of Defense Total			<u>-</u>	<u>70,222</u>

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
Year Ended June 30, 2017

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Justice				
ADMINISTRATIVE OFFICE OF THE TRIAL COURT	16.812	2015-RW-BX-0006	\$ -	\$ 3,770
MA DEPARTMENT OF MENTAL HEALTH	16.812	2015-RW-BX-0006	-	30,858
MA DEPARTMENT OF MENTAL HEALTH	16.812	WI-RAPS-16	-	(309)
MA DEPARTMENT OF PUBLIC HEALTH	16.589	INTF3222M020115023	-	(455)
MA OFFICE FOR VICTIM ASSISTANCE	16.575	MOVA-VOCA/FY2016	-	1,882
MA OFFICE FOR VICTIM ASSISTANCE	16.575	MOVA-VOCA/FY2017	-	192,031
MA OFFICE FOR VICTIM ASSISTANCE	16.575	VOCA2017EVWC00000000	-	63,422
U.S. DEPARTMENT OF JUSTICE	16.525		19,772	73,247
U.S. DEPARTMENT OF JUSTICE	16.726		237,709	441,933
Department Of Justice Total			<u>257,481</u>	<u>806,379</u>
Department Of Labor				
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.225	Contract I0SCC10 16 RESEA	\$ -	\$ 116,895
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.225	UI-27117-15-55-A-25	-	5,839
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.225	UI-29847-17-55-A-25	-	14,998
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.225	UI-30223-17-60-A-25	-	83,181
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.245	PR: TA-28056-16 / SB: Contract #10SCC10	-	75,999
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.277	I0SCC10	-	42,319
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.277	EM-27356-15-60-A-25	-	7,998
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.277	EM-29564-16-60-A-25	-	408,709
BROCKTON AREA WORKFORCE INVESTMT BOARD	17.277	Master Agreement #JD-004	-	14,163
ECONOMIC DEVEL & INDUST CORP	17.268	16-0174-0-1-504	-	28,689
ECONOMIC SYSTEMS, INC.	17.720	1028012	-	896
ECONOMIC SYSTEMS, INC.	17.720	EFSLMP-15_121504	-	(3,656)
MA EXEC OFFICE OF LABOR & WORKFORCE DEV	17.283	CT EOL 3250 17ICIDEIVII000000000	-	16,032
MA EXEC OFFICE OF LABOR & WORKFORCE DEV	17.283	CT EOL 325017WWLDEIVII000000000	-	69,364
MASSASOIT COMMUNITY COLLEGE	17.282	Navigator - TAACCCT IV	-	1,337
Department Of Labor Total			<u>-</u>	<u>882,763</u>
Department Of State				
ASSOC OF UNIV CENTERS ON DISABILITIES	19.415	S-ECAGD-16-CA-1111	\$ -	\$ 54,638
FULBRIGHT COMMISSION ARGENTINA	19.402	19-0201-0-1-154 Fulbright-Hays Act of 1961	-	38,993
FULBRIGHT COMMISSION ARGENTINA	19.U03	19-0201-0-1-154 Fulbright-Hays Act of 1961	-	64,044
FULBRIGHT COMMISSION ARGENTINA	19.U04	ARG 2015	-	(5,450)
INSTITUTE OF INTERNATIONAL EDUCATION	19.021	SIZ-100-15-GR019	-	56,772
MERIDIAN INTERNATIONAL CENTER	19.021	PR: SIZ-100-13-GR039 / SB: 021-0012-0345	-	(1,126)
MERIDIAN INTERNATIONAL CENTER	19.021	PR: SIZ-100-15-CA023 / SB: IYELP2016	-	139,233
U.S. DEPARTMENT OF STATE	19.009		-	606,909
U.S. DEPARTMENT OF STATE	19.040		-	70,696
U.S. DEPARTMENT OF STATE	19.401		-	264,592
U.S. DEPARTMENT OF STATE	19.501		-	697,764
WORLD LEARNING, INC.	19.021	S02 SIZ-100-16-CA-008	-	3,361
Department Of State Total			<u>-</u>	<u>1,990,426</u>
Department Of Transportation				
COMMONWEALTH CORPORATION	20.U07	4200 Mod 3	\$ -	\$ 11,164
Department Of Transportation Total			<u>-</u>	<u>11,164</u>
National Endowment For The Arts				
NEW ENGLAND FOUNDATION FOR THE ARTS	45.025	15-29720	\$ -	\$ (853)
National Endowment For The Arts Total			<u>-</u>	<u>(853)</u>

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
Year Ended June 30, 2017

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
National Endowment For The Humanities				
MASS HUMANITIES	45.164	039-15	\$ -	\$ 4,676
NATIONAL ENDOWMENT FOR THE HUMANITIES	45.163		16,131	101,044
National Endowment For The Humanities Total			<u>16,131</u>	<u>105,720</u>
Small Business Administration				
SMALL BUSINESS ADMINISTRATION	59.037		\$ 239,223	\$ 840,613
Small Business Administration Total			<u>239,223</u>	<u>840,613</u>
Department Of Veterans Affairs				
VETERAN AFFAIRS BOSTON HEALTHCARE SYS	64.U05	Ctrct # GA-10F-0211M/Obligation#523D43002(43033)	\$ -	\$ 2,169
Department Of Veterans Affairs Total			<u>-</u>	<u>2,169</u>
Department Of Education				
BOSTON PLAN FOR EXCELLENCE	84.336	U336S14088	\$ -	\$ 300,946
BOSTON PLAN FOR EXCELLENCE	84.336	U405A100117	-	886
MA DEPT OF ELEMENTARY & SECONDARY ED	84.002	359-017-7-1255-R	-	8,864
MA DEPT OF ELEMENTARY & SECONDARY ED	84.002	CTDOE-1678UMASSAMHERSTMAPT	-	417,183
MA DEPT OF ELEMENTARY & SECONDARY ED	84.366	CTDOE 1247UMASSDONAHUE0293	-	144,989
MAINE DEPARTMENT OF LABOR	84.421	PO# CT12A 20170221000000002436	-	73,409
NATIONAL WRITING PROJECT	84.367	#2A/92-MA01-SEED2012 NWP 2014-2016	-	5,435
NATIONAL WRITING PROJECT	84.367	03-MA04-SEED 2012	-	4,023
NATIONAL WRITING PROJECT	84.367	U367D150004	-	14,295
SALUS UNIVERSITY	84.325	H325HI40002	-	47,045
SALUS UNIVERSITY	84.325	H325HI40002-14A	-	1,035
SPECIAL OLYMPICS, INC.	84.128	Project Unify	-	452,618
U.S. DEPARTMENT OF EDUCATION	84.031		-	270,897
U.S. DEPARTMENT OF EDUCATION	84.129		-	266,874
U.S. DEPARTMENT OF EDUCATION	84.133		-	(18,998)
U.S. DEPARTMENT OF EDUCATION	84.200		-	76,987
U.S. DEPARTMENT OF EDUCATION	84.264		1,330,697	3,036,358
U.S. DEPARTMENT OF EDUCATION	84.299		-	275,797
U.S. DEPARTMENT OF EDUCATION	84.324		87,333	440,762
U.S. DEPARTMENT OF EDUCATION	84.325		-	597,364
U.S. DEPARTMENT OF EDUCATION	84.327		44,820	467,339
U.S. DEPARTMENT OF EDUCATION	84.365		-	347,496
U.S. DEPARTMENT OF EDUCATION	84.382		-	165,896
U.S. DEPARTMENT OF EDUCATION	84.407		-	(45,992)
UNIVERSITY OF MINNESOTA	84.133	H133B130006	-	(32,777)
UNIVERSITY OF WASHINGTON	84.326	H264A080003	-	298
Department Of Education Total			<u>1,462,850</u>	<u>7,319,029</u>
Department Of Health And Human Services				
ADMINISTRATIVE OFFICE OF THE TRIAL COURT	93.243	I H79 SM061663-01	\$ -	\$ 70,034
ADMINISTRATIVE OFFICE OF THE TRIAL COURT	93.243	I-T1026677-01	-	21,483
CHILDREN'S HOSPITAL	93.110	2T73MC00020-19-00	-	(10,937)
CHILDREN'S HOSPITAL	93.110	6 T73MC00020-23-00	-	(205)
CHILDREN'S HOSPITAL	93.632	90DD0808-01-00	-	7,012
FLORIDA DEVELOPMENT DISABILITIES COUNCIL	93.630	983EM16E	-	91,789
HEALTH RESOURCES SERVICE ADMINISTRATION	93.178		23,802	279,561

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Schedule of Expenditures of Federal Awards
Year Ended June 30, 2017

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA #	Pass-Through Entity Identifying Number	Passed Through to Subrecipients	Total Federal Expenditures
Department Of Health And Human Services				
MA DEPARTMENT OF MENTAL HEALTH	93.104	821014080220000	\$ 95,470	\$ 238,774
MA DEPARTMENT OF MENTAL HEALTH	93.243	I H79 SM061663-01	-	72,115
MA DEPARTMENT OF MENTAL HEALTH	93.243	PR: I H79 SM061663-01 / SB: SCDMH822015081490000	-	(931)
MA DEPARTMENT OF MENTAL HEALTH	93.243	SCDMH821014081480000	-	18
MA DEPARTMENT OF MENTAL HEALTH	93.829	I6UMMS CBHCPAYMENTS	-	16,691
MA DEPARTMENT OF PUBLIC HEALTH	93.243	INTF2330MM3W16007103	-	382,112
MA DEPARTMENT OF PUBLIC HEALTH	93.243	INTF233MM3W16007103 34512-9086	-	4,239
MA DEPARTMENT OF PUBLIC HEALTH	93.283	INTF4126H23SPRF46004	-	8,735
MA DEPARTMENT OF PUBLIC HEALTH	93.735	INTF2915HH2500224009	-	22,663
MA DEPARTMENT OF PUBLIC HEALTH	93.757	4120HH250024053	-	31,947
MA DEPARTMENT OF PUBLIC HEALTH	93.918	INTF4943MM3200120038	-	638,794
MA DEPARTMENT OF PUBLIC HEALTH	93.994	INTF3054M03300819017	-	438
MA DEPARTMENT OF PUBLIC HEALTH	93.U48	INTF5291HH4300522026	-	8,871
MA DEPT OF DEVELOPMENTAL SERVICES	93.631	17UMSICGRANTEMPLY1	-	35,607
MA DEPT OF PUBLIC HEALTH, BSAS	93.243	INTF2400H78500224216	-	(780)
MA DEPT OF PUBLIC HEALTH, BSAS	93.243	PR: I H79 TI025347 / SB: INTF2400H78500224220	-	66,055
MA DEPT OF PUBLIC HEALTH, BSAS	93.243	PR: I H79 TI025347 / SB: INTF2400H78500224220	-	10,898
MA DEVELOPMENTAL DISABILITIES COUNCIL	93.630	CTADD010017GCS62BCSNF0	-	8,500
MA EXECUTIVE OFFICE OF HLTH & HUMAN SVC	93.609	I5UMMSMOANALYTICSSW	-	55
MASSACHUSETTS DEPARTMENT OF REVENUE	93.597	CTDOR2017JMBHH4	-	101,670
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.048		-	248,891
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.297		145,062	481,535
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.433		-	237,806
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.464		89,539	195,659
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.600		1,564,068	6,424,650
U.S. DEPT OF HEALTH AND HUMAN SERVICES	93.U49	HHSP233201500006C	-	2,838,652
WASHINGTON STATE DEPT OF SOC & HLTH SVCS	93.243	1465-24434	-	(2,660)
WASHINGTON STATE DEPT OF SOC & HLTH SVCS	93.243	1565-30187	-	21,811
WASHINGTON STATE DEPT OF SOC & HLTH SVCS	93.243	5H79TI025342-02	-	12,181
WASHINGTON STATE DEPT OF SOC & HLTH SVCS	93.243	SM061705	-	17,143
Department Of Health And Human Services Total			<u>1,917,941</u>	<u>12,580,876</u>
Department Of Homeland Security				
MA EXEC OFC OF PUBLIC SAFETY & SECURITY	97.067	PR: CTUASH4EXERCISUM15A / SB: UASI EPS	\$ -	\$ 1,927
Department Of Homeland Security Total			<u>-</u>	<u>1,927</u>
Agency For International Development				
U.S. AGENCY INTERNATIONAL DEVELOPMENT	98.001		\$ -	\$ 67,346
Agency For International Development Total			<u>-</u>	<u>67,346</u>
Total Expenditures of Federal Awards			<u>\$ 50,524,273</u>	<u>\$ 886,375,174</u>

See accompanying notes to Schedule of Expenditures of Federal Awards

UNIVERSITY OF MASSACHUSETTS
Notes to the Schedule of Expenditures of Federal Awards
For the year ended June 30, 2017.

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, 2017.

The Schedule is prepared on the accrual basis of accounting. The information in this schedule is presented in accordance with the requirements of *Title 2 U.S. Code of Federal Regulations (CFR) Part 200 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance)*. 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 for determining Federal awards expended*, to include the 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, 2017

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 University does not use a de minimis rate as defined by Uniform Guidance Part 200.414, Indirect (F&A) 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, 2017:

	<u>CFDA Number</u>	<u>Amount Disbursed</u>	
William D. Ford Federal Direct Loan Programs			
Ford Loans	84.268	\$ 184,016,295	
Parent Loans for Undergraduate Students	84.268	<u>151,619,905</u>	
Total William D. Ford Federal Direct Loan Program		<u>335,636,200</u>	
	<u>CFDA Number</u>	<u>Amount Disbursed</u>	<u>Amount Outstanding</u>
Other Loan Programs			
Perkins Loan	84.038	8,078,989	\$ 40,905,367
Primary Care Loans	93.342	172,500	1,073,397
Loans for Disadvantaged Students	93.342	150,000	279,820
Nurse Faculty Loan Program	93.264	840,895	4,115,891
Nurse Faculty Loan Program - ARRA	93.264	-	64,863
Nursing Student Loans	93.364	<u>10,600</u>	<u>23,054</u>
Total Other Loan Programs		<u>9,252,984</u>	<u>\$ 46,462,391</u>
Total Federal Loan Programs		<u>\$ 344,889,184</u>	

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



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

Board of Trustees of the
University of Massachusetts

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the business-type activities and the aggregate discretely presented component units of the University of Massachusetts (the "University") as of and for the year ended June 30, 2017 and 2016, 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 14, 2017.

The financial statements of Worcester City Campus Corporation, the University of Massachusetts Foundation, and the University of Massachusetts Dartmouth Foundation, Inc., were not audited in accordance with *Government Auditing Standards* and, accordingly, this report does not include reporting on internal 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

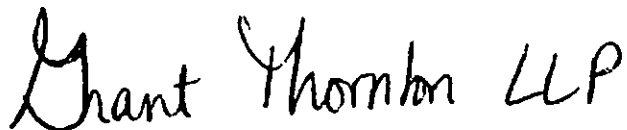
As part of obtaining reasonable assurance about whether the University's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material 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 instances of noncompliance or other matters, described in the accompanying schedule of findings and questioned costs as item 2017-002, that is required to be reported under *Government Auditing Standards*.

University's response to findings

The University's response to our findings, which is described in the accompanying schedule of findings and questioned costs, was not subjected to the auditing procedures applied in the audit of the financial statements, and accordingly, we express no opinion on the University's response.

Intended purpose

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

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

Boston, Massachusetts
December 14, 2017



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**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, 2017. The University's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

Our audit of, and opinion on, the University's compliance for each major federal program does not include the compliance requirements governing student loan repayments under the Student Financial Assistance cluster because the University engaged Heartland ECSI to perform these compliance activities. This third-party servicer has obtained a compliance examination from another practitioner for the year ended June 30, 2017 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, 2017.

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 and therefore, material weaknesses or significant deficiencies may exist that have not been identified. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, we identified a deficiency in internal control over compliance, described in the accompanying schedule of findings and questioned costs as item 2017-002, which we consider to be a significant deficiency in the University's internal control over compliance.

The University's response to the findings on internal control over compliance identified in our audit, which is described in the accompanying schedule of findings and questioned costs, was not subjected to the auditing procedures applied in the audit of compliance, and accordingly, we express no opinion on the University's response.

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 14, 2017

PART III

SCHEDULE OF FINDINGS AND QUESTIONED COSTS

UNIVERSITY OF MASSACHUSETTS
Schedule of Findings and Questioned Costs
For the year ended June 30, 2017

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)? X yes __ 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)? X yes __ no

Identification of major federal programs:

Program or Cluster Title	Federal CFDA Number
Research and Development Cluster	Multiple
Student Financial Assistance Cluster	Multiple
TRIO Cluster	Multiple
Head Start	93.600 & 93.U49
Rehabilitation Services	84.264

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, 2017

SECTION II - FINANCIAL STATEMENT FINDINGS

None noted.

SECTION III - FEDERAL AWARD FINDINGS AND QUESTIONED COSTS

Reference 2017-001: Timeliness of recognition of certain activities

Boston Campus

Cluster: Research and Development

Grantor: National Institutes of Health

Award Name: A Family-Based Weight Loss Intervention for Youth with Intellectual Disability

Award year: 2/6/13 – 4/30/17

Award Number: R01HD072573

CFDA Number: 93.865

Criteria:

CFR 200.302 Financial management requires that the entity must account for grant activity in such a way that allows for accurate, current, and complete disclosure of the financial results of each Federal award or program in accordance with requirements for monitoring and reporting program performance. In addition, *CFR 200.303 Internal controls* requires an entity to establish and maintain effective control over the Federal award the provides reasonable assurance that the non-Federal entity is managing the Federal award in compliance with Federal statutes, regulations, and the terms and conditions of the Federal award. These controls should allow the entity to evaluate and monitor the Federal entity's compliance, and take prompt action when instances of noncompliance are identified.

Condition and Context:

When performing testing of the sub-recipient activity with the Research and Development cluster, one transaction in a sample of 40 selected for testing represented an expense that was charged to a federal award in fiscal year 2017 for services performed in November 2014. The grant started on February 6, 2013. The expense was incurred within the period of performance for the grant, but was not accurately and currently disclosed as part of federal program in a timely manner.

Questioned Costs:

None

Cause:

Certain invoices for subrecipient expenditures are remitted directly by the subrecipient institution to the Principal Investigator's ("PI's") department for approval before being routed to Accounts Payable for payment

UNIVERSITY OF MASSACHUSETTS
Schedule of Findings and Questioned Costs
For the year ended June 30, 2017

Effect:

The delay in entering the expense does not allow controls around allowability and approval to occur in a timely manner, and does not allow the entity to capture accurate, current, and complete reporting of financial results.

Recurring Finding:

No.

Recommendation:

We recommend that controls around monitoring subrecipient invoices be enhanced to ensure that all subrecipient expenditures are captured timely in the University's system.

Views of Responsible Officials and Corrective Action Plan:

Management's views and corrective action plan is included at the end of this report after the summary schedule of prior year audit findings.

UNIVERSITY OF MASSACHUSETTS
Schedule of Findings and Questioned Costs
For the year ended June 30, 2017

Reference 2017-002: Timeliness of earmarking controls

Boston Campus

Cluster: TRIO Cluster

Grantor: Department of Education

Award Name: Talent Search/ Upward Bound Veterans

Award year: 09/01/2016-08/31/2021/ 09/1/2012-08/31/2017

Award Numbers: P044A160542 & P047V120035

CFDA Numbers: 84.044/ 84.047

Criteria:

CFR 200.328 Monitoring and reporting program performance requires that the entity must monitor its activities under Federal awards to assure compliance with applicable Federal requirements and performance expectations are being achieved. Monitoring by the non-Federal entity must cover each program, function or activity. In addition, *CFR 200.303 Internal controls* requires an entity to establish and maintain effective control over the Federal award that provides reasonable assurance that the non-Federal entity is managing the Federal award in compliance with Federal statutes, regulations, and the terms and conditions of the Federal award. These controls should allow the entity to evaluate and monitor the Federal entity's compliance, and take prompt action when instances of noncompliance are identified.

Condition and Context:

In testing a population of five awards for earmarking requirements, all TRIO cluster programs were determined to have met the compliance requirement for the cluster by the end of the period (in this case, June 30, 2017). However, for two programs, Talent Search ("TS") and Veterans Upward Bound ("VUB"), it was determined that timely controls were not in place to provide management reasonable assurance that the Federal awards are being disbursed in compliance with Federal requirements. For both TS and VUB there is a requirement that two-thirds (66%) of those served be low-income individuals who are potential first generation college students. Data gathered to be used in management's review and evaluation of the proportion of applicants that met this criteria throughout the period did not happen in a manner that allowed management to ensure compliance as the program occurred, but rather was gathered and finalized in such a way to be able to detect compliance at the end of the period.

Questioned Costs:

None

Cause:

For TS, in the past the University would use information gathered through the Boston Public Schools ("BPS") Free Lunch Program to document which participants were low-income individuals. This data allowed management to verify whether a student fell into the population that met the earmarking requirement in a timely fashion, as the data was available at the outset of the program. During the past year, the BPS instituted a new process that shifted responsibility for collecting the data from the schools to their central office and the information was not available to the program and therefore the control that management previously applied as a preventative control at the beginning of the period was not able to operate in a timely manner, which caused a delay in the operation of the control around this compliance requirement.

UNIVERSITY OF MASSACHUSETTS
Schedule of Findings and Questioned Costs
For the year ended June 30, 2017

For VUB, Project Managers do require completed applications prior to enrollment and service provision, but data entry errors in the Annual Performance Report misclassified some students. When the errors were corrected, earmarking targets were achieved.

Effect:

Without completing the verification process at the outset and throughout the program period, the entity is unable to ensure that it is meeting the earmarking requirement for the TS and VUB programs.

Recurring Finding:

No.

Recommendation:

The University should establish a control using the data available to ensure that management can monitor the University's compliance with the earmarking compliance requirements, and that allows management to take prompt action when instances of noncompliance are identified.

Views of Responsible Officials and Corrective Action Plan:

Management's views and corrective action plan is included at the end of this report after the summary schedule of prior year audit findings.

UNIVERSITY OF MASSACHUSETTS
Schedule of Findings and Questioned Costs
For the year ended June 30, 2017

Reference 2017-003: Late reporting

Amherst Campus

Cluster: Research and Development

Grantor: National Park Service, Department of Energy, & Natural Resources Conservation Services

Award Name: Creating a Collections Mobile app for the Springfield Armory National Historic Site

Award year: 9/11/2015 – 6/30/2017, 5/17/2011 – 8/14/2016, & 8/17/2011 – 8/16/2016

Award Numbers: P15AC01114, DE-SC0006641, & 68-1320-11-05

CFDA Number: 15.945, 81.049, & 10.025

Criteria:

CFR 200.327 Financial Reporting

Unless otherwise approved by OMB, the Federal awarding agency may solicit only the standard, OMB-approved government wide data elements for collection of financial information (at time of publication the Federal Financial Report or such future collections as may be approved by OMB and listed on the OMB Web site). This information must be collected with the frequency required by the terms and conditions of the Federal award, but no less frequently than annually nor more frequently than quarterly except in unusual circumstances, for example where more frequent reporting is necessary for the effective monitoring of the Federal award or could significantly affect program outcomes, and preferably in coordination with performance reporting.

Condition and Context:

The University has established policies and procedures to accurately and timely report financial information under federal regulation. In a sample of 25, 3 of the selected reports were not submitted within the required time period as defined in the grant agreements. The quarterly SF425 Report was submitted 3 days late, and the two Final SF425 Reports were submitted 16 days late and 1 day late.

Cause:

The reports were submitted late due to inconsistencies in the way different Research Accountants were tracking the report due dates. As a result of the inconsistencies, when a Research Accountant was on leave or left the University, the Research Accountant covering for them missed the due date as they were used to a different tracking method.

Effect:

The inconsistencies in tracking the report due dates results in the opportunity for due dates to be missed, leading to the late submission of reports.

Repeat Finding:

No

Recommendation:

The University should implement a consistent method for tracking the due dates, and should implement a review process to ensure all reports submitted are reviewed for timely submission.

UNIVERSITY OF MASSACHUSETTS
Schedule of Findings and Questioned Costs
For the year ended June 30, 2017

Views of Responsible Officials and Corrective Action Plan:

Management's views and corrective action plan is included at the end of this report after the summary schedule of prior year audit findings.

SECTION IV - SUMMARY SCHEDULE OF PRIOR YEAR AUDIT FINDINGS

None noted

MANAGEMENT'S CORRECTIVE ACTION PLAN



CORRECTIVE ACTION PLAN

Reference 2017-001: Timeliness of Recognition of Certain Activities

Corrective Action Plan

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

Contact Person – Boston Campus

Matthew Meyer, Associate Vice Provost for Research and Director of ORSP (617) 287-5372

Reference 2017-002: Timeliness of Earmarking Controls

Corrective Action Plan

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

For VUB, additional oversight to ensure accurate information is entered into the APR is now being performed by the PI. The VUB award terminated on 9/30/17 and therefore no future earmarking reports will be necessary after the next filing.

Contact Person – Boston Campus

Matthew Meyer, Associate Vice Provost for Research and Director of ORSP (617) 287-5372

Reference 2017-003: Reporting “Late Reporting”

Corrective Action Plan

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

Contact Person – Amherst Campus

Norman Gousy, Interim Controller (413) 545-3364

University of Massachusetts Office of the President

Board of Trustees

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Maria D. Furman

Stephen R. Karam

Brian J. Madigan

Katharine E. Mallett

Jiya Nair

Michael V. O'Brien

Noreen C. Okwara, MD

Kerri E. Osterhaus-Houle, MD

Imari K. Paris Jeffries, BA, MEd, MA

James A. Peyser

Silavong Phimmasone

Elizabeth D. Scheibel, JD

Sara Tariq

Henry M. Thomas III, JD

Steven A. Tolman

Victor Woolridge

Charles F. Wu, MBA

Zunilka M. Barrett

Jean C. Sullivan, J.D.

Director, Center for Health Law and Economics
Associate Vice Chancellor for Commonwealth Medicine
Instructor, Department of Family Medicine and Community Health

Professional Experience

<i>University of Massachusetts Medical School</i>	Worcester, MA
<i>Director, Center for Health Law and Economics</i>	2007–present
<i>Associate Vice Chancellor for Commonwealth Medicine</i>	2005–present
<i>Instructor, Department of Family Medicine and Community Health</i>	2003–present
<i>Special Assistant to the Deputy Chancellor</i>	2002–2005

Founder and Director of the Center for Health Law and Economics and member of the Executive Leadership Team for Commonwealth Medicine (CWM), the enterprise within the Chancellor's office primarily responsible for realizing the Medical School's public service mission. CWM serves state health and human services agencies in health policy research, development, analysis, design, and finance.

- Responsible for health law and policy advice, analysis, and consulting services that CWM provides to health, human services, and elder affairs agencies, Governor's office, and Executive Office of Administration and Finance in Massachusetts.
- Oversee CWM Office of Compliance and Review and provide in-house advice to CWM Research Centers, Service Delivery Units, and Center for Health Care Financing.
- Expert in federal- and state-level health care reform initiatives; federal and state Medicaid law and programs, Title XIX Demonstration Project waivers and home- and community-based services waivers; and disability law as it relates to long-term care and supports programs. Expertise in law related to ADA, ERISA, and Title XIX Medicaid special topics, including Intergovernmental Funds Transfer regulations, state and federal financial participation (FFP) rules; and broad knowledge of federal policies and practices related to these areas.
- Over 28 years of legal, policy, and legislative experience relative to Medicaid and S-CHIP, Medicare–Medicaid dual eligibility issues, Social Security Disability benefits, Home- and Community-Based Services Waivers, and ADA laws, health care reform efforts for the uninsured, uncompensated care financing programs and health care access issues.
- Responsible for strengthening CWM's relationship with the Massachusetts Executive Office of Health and Human Services (HHS); providing strategic and subject matter expertise on health policy to the Secretary of HHS, including the design and financial modeling for the Massachusetts Health Care Reform proposal; and leading key components of the re-organization of CWM.

<i>Massachusetts Division of Medical Assistance</i>	Boston
<i>Acting Commissioner</i>	May–Sept. 2000
<i>Deputy Commissioner</i>	2000–2002
<i>General Counsel</i>	1993–2000

Executive leader for Massachusetts' Medicaid agency responsible for nearly 1 million enrollees, a comprehensive Demonstration Project for expanding coverage and access for low-income residents, an \$8 billion annual budget, over 800 employees, and six offices across the state.

As Deputy Commissioner:

- Directed the operation of six reporting units including: management of federal relations, national and state legislative affairs; agency policy development, analysis, and implementation; all federal demonstration projects; the child health insurance program (S-CHIP); fair hearings, constituent relations; media management; external communications and agency publications.
- Directed the management of complex agency issues and projects, particularly in the areas of provider reimbursement policy and federal revenue issues.

As General Counsel:

- Directed all legal services to the state's Medicaid agency including litigation, contracting, procurements, and state and federal legislation drafting and analysis.
- Directed and provided legal advice and drafting for all policy and program development, internal operations, state finance issues, state and federal oversight and compliance issues, employment and labor issues, federal revenue issues, state and federal legislative and regulatory matters. Managed five units with 30 attorneys and 10 paralegal staff.
- Directed legal team for design and legal defense of federal waiver requests and the financing methodologies for support of safety net providers. Served as Special Assistant Attorney General for supervision of lawsuits brought against the agency.

Massachusetts Department of Public Welfare
Chief Counsel for Medical Services
Deputy General Counsel for Medical Assistance
Associate General Counsel
Assistant General Counsel

Boston
1991-1993
1988-1991
1987-1988
1984-1987

- Directed and managed in-house legal support services needed by the Medical Services Division within the Department of Public Welfare.
- Directed legal support and litigation services for the medical assistance programs administered by the Department. Conceived of and developed a new structure for the state's uncompensated care fund to leverage \$500 million in new federal funds for the state.
- Led the legal support team for implementation of CommonHealth, a new health coverage program for disabled individuals.

Education

Boston University School of Law, Boston
J.D., Legal Intern at B.U. Legal Aid Program: 9/82-4/84

May 1984

Mount Holyoke College, South Hadley, Mass.
B.A., magna cum laude. Phi Beta Kappa, 1976; GPA: 3.875
Major: Experimental Psychology

June 1977

Bar Admissions
Commonwealth of Massachusetts
United States District Court, District of Massachusetts

January 1985
May 1986

Awards

Manuel Carballo Governor's Award for Excellence in Public Service 1988, 1991, 1997, 2004

This award is the top performance recognition award issued by the Commonwealth.

Among all employees of the state, it is presented to only 10 individuals or teams each year.

Each of these four awards was won for *achievements in health reform design and implementation*.

Commonwealth Citation for Outstanding Performance 2000

Federal Financing restructuring in Massachusetts Medicaid to support uninsured access.

Selected Presentations, Reports, and Lectures (complete list available on request)

- Stephanie Anthony, Robert W. Seifert, and Jean C. Sullivan. *The MassHealth Waiver: 2009–2011...and Beyond*. (Boston, MA: Massachusetts Medicaid Policy Institute and Massachusetts Health Policy Forum, February 2009)
- Adams, A.E., Campanelli, S., Lewis, W., Sullivan, J., Clark, R., & Gettens, J. *Analyzing the impact of a proposed change in the New Hampshire disability duration requirement*. (Technical Report. Shrewsbury, MA: University of Massachusetts Medical School, Commonwealth Medicine. 2009)
- Campanelli, S.; Adams, A.E., Edwards, K., Lewis, W., & Sullivan, J. *The appeals process for the Aid to the Permanently and Totally Disabled (APT) program in New Hampshire: Recommendations for Improvement*. (Technical Report. Shrewsbury, MA: University of Massachusetts Medical School, Commonwealth Medicine. 2009)
- Miller, Quigley, Seifert, and Sullivan, "The Outlook for Medicaid in Massachusetts," Massachusetts Medicaid Policy Institute, Report, March 2007
- Presenter, Plenary Session at the Annual Conference of National Association of Human Services Finance Officers, "Universal Health Coverage: National Trends and Massachusetts Reform," August 4, 2008
- Presenter, (via Webinar). "National Health Reform: So Far," National Association of Reimbursement Officers (NARO), Annual conference, February 2011

Michael Grenier, M.P.A.

*Senior Associate, Center for Health Law and Economics
University of Massachusetts Medical School*

Professional Experience

University of Massachusetts Medical School
Center for Health Law and Economics
Senior Associate

February 2012- Present
Charlestown, MA

- Conducted analysis and drafted a report for the New Hampshire Insurance Department on price variations in New Hampshire Hospitals
- Completed calculation of the federal Medicaid upper payment limitation for Massachusetts hospitals for fiscal year 2012
- Developing a methodology and completing calculations to ensure that all facilities receiving Safety Net Care Pool payments are within limitation requirements required under the federal Section 1115 MassHealth waiver

Commonwealth of Massachusetts
Division of Health Care Finance and Policy
Pricing Policy Manager

2001- 2012
Boston, MA

- Manage data analysis and rate development for the MassHealth program and other public payers for a wide range of health care services, including nursing facilities, hospitals, and other community-based providers
- Manage staff of ten, including two associate managers, five health policy analysts, and three auditors
- Determine rates and develop payment policies for the Health Safety Net program for hospital and community health center services
- Supervise the development of data collection policies for total medical expense and relative price data submitted by health insurers
- Provide analytical support for various health policy initiatives, including the Special Commission on the Health Care Payment System (2009) and the Special Commission on Provider Price Reform (2011)
- Lead projects and supervise staff in the analyses of large claims databases to assess, report, and present on health care costs and utilization
- Represent agency at meetings and make presentations to health care industry representatives and provider associations
- Supervise policy analysts in the drafting of regulatory policies and collaborate with legal staff to ensure accuracy
- Direct and manage multiple projects, plan timelines, and delegate tasks
- Coordinate projects with internal agency staff and with staff from other state agencies
- Managed the collection of \$220 million in annual nursing facility provider taxes
- Draft contractor task orders that outline performance objectives and monitor performance of contractors

Senior Health Policy Analyst

1997 - 2001

- Calculated payment rates for the MassHealth program for nursing facility, home health, temporary nursing, and dental service programs
- Completed reviews of proposed legislation, including calculations of fiscal impacts, drafting summaries of costs and benefits, and making recommendations to senior staff
- Drafted amendments to state regulations and presented staff testimony at public hearings
- Analyzed hospital, nursing facility, and home health cost data derived from Massachusetts and Medicare cost reports
- Completed analyses, conducted research, and drafted sections of the Division's report on the Balanced Budget Act of 1997
- Authored article for Division's *Healthpoint* series, titled "Emerging Trends in Long-Term Care"
- Analyzed financial, cost, and other statistical data and presented findings in written and oral presentations

Health Policy Analyst

1995-1997

- Analyzed cost, statistical, and other financial data to support the development of MassHealth rates for acute, chronic, and rehabilitation hospitals
- Researched health policies of other states, including programs for the uninsured and payment policies for acute hospital services
- Reviewed and summarized proposed legislation to assess impact on agency and providers
- Completed research, analyzed data and drafted text for the Report of the *Special Commission on Uncompensated Care*

Lowell General Hospital

Lowell, MA

Accounts Receivable Specialist

1990-1993

- Maintained Medicare interim reimbursement databases
- Reconciled Medicare payments to ensure accurate payment
- Completed third party billing for commercial, Blue Cross and government payers
- Responded to patient inquiries and resolved problem accounts

Education

University of Massachusetts
Master Degree in Public Administration (1995)

Amherst, MA

University of Massachusetts
Bachelor of Arts degree in Political Science (1993)

Lowell, MA

Software Skills

Microsoft® Excel, Word, Access, Powerpoint, Project

SAS

Other

Received Pride in Performance Awards in 1997, 2005, 2007 and 2008

Larry Crehan

Senior Associate, Title XIX

Center for Health Care Financing

University of Massachusetts Medical School

Expertise

- Accounting
- Analysis
- Auditing
- Federal Law & Regulation Interpretation
- Medicare Title XVII
- Claims Processing Part A, Part B and Outpatient
- Administrative Costs
- Beneficiary Services
- HMO's
- Managed Care
- Medical Review Process
- Medicare Coverage
- Medicare Disproportionate Share Hospital Requirements
- Overpayments
- Program Integrity-Fraud & Abuse
- Prospective Payment Reimbursement
- Provider-Based Physicians
- Provider Reimbursement Review Board Issues
- Quality Control
- Reasonable Charges
- Reconsiderations & Appeals—Part A and Part B Appeals
- Reimbursement & Audit
- Survey, Certification and Enforcement
- Teaching Physicians
- Utilization Review
- Other-Ambulatory Surgical Centers, Critical Access Hospitals, Federally Qualified Health Centers, Hospice Care, Rural Health Centers, Rural Referral Centers and Sole Community Providers

- Medicaid
 - Disproportionate Share Hospital Payments
 - Donations

- o Federal Claims & Time Limits
- o Grant Appeals Board
- o HMO's
- o Intergovernmental Transfers
- o Institutional Reimbursement
- o Non-Institutional Reimbursement
- o State Plans
- o Taxes
- o Waives
- o Quality Control
- o Research

Professional Experience

University of Massachusetts Medical School

Center for Health Care Financing

1998-Present

Medicare/Medicaid Reimbursement Consultant providing assistance to the State of Massachusetts and other states in the analysis of potential revenue projects. Monitor and review federal law, regulations and policies.

Department of Health and Human Services

Health Care Financing Administration (HCFA)

1977-1998

After SSA, BHI reorganized into HCFA, I continued as RHIF at BC/BS of MA and at Aetna Insurance. After transferring into the Regional Office, I supervised the Financial Unit (Contractor budgets, cost reports and financial activities), Contract Operations Branch (Quality Control, Medical Review, Professional Standard Review Organizations [PSRO] functions and Medicare coverage and policy issues), and functions as the (1) Institutional Program Validation Accountant (fraud and abuse), (2) Supervisor in the Medicare Cost Reimbursement and Audit Quality Control Unit and (3) Supervisor in the Medicaid Institutional and Non-Institutional Unit. This unit was responsible for all Medicaid reimbursement in the region, Disproportionate Share Hospital policy, Donations, Taxes, Intergovernmental Transfers and negotiations with States in Region I up to the governor level.

Department of Health Education and Welfare, Social Security Administration (SSA)

Bureau of Health Insurance (BHI)

1973-1977

Functioned as the Resident Health Insurance Representative (RHIR) at Blue Cross and Blue Shield of Massachusetts, Inc. Activities covered all aspects of the contractor's operation. I worked with all staff from claims reviewers to the Board of Directors.

Department of Health, Education and Welfare Audit Agency

1971-1973

Supervised and performed Financial & Program Audits of Medicare, Medicaid, Public Health, Vocational Education, Vocational Rehabilitation, State & Local Municipalities and University & Non-Profit organizations and programs

Department of Defense-Defense Contract Audit Agency

1966-1971

- Performed Financial and Program Audits at General Electric concerning the manufacturing of jet engines and spare parts under contracts with the Departments of the Air Force, Army and Navy
- Represented the Department of Defense during contract negotiations

United States Army Audit Agency

1965-1966

Performed Financial, Mission and Program Audits of Department of Army Installations and Components

Education

Boston College
B.S. Accounting



Michael Cheung, MBA

University of Massachusetts Medical School – Center for Health Law and Economics

Associate

Michael Cheung has more than 10 years’ experience in healthcare analytics, utilizing data sources from both the Commonwealth of Massachusetts and non-profit healthcare organizations to support reporting related to healthcare financing and performance tracking. Mr. Cheung provides data support for analytics related to Centers for Medicare & Medicaid Services’ CMS-2552 hospital cost reports and Nursing Minimum Data Set. He has been a lead analyst for several key projects, including dashboard implementation using Partners Healthcare’s patient claims and electronic medical records, data analyses of pharmacy and inpatient discharge data for Opioid utilization studies, and designing Healthcare Provider attribution crosswalks using Massachusetts’ All-Payer Claim Datasets.

Education

Boston University, Boston, MA–2015

Graduate certification in Health Data Informatics

University of Massachusetts, Boston, MA–2010

MBA, Finance and Healthcare Management

Boston University, Boston, MA–2006

BA, Economics

Experience

University of Massachusetts Medical School2018–Present

Associate, Center for Health Law and Economics

- Developing financial models in Excel to assess the impact of healthcare policy changes. Analytics findings serve to aid policy enhancements for adjusting payment rates
- Determining healthcare provider payment and cost amounts using CMS-2552 HCRIS and CHIA data. SAS data used for calculating NH’s Disproportionate Share Payments and MA’s Uncompensated Care Cost Limit.

Partners Healthcare, Somerville, MA2017–2018

Lead Analyst, Financial Analytics Team2017–2018

- Construct and QA medical & pharmacy database tables used for analytics related to Health Insurance contract negotiations and quarterly healthcare cost and utilization reporting
- Design and maintain coding logic for healthcare key performance metrics used for tracking new high-cost Partners patients, with results updated in monthly dashboard
- Implement updates and process flow improvements to medical spending model used for reporting year-over-year cost growth and making predictive analyses

Team Lead, Financial Reporting Team2016–2017

- Maintained production of monthly reports featuring 25+ metrics tied to a financial projection model used for distributing \$100mill incentive based on providers’ patient care performance
- Provide timely medical spending drill-down analyses to senior management used for supporting Population Health-based clinical and business decision-making
- Delivered monthly performance review presentations to both healthcare providers and technical analysts requiring explanations in both clinical and financial significance

Center for Health Information and Analysis (CHIA); Boston, MA

Senior Health Policy Analyst2013–2016

- Developed Provider Index from MA’s All Payer Claims Database (APCD) used as crosswalk for bucketing physician group level medical expenses to support CHIA’s price transparency initiative



- Compiled SAS Macros to output automated data quality reports for the top 5 MA Insurers' APCD claims data. Reports determined positive data quality for calculating over 30+ HEDIS measures
- Calculated AHRQ's Prevention Quality Indicators using CHIA's Hospital Case Mix data

Beth Israel Deaconess Medical Center, Dept of Medicine; Brookline, MA.....2011–2013

Data Analyst

- Created statistical tables and regression models using inpatient hospitalization data to supplement peer-reviewed Opioid Utilization paper; Journal Article published February 2014
- Prepared analytic files using CMS Medicare data for use in cohort study relating to breast cancer survival analysis
- Provided ad-hoc statistical analyses and methodology write-ups for Principal Investigators in their day-to-day research tasks

Div. of Health Care Finance and Policy (Commonwealth of Massachusetts); Boston, MA.....2006–2010

Senior Health Policy Analyst, Health Policy Analyst

- Developed SAS programs to integrate with 3M's *Preventable Rehospitalization* software to calculate statewide readmission rates used to support pay-for-performance initiatives
- Calculated penalty assessments on MA employers who fail to meet the *Fair Share Contribution* standard to project yearly revenues of Commonwealth Care Trust Fund
- Constructed outpatient cost database for MA *Health Care Quality Cost Council* used in website to inform consumers of healthcare options and provide healthcare cost transparency to the public

Publications

J. Herzig, M.D., M.P.H., Michael B. Rothberg, M.D., M.P.H., Michael Cheung, M.B.A., "Opioid Utilization and Opioid-Related Adverse Events in Non-Surgical Patients in U.S. Hospitals." *Journal of Hospital Medicine*. Volume 9, Issue 2, pages 73-81, February 2014.

Skills

SAS Enterprise Guide (Certified Advanced Programmer for SAS 9), Tableau, R Studio, Office 365 (PowerBI, Excel, Access, Word, Visio), SharePoint Online



STATE OF NEW HAMPSHIRE
 DEPARTMENT OF HEALTH AND HUMAN SERVICES
 OFFICE OF MEDICAID BUSINESS AND POLICY

JUL 08 '15 PM 3:13 DAS YV Item #10

G&C APPROVED
 July 22, 2015

Nicholas A. Toumpas
 Commissioner

129 PLEASANT STREET, CONCORD, NH 03301-3857
 603-271-9422 1-800-852-3345 Ext. 9422
 Fax: 603-271-8431 TDD Access: 1-800-735-2964 www.dhhs.nh.gov

Kathleen A. Dunn
 Associate Commissioner
 Medicaid Director

June 23, 2015

Her Excellency, Governor Margaret Wood Hassan
 and the Honorable Council
 State House
 Concord, New Hampshire 03301

Requested Action

Authorize the Department of Health and Human Services, Office of Medicaid Business and Policy to amend an agreement by exercising a renewal option with the University of Massachusetts Medical School, Center for Health Law and Economics, (Vender #177576), 55 Lake Avenue, Worcester, MA 01655 to provide policy and technical consulting services for New Hampshire Disproportionate Share Hospital Program by increasing the price limitation by \$631,433.80 from \$602,883.00 to \$1,234,316.80 and extending the end date of the agreement from October 31, 2015 to October 31, 2018 effective October 31, 2015 or date of Governor and Executive Council approval, whichever is later. Governor and Executive Council approved the original agreement on November 14, 2012 (Item #45). 50% General Funds, 50% Federal Funds.

Funds to support this request are anticipated to be available in the following account in State Fiscal Year 2016, State Fiscal Year 2017 and State Fiscal Year 2018 upon availability and continued appropriation of funds in the future operating budget, with the ability to adjust encumbrances between State Fiscal Years through the Budget Office without Governor and Executive Council approval, if needed and justified.

05-95-95-9560010-6126 HEALTH AND SOCIAL SERVICES, DEPARTMENT OF HEALTH AND HUMAN SVCX, HHS: COMMISSIONER, OFF MEDICAID & BUSINESS POLICY, MEDICAID ADMINISTRATION

Fiscal Year	Class	Title	Activity Code	Current Budget	Increase - Decrease	Modified Budget
2013	102-500731	Contracts for Program Svcs	47000004	\$130,680.00		\$130,680.00
			Total:			\$130,680.00

05-00095-047-470010-7943 HEALTH AND SOCIAL SERVICES, HEALTH AND HUMAN SVCS DEPT OF, HHS: OFC OF MEDICAID & BUS PLCY, OFF. OF MEDICAID & BUS, POLICY, UNCOMPENSATED CARE FUND.

Fiscal Year	Class	Title	Activity Code	Current Budget	Increase - Decrease	Modified Budget
2014	102-500731	Contracts for Program Svcs	47000004	\$200,920.00		\$200,920.00
2015	102-500731	Contracts for Program Svcs	47000004	\$205,943.00		\$205,943.00
2016	102-500731	Contracts for Program Svcs	47000004	\$65,340.00	\$140,603.00	\$205,943.00
2017	102-500731	Contracts for Program Svcs	47000004		\$205,943.00	\$205,943.00
2018	102-500731	Contracts for Program Svcs	47000004		\$212,807.76	\$212,807.76
2019	102-500731	Contracts for Program Svcs	47000004		\$72,080.04	\$72,080.04
			Total:	\$602,883.00	\$631,433.80	\$1,234,316.80

Explanation

The purpose of this amendment is to extend the contract completion date in order to continue to receive expert advice concerning New Hampshire and federal requirements for the Disproportionate Share Hospital Program from the University of Massachusetts Medical. In 2009, the New Hampshire Legislature enacted Chapter 133:212 (HB 2), which required the Department of Health and Human Services to redesign the Disproportionate Share Hospital Program within the parameters of State and federal law. Since that time, New Hampshire's Disproportionate Share Hospital Program has undergone significant scrutiny, analysis, and modification in order to comply with State and federal law.

The personnel of the University of Massachusetts Medical School personnel have the experience and expertise necessary to navigate through the Disproportionate Share Hospital Program's complex legal requirements and policy considerations and to advise the Department of Health and Human Services accordingly. The availability of specialized and expert services will enable the Department to continue the long-term policy and technical work necessary for State and federal legal compliance.

The original contract and Governor and Executive Council letter contain renewal language that allows for one (1) extension for a three (3) year period by amendment. The Department is satisfied with the services provided.

Should the Governor and Executive Council not approve this request, The Department would not have the necessary expertise to comply with State and federal law regulating the Disproportionate Share Hospital program. The Department would have difficulty completing Disproportionate Share Hospital program tasks in a timely and accurate manner; thereby exposing the Department and State to an increased risk of federal funds being withheld, of continued and costly litigation from hospitals, and liability for incorrect or noncompliant Disproportionate Share Hospital program calculations.

Area Served: Statewide

Source of Funds: 50% General funds and 50% Federal funds.

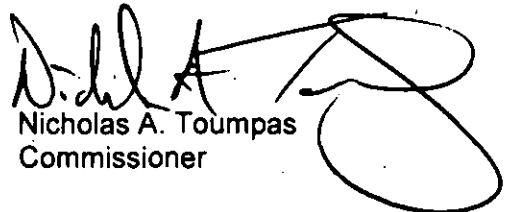
In the event Federal Funds become no longer available, General Funds will not be requested to support this program.

Respectfully submitted,



Kathleen A. Dunn, MPH
Associate Commissioner
Medicaid Director

Approved by:



Nicholas A. Toumpas
Commissioner



**State of New Hampshire
Department of Health and Human Services
Amendment #1 to the University of Massachusetts Medical School DSH Consultant Contract**

This 1st Amendment to the University of Massachusetts Medical School DSH Consultant contract (hereinafter referred to as "Amendment #1") dated this, third day of June is by and between the State of New Hampshire, Department of Health and Human Services (hereinafter referred to as the "State" or "Department") and University of Massachusetts Medical School (hereinafter referred to as "the Contractor"), a public university with a place of business at 333 South Street, Shrewsbury, MA 01545.

WHEREAS, pursuant to an agreement (the "Contract") approved by the Governor and Executive Council on November 14, 2012 (item #45), the Contractor agreed to perform certain services based upon the terms and conditions specified in the Contract as amended and in consideration of certain sums specified; and

WHEREAS, the State and the Contractor have agreed to make changes to the scope of work, payment schedules and terms and conditions of the contract; and

WHEREAS, pursuant to the General Provisions, Paragraph 18 of the Agreement, and Standard Exhibit A, Paragraph 2, the State may renew the contract for three (3) additional years by written agreement of the parties and approval of the Governor and Executive Council; and;

WHEREAS, the parties agree to extend the Contract for three (3) years and increase the price limitation; and

NOW THEREFORE, in consideration of the foregoing and the mutual covenants and conditions contained in the Contract and set forth herein, the parties hereto agree as follows:

To amend as follows:

1. Form P-37, General Provisions, Item 1.7, Completion Date, to read:
October 31, 2018
2. Form P-37, General Provisions, Item 1.8, Price Limitation, to read:
\$1,234,316.80
3. Form P-37, General Provisions, Item 1.9, Contracting Officer for State Agency; to read:
Eric D. Borrin
4. Form P-37, General Provisions, Item 1.10, State Agency Telephone Number, to read:
(603) 271-9558
5. Delete Standard Exhibit A, Section B, Paragraph B3.
6. Standard Exhibit A, Section B, Paragraph B6 to read:
Participate in a minimum of ten on-site meetings as a subject matter expert at the request of the Department. Meeting venues may include Office of the Governor, CMS (Central and Regional Offices), Department of Justice, other New Hampshire State agencies, and Legislative Chairs and Committees. Meetings will be scheduled whenever new or modified policy, procedure, rate or program must garner support, approval or stakeholder input from entities in addition to the Department.
7. Standard Exhibit A, Section B, Paragraph B16 to read:
Develop new procedures for administration of the DSH program and improvements to data collections related to the DSH program in consultation with the Department program managers



and the Associate Commissioner and Medicaid Director, including any proposals for the modification of DSH payment methods to increase efficiencies, reduce the size and frequency of retroactive adjustments, audit findings, or DSH overpayments, or to accommodate changing federal laws and regulations affecting the DSH program policies or the current structures of the State's permissible health care related taxes.

8. Standard Exhibit A, Section D Project Management and Implementation Work Plan, Major Milestones to read:
 - D1. Kick off meeting and Fiscal Year 2016 Workplan by November 2015 and repeated annually during the duration of the contract period;
 - D2. Resolution of current State Plan Amendments and CMS Access Questions, November 2015 through February 2016;
 - D3. Advice on need for new SPAs and notices, as needed, November 2015 through October 2018;
 - D4. Draft new SPAs and notices, as needed, November 2015 through October 2018;
 - D5. Develop fiscal models for annual DSH payments in conformity with state and federal rules and state budget directives, November 2015, August 2016 through November 2016, August 2017 through October 2018;
 - D6. Develop, update and issue annual DSH data form, December 2015, December 2016, December 2017 and October 2018;
 - D7. Review Data Feedback and calculate preliminary revenue sources (MET et al.) for DSH payment and implement overdue payment procedure before end of State Fiscal Year 2016, unless the State of New Hampshire amends its current policy for overdue MET payments;
 - D8. Review DSH Data Feedback and calculation of preliminary DSH payments at least annually, and whenever DSH payment adjustments need to be made;
 - D9. Calculate interim final DSH payments (subject to final state budget directives and federally-required independent DSH audits by independent DSH audit contractor, under 42 CFR 455.300-304);
 - D10. Review and develop methods for calculations of state uncompensated care costs, DSH limits, Hospital UPLs, Deemed DSH identification, and P1/P2 provider tax test whenever some hospitals may be exempted from tax, Ongoing throughout the term of this Agreement;
 - D11. Assist with the development of responses to CMS inquires, and draft and/or edit and as requested review all draft responses, Ongoing throughout the term of this Agreement;
 - D12. Develop agenda and materials for CMS conference calls to resolve CMS questions; participate in calls; amend SPA provisions, provide other advice as needed to secure CMS approvals whenever needed during the term of this Agreement;
 - D13. Brief hospitals, solicit input and modify proposal, as appropriate and requested, in response to hospitals feedback; assist The Department with providing hospital technical assistance on reimbursement matters, DSH payments, hospital cost reports and related financial information as needed throughout the term of this Agreement;
 - D14. Develop format and all presentation materials for an annual provider/stakeholder forum with the Department officials to review past year's program, policy and process, develop understanding of upcoming year's program requirements, policies, parameters and procedures; solicit feedback on provider and stakeholder concerns each year, or other annual period as the Department prefers;



- D15. Provide advice, analysis, document drafting, meeting participation, presentations for state Legislative Committees, Legislative leadership, as requested, and no less than annually throughout the term of this Agreement;
 - D16. Provide advice, analysis, document drafting, meeting participation and presentations, as requested by the Department, for Executive Branch communications needs, including Governor's office or staff, DRA officials, Department of Justice attorneys, or other Department of the Executive Branch or the Department's leadership throughout the term of this Agreement;
 - D17. Provide advice, analysis, document drafting, meeting participation and/or preparation, and presentations, as requested, for conference calls, negotiations or meetings with CMS staff and officials, the Secretary of the United States Department of Health and Human Services or other federal oversight agency (e.g. OIG) throughout the term of this agreement;
 - D18. Provide advice and assistance to the Department on relationship management and negotiation strategies as requested throughout the term of this agreement;
 - D19. Develop modeling for alternative DSH and Health Care Related Tax programs that are aligned with and leverage State options and mandates under the federal health law, PPACA, in advance of the effective dates of various options and mandates throughout the term of this Agreement;
 - D20. Assist in development of periodic reports, as requested;
 - D21. Assist, advise and participate in CMS conference calls and meetings, as requested;
 - D22. Analyze and explain any final or new federal regulations or guidance relative to Access or DSH or Health Care Related Tax compliance throughout the term of this Agreement;
 - D23. Assist with Provider – Department communications relative to access policies, plans, issues and reporting, as requested;
 - D24. Assist the Department staff, provide advice and assist in the preparation or review of material relating to the incorporation of Access monitoring and measurement procedures into the terms, contract provisions and contractor management and oversight of the Care Management Plans, as requested throughout the term of this Agreement.
9. Standard Exhibit B, Methods and Conditions Precedent to Payment, Paragraph 1, to read:
Payments shall be made to the Contractor on a monthly basis. The Total of all payments made to the Contractor shall not exceed the amount in Form P-37, General Provisions, Item 1.8, Price Limitation.



10. Standard Exhibit, B, Methods and Conditions Precedent to Payment add the following:

Staff Hourly Rates November 2015 through October 2017

Staff Position	Rate per Hour
Jean C. Sullivan, Center Director	\$247
Larry Crehan (or other special expert approved by the Department Contract Officer)	\$131
Katharine London or other Principal	\$189
Michael Grenier or other Senior Consultant	\$173
Associates	\$140
Senior Policy Analysts	\$102
Policy Analysts	\$ 84

Staff Hourly Rates November 2017 through October 2018

Staff Position	Rate per Hour
Jean C. Sullivan, Center Director	\$259.35
Larry Crehan (or other special expert approved by the Department Contract Officer)	\$137.55
Katharine London or other Principal	\$198.45
Michael Grenier or other Senior Consultant	\$181.65
Associates	\$147.00
Senior Policy Analysts	\$107.10
Policy Analysts	\$ 88.20

11. Standard Exhibit D, Certification Regarding Drug-Free Workplace Requirements, Period Covered by this Certification, to read:
From November 1, 2012 to October 31, 2018
12. Standard Exhibit E, Certification Regarding Lobbying, Contract Period, to read:
From November 1, 2012 to October 31, 2018
13. Delete Standard Exhibit G, Certification Regarding the Americans with Disabilities Act Compliance, and replace with Exhibit G, Certification of Compliance with Requirements Pertaining to Federal Nondiscrimination, Equal Treatment of Faith-Based Organizations and Whistleblower Protections.



New Hampshire Department of Health and Human Services
University of Massachusetts Medical School DSH Consultant

This amendment shall be effective upon the date of Governor and Executive Council approval.

IN WITNESS WHEREOF, the parties have set their hands as of the date written below,

State of New Hampshire
Department of Health and Human Services

6/25/15
Date

Maxhleen Quinn
NAME:
TITLE: Associate Commissioner

6/22/15
Date

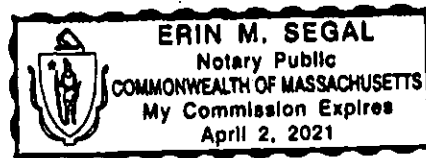
Joyce A. Murphy
NAME: Joyce A. Murphy
TITLE: Executive Vice Chancellor

Acknowledgement:

State of Massachusetts, County of Worcester on June 22, 2015, before the undersigned officer, personally appeared the person identified above, or satisfactorily proven to be the person whose name is signed above, and acknowledged that s/he executed this document in the capacity indicated above.

Signature of Notary Public or Justice of the Peace

[Signature]
Name and Title of Notary or Justice of the Peace

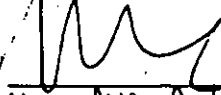




The preceding Amendment, having been reviewed by this office, is approved as to form, substance, and execution.

OFFICE OF THE ATTORNEY GENERAL

Date 7/6/15


Name: Megan A. Yegan
Title: Attorney

I hereby certify that the foregoing Amendment was approved by the Governor and Executive Council of the State of New Hampshire at the Meeting on: _____ (date of meeting)

OFFICE OF THE SECRETARY OF STATE

Date _____

Name: _____
Title: _____



**CERTIFICATION OF COMPLIANCE WITH REQUIREMENTS PERTAINING TO
FEDERAL NONDISCRIMINATION, EQUAL TREATMENT OF FAITH-BASED ORGANIZATIONS AND
WHISTLEBLOWER PROTECTIONS**

The Contractor identified in Section 1.3 of the General Provisions agrees by signature of the Contractor's representative as identified in Sections 1.11 and 1.12 of the General Provisions, to execute the following certification:

Contractor will comply, and will require any subgrantees or subcontractors to comply, with any applicable federal nondiscrimination requirements, which may include:

- the Omnibus Crime Control and Safe Streets Act of 1968 (42 U.S.C. Section 3789d) which prohibits recipients of federal funding under this statute from discriminating, either in employment practices or in the delivery of services or benefits, on the basis of race, color, religion, national origin, and sex. The Act requires certain recipients to produce an Equal Employment Opportunity Plan;
- the Juvenile Justice Delinquency Prevention Act of 2002 (42 U.S.C. Section 5672(b)) which adopts by reference, the civil rights obligations of the Safe Streets Act. Recipients of federal funding under this statute are prohibited from discriminating, either in employment practices or in the delivery of services or benefits, on the basis of race, color, religion, national origin, and sex. The Act includes Equal Employment Opportunity Plan requirements;
- the Civil Rights Act of 1964 (42 U.S.C. Section 2000d, which prohibits recipients of federal financial assistance from discriminating on the basis of race, color, or national origin in any program or activity);
- the Rehabilitation Act of 1973 (29 U.S.C. Section 794), which prohibits recipients of Federal financial assistance from discriminating on the basis of disability, in regard to employment and the delivery of services or benefits, in any program or activity;
- the Americans with Disabilities Act of 1990 (42 U.S.C. Sections 12131-34), which prohibits discrimination and ensures equal opportunity for persons with disabilities in employment, State and local government services, public accommodations, commercial facilities, and transportation;
- the Education Amendments of 1972 (20 U.S.C. Sections 1681, 1683, 1685-86), which prohibits discrimination on the basis of sex in federally assisted education programs;
- the Age Discrimination Act of 1975 (42 U.S.C. Sections 6106-07), which prohibits discrimination on the basis of age in programs or activities receiving Federal financial assistance. It does not include employment discrimination;
- 28 C.F.R. pt. 31 (U.S. Department of Justice Regulations – OJJDP Grant Programs); 28 C.F.R. pt. 42 (U.S. Department of Justice Regulations – Nondiscrimination; Equal Employment Opportunity; Policies and Procedures); Executive Order No. 13279 (equal protection of the laws for faith-based and community organizations); Executive Order No. 13559, which provide fundamental principles and policy-making criteria for partnerships with faith-based and neighborhood organizations;
- 28 C.F.R. pt. 38 (U.S. Department of Justice Regulations – Equal Treatment for Faith-Based Organizations); and Whistleblower protections 41 U.S.C. §4712 and The National Defense Authorization Act (NDAA) for Fiscal Year 2013 (Pub. L. 112-239, enacted January 2, 2013) the Pilot Program for Enhancement of Contract Employee Whistleblower Protections, which protects employees against reprisal for certain whistle blowing activities in connection with federal grants and contracts.

The certificate set out below is a material representation of fact upon which reliance is placed when the agency awards the grant. False certification or violation of the certification shall be grounds for suspension of payments, suspension or termination of grants, or government wide suspension or debarment.

Exhibit G

Certification of Compliance with requirements pertaining to Federal Nondiscrimination, Equal Treatment of Faith-Based Organizations and Whistleblower protections

Contractor Initials

[Handwritten Signature]
Date 6/22/15

New Hampshire Department of Health and Human Services
Exhibit G



In the event a Federal or State court or Federal or State administrative agency makes a finding of discrimination after a due process hearing on the grounds of race, color, religion, national origin, or sex against a recipient of funds, the recipient will forward a copy of the finding to the Office for Civil Rights, to the applicable contracting agency or division within the Department of Health and Human Services, and to the Department of Health and Human Services Office of the Ombudsman.

The Contractor identified in Section 1.3 of the General Provisions agrees by signature of the Contractor's representative as identified in Sections 1.11 and 1.12 of the General Provisions, to execute the following certification:

1. By signing and submitting this proposal (contract) the Contractor agrees to comply with the provisions indicated above.

Contractor Name:

6/22/15
Date

[Signature]
Name: Joyce H. Murphy
Title: Executive Vice Chancellor

Exhibit G

Certification of Compliance with requirements pertaining to Federal Nondiscrimination, Equal Treatment of Faith-Based Organizations and Whistleblower protections

Contractor Initials

[Signature]
Date 6/22/15

**EXTRACT FROM THE RECORDS OF
UNIVERSITY OF MASSACHUSETTS**

Granting Authority to Execute Contracts and All Other Instruments

I, Zunilka Barrett, Secretary of the Board of Trustees of the University of Massachusetts, do hereby certify that the following is a true and complete copy of a vote duly adopted by the Board of Trustees of the University of Massachusetts at a meeting duly called and held on the fifth day of February, nineteen hundred and ninety-seven at the University of Massachusetts, Chancellor's Conference Room, Boston, Massachusetts:

"Further, to affirm that, except as to matters governed by the University of Massachusetts Intellectual Property Policy (Doc. T96-040), the Treasurer of the University of Massachusetts or his designee shall be the sole contracting officer of the University with the Authority to execute all contract, grants, restricted gifts (excluding endowments), and amendments thereto for sponsored programs in instruction, research, or public service, unless and until otherwise voted by the Board of Trustees."

I further certify that the Senior Vice President for Administration & Finance and Treasurer of the University, Christine M. Wilda, has retained the right to remain the sole contracting officer of the University of Massachusetts, but in her absence, she has designated Philip J. Marquis, Assistant Vice President and Associate Treasurer.

I further certify that effective June 16, 2015, the following is a list of designated individuals authorized in accordance with the afore referenced votes to review and execute all grants and contracts for sponsored programs in instruction, research and public service that are applicable to and received on behalf of the University of Massachusetts for their respective campuses.

Amherst Campus

Kumble R. Subbaswamy, Chancellor, Amherst Campus, Amherst, Massachusetts,
Robert S. Feldman, Deputy Chancellor, Amherst Campus, Amherst, Massachusetts,
Michael Malone, Vice Chancellor, Amherst Campus, Amherst, Massachusetts,
Carol P. Sprague, Director of the Office of Grants and Contracts Administration, Amherst Campus, Amherst, Massachusetts,
Jennifer A. Donais, Director of Research Compliance, Amherst Campus, Amherst, Massachusetts,
Theresa W. Girardi, Assistant Director, Amherst Campus, Amherst, Massachusetts,
Nancy E. Stewart, Assistant Director, Amherst Campus, Amherst, Massachusetts,
James B. Ayres, Assistant Director, Amherst Campus, Amherst, Massachusetts,
Laura J. Howard, Associate Director, Division of Continuing Education, Amherst Campus, Amherst, Massachusetts

Boston Campus

J. Keith Motley, Chancellor, Boston Campus, Boston, Massachusetts,
Ellen M. O'Connor, Vice Chancellor for Administration & Finance, Boston Campus, Boston, Massachusetts,
Winston Langley, Provost & Vice Chancellor for Academic Affairs, Boston Campus, Boston, Massachusetts,



STATE OF NEW HAMPSHIRE
DEPARTMENT OF HEALTH AND HUMAN SERVICES
OFFICE OF MEDICAID BUSINESS AND POLICY

129 PLEASANT STREET, CONCORD, NH 03301-3857
 603-271-9422 1-800-852-3345 Ext. 9422
 Fax: 603-271-4727 TDD Access: 1-800-735-2964 www.dhhs.nh.gov

Nicholas A. Toumpas
 Commissioner

Kathleen A. Dunn
 Associate Commissioner

October 5, 2012

His Excellency, Governor John H. Lynch
 and the Honorable Executive Council
 State House
 Concord, New Hampshire 03301

Approved by GTC
 Date 11/14/12
 Page _____
 Item # 45
 Contract # _____

REQUESTED ACTION

Authorize the Department of Health and Human Services, Office of Medicaid Business and Policy to enter into an agreement with the University of Massachusetts Medical School, Center for Health Law and Economics, 55 Lake Avenue, Worcester, MA 01655, Vendor Code 177576, to provide policy and technical services for New Hampshire. Disproportionate Share Hospital program in an amount not to exceed \$602,883.00 effective November 1, 2012, or date of Governor and Executive Council approval, whichever is later, through October 31, 2015. Funds are available in the following account in State Fiscal Year 2013 and anticipated to be available in State Fiscal Years 2014, 2015 and 2016 with authority to adjust amounts if needed and justified between State Fiscal Years:

05-95-95-9560010-6126 HEALTH AND SOCIAL SERVICES, DEPARTMENT OF HEALTH AND HUMAN SVCS, HHS: COMMISSIONER, OFF MEDICAID & BUSINESS POLICY, MEDICAID ADMINISTRATION

<u>State Fiscal Year</u>	<u>Class/Object</u>	<u>Class Title</u>	<u>Budget Amount</u>
SFY 2013	102-500731	Contracts for Program Services	\$130,680.00
		Sub Total	\$130,680.00

05-00095-047-470010-7943 HEALTH AND SOCIAL SERVICES, HEALTH AND HUMAN SVCS DEPT OF, HHS: OFC OF MEDICAID & BUS PLCY, OFF. OF MEDICAID & BUS. POLICY, UNCOMPENSATED CARE FUND

<u>State Fiscal Year</u>	<u>Class/Object</u>	<u>Class Title</u>	<u>Budget Amount</u>
SFY 2014	102-500731	Contracts for Program Services	\$200,920.00
SFY 2015	102-500731	Contracts for Program Services	\$205,943.00
SFY 2016	102-500731	Contracts for Program Services	\$65,340.00
		Sub Total	\$472,203.00
		Total	\$602,883.00

EXPLANATION

The purpose of this agreement is to provide the Department of Health and Human Services with expert advice from the University of Massachusetts Medical School in order to meet New Hampshire and federal requirements for the Disproportionate Share Hospital program. In 2009, the New Hampshire Legislature enacted Chapter 144.212 (HB 2), which required the Department of Health and Human Services to redesign the Disproportionate Share Hospital Program within the parameters of State and federal law. Since that time, New Hampshire's Disproportionate Share Hospital program has undergone significant scrutiny, analysis, and

modification in order to comply with State and federal law. University of Massachusetts Medical School personnel have the requisite experience and expertise to navigate through the Disproportionate Share Hospital program's complex legal requirements and policy considerations and to advise the Department of Health and Human Services accordingly.

University of Massachusetts Medical School is currently providing these services through the Department of Health and Human Services contract with the University of New Hampshire. The contract agreement will terminate on October 31, 2012. However, the Department's need for expert advice regarding the Disproportionate Share Hospital program, analysis of Disproportional Share Hospital regulations, the Centers for Medicare and Medicaid Services communications and directives and the calculation of hospital uncompensated care payments, continues. The availability of specialized and expert services will enable the Department to continue the long-term policy and technical work necessary for State and federal legal compliance.

Procurement of expert consultant services provided pursuant to this agreement will enable the Department of Health and Human Services to effectively address many of the more complicated, technical aspects of the Disproportionate Share Hospital program. The University of Massachusetts Medical School will, among other things, assist the Department of Health and Human Services do the following:

- develop fiscal models for Disproportionate Share Hospital distribution methods;
- develop methodologies for calculation of State uncompensated care, individual hospital uncompensated care, individual hospital upper payment limits (UPL), deemed Disproportionate Share Hospital program hospitals, and Proportion 1/Proportion 2 healthcare tax waiver tests;
- collect Disproportionate Hospital Share data from hospitals;
- perform calculations of uncompensated care, hospital specific Disproportionate Share Hospital limits, and Disproportionate Share Hospital payments, estimate the Medicaid Enhancement Tax, and present findings to internal and external stakeholders;
- assist the Department of Health and Human Services draft changes to the Medicaid State Plan and New Hampshire administrative rules; and
- assist the Department of Health and Human Services to fully comply with federal mandates for individual hospital Disproportionate Share Hospital audits.

These consultant services from the University of Massachusetts Medical School are necessary to the efficient and cost effective management of the Disproportionate Share Hospital program.

Performance Measures and Deliverables

RFP Task #	Task	Preparation	Ongoing Support	As-needed or upon request	Other Actions needed for successful completion of deliverable
3.1.1.	Serve as subject matter expert on federal DSH policy, advising DHHS on compliance methods and policy options.	√	√		Each fiscal quarter assess need for SPAs, public notice and external communications and complete a quarterly action plan for timely SPAs
3.1.2.	Assist with implementing legislative DSH directives.	√	√		Analyze directives and develop, assess and describe pros and cons or all feasible options; develop implementation plan, and let implementation

RFP Task #	Task	Preparation	Ongoing Support	As-needed or upon request	Other Actions needed for successful completion of deliverable
3.1.3	Conduct a planning conference call with DHHS to finalize a project plan and ensure a bilateral understanding and agreement of the scope of work and timeline.	√		Within 7-10 days of execution of Contract	
3.1.4	Assist in the review and editing of various communications related to DSH administration, including but not limited to, correspondences between DHHS, CMS and hospital providers; conference calls, public notices, Medicaid State Plan Amendments (SPA), and other policy statements.	√	√		Stay abreast of and maintain comprehensive understanding of all new federal law amendments, regulations and CMS policies so that conduct of review and editing is well-informed
3.1.5	Participate in minimum of six meetings as subject matter expert at the request of DHHS. Meeting venues may include Office of the Governor, CMS (Centers for Medicare and Medicaid Services) (Central and Regional Offices), Department of Justice, other NH State agencies, and Legislative Chairs and Committees.	√		(likely need to do more than 6 meetings each year of the contract)	Needed whenever new or modified policy, procedure, rate or program must garner support, approval or stakeholder input from entities in addition to DHHS
3.1.6	Provide subject matter expertise to DHHS and those hospitals requiring technical assistance in completing the annual DSH Data Form via conference calls to be scheduled by DHHS with each hospital.	√	Sept – December of each Contract year	√	Although DSH Data forms are circulated and completed and finalized in the fall each year, the Contractor may also need to provide such subject matter expertise to DHHS and to hospitals requiring technical assistance at other times during the year, whenever questions arise; e.g., when final DSH and MET revenue amounts are determined later in the state budget year.
3.1.7	Assist DHHS in developing fiscal models for DSH distribution methods.	√		√	Likely an exercise needed at least twice in each annual cycle; first, a model to implement the current year legislative directive, and again when briefing legislative committees about options, and impacts for the upcoming (next) annual cycle.

RFP Task #	Task	Preparation	Ongoing Support	As-needed or upon request	Other Actions needed for successful completion of deliverable
3.1.8	Review and develop methodology to be employed for the calculations of state uncompensated care, individual DSH hospitals uncompensated care, individual hospital upper payment limits, deemed DSH hospitals, and P1/P2 waiver tests.	√		√	As requested, but will need to be done at least annually in the fall of each contract year and then repeated to reach final calculation of DSH payments once extent of state funding for the payments is finalized.
3.1.9	Assist in the collection of DSH data from hospitals. Complete the calculations of uncompensated care, hospital specific DSH limits, DSH payments and estimated MET revenue, and present findings to DHHS and subsequently to hospitals, specific legislative committees, and other stakeholders, as requested by DHHS.	√		√	Similar to comment for task 3.1.8, above.
3.1.10	Draft changes to the Medicaid State Plan as applicable and assist in consultations with CMS as necessary on approval of the SPA.	√	√	√	The assistance in resolving all outstanding SPAs and related RAI responses is ongoing, and in each fiscal quarter, the Contractor would review all contract-related program topics and issues to identify any need for a new SPA; and, when requested, assist in drafting the SPA.
3.1.11	Draft changes to the State Administrative rules as applicable and assist in rule hearings as necessary on approval of rule changes.	√		√	This task would be done in consultation with DHHS' Legal office where it relates to NH State law.
3.1.12	Assist DHHS in fulfilling federal mandate for individual hospital DSH audits to include review of preliminary report from independent contractor, participation in conference calls with auditors, development of communication strategies, and drafting of NH Medicaid's response to the auditor's findings.		Annually in each year of the contract; related research and prep for each annual audit would be ongoing	√	

RFP Task #	Task	Preparation	Ongoing Support	As-needed or upon request	Other Actions needed for successful completion of deliverable
3.1.13	Participate in weekly two-hour conference calls, as needed, with DHHS upon approval of agreement.		√	√*	*Contractor will participate in additional conference calls during same week, as requested if needed to meet any interim project deadline.
3.1.14	Other tasks, up to the maximum compensation and resources available under this Agreement, related to (a) the modification and administration of the NH uncompensated care program and (b) the implementation of the access to care provisions as requested by DHHS officials, including assistance with analysis and implementation of the new federal CMS access to care regulations, particularly as they apply to the drafting of responses to the pending Medicaid State Plan RAIs from CMS. **The Contractor shall develop new Medicaid Data Reports that would collect and compile for DHHS not only DSH related information, but also all other institutional provider information needed to meet federal and state Medicaid agency responsibilities, manage claims payments, and understand provider cost and fiscal status.	√	√	√**	**The development of new Medicaid Data Reports is to be completed, if DHHS requests it by March 2013, with target date for implementation in FY14.

Competitive Bidding

These services were procured through a competitively bid process. A Request For Proposals was posted on the Department of Health and Human Services website from August 31, 2012 to September 14, 2012. Potential qualified bidders known to the Department were notified of the posting. Three proposals were submitted in response to the Request For Proposals.

An evaluation team of three Department employees with varying backgrounds in finance, policy, and statistical analytics evaluated and scored the proposals in accord with the criteria published in the Request For Proposals. The University of Massachusetts Medical School achieved the highest evaluation score with a total of 97 out of 100 possible points. The University of Massachusetts Medical School also submitted the lowest cost proposal. Through the current contract with the University of New Hampshire, this vendor has proven itself to be a reliable, accessible, and highly skilled consultant on issues related to the design and redesign of the Disproportionate Share Hospital program and compliance with State and federal law. The vendor has the ability

and organizational capacity to meet all of the requisites outlined in the Request For Proposals and to support Department management of the Disproportionate Share Hospital program.

Should the Governor and Executive Council not approve this request, the Department of Health and Human Services would not have the necessary expertise to comply with State and federal law regulating the Disproportionate Share Hospital program. The Department would have difficulty completing Disproportionate Share Hospital program tasks in a timely and accurate manner; thereby exposing the Department and State to an increased risk of federal funds being withheld, of continued and costly litigation from hospitals, and liability for incorrect or noncompliant Disproportionate Share Hospital program calculations.

The terms of the agreement provide for a two-year period extension at the discretion of the Department upon a determination of satisfactory execution of services by the vendor, the availability of funds, and approval of Governor and Executive Council.

Area Served: statewide.

Source of Funds: 50 % General funds and 50 % Federal funds.

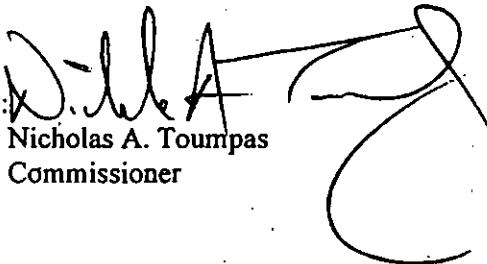
In the event Federal Funds become no longer available, General Funds will not be requested to support this program.

Respectfully submitted,



Kathleen A. Dunn, MPH
Associate Commissioner and Medicaid Director

Approved by:



Nicholas A. Toumpas
Commissioner

Disproportionate Share Hospital Consultant Request For Proposals

Potential Bidders Notified of the Request for Proposals.

Name	Address
ECG Management Consultants	100 Cambridge St, Boston, MA02114
Navigant Healthcare	101 Federal St Boston, MA 02110
Center for Health Law and Economics	UMASS Medical School 55 Lake Ave North Worcester, MA 01655
Myers and Stauffer LC	400 Redland Court, Suite 205 Owings Mills, MD 21117
NH Institute for Health Policy and Practice University System of New Hampshire	UNH 4 Library Way, Suite 202 Hewitt Hall 202 Durham, NH 03842

Bidders submitting proposals pursuant to the Department of Human Services' Request for Proposals

Myers and Stauffer, LC Certified Public Accountants	400 Redland Court, Suite 205 Owings Mills, MD 21117
Public Consulting Group, Health	148 State Street, Tenth Floor Boston, MA 02109
University of Massachusetts Medical School Center for Health Law and Economics	UMass Medical School 55 Lake Avenue North Worcester, MA 01655

Department and Health and Human Services' evaluation team.

1. Andrea Stewart, Bureau of Healthcare Analytics and Data Systems
2. Athena Gagnon, Financial Manager, Office of Medicaid Business and Policy
3. Valerie King, OMBP-Rules Unit

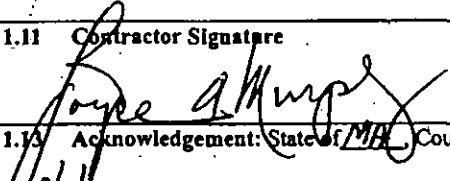
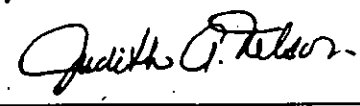

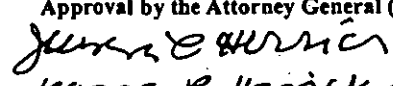
Proposed Deliverables
Bid Evaluation Summary

Final Evaluation 13-OMBP-OSH-01		Possible 100	Final Scores		
			97.34	82.87	73.57
			UMASS	MYERS	PCG
Organization Qualifications 10%		Possible Score	Actual Score	Actual Score	Actual Score
Ability to Deliver Services efficiently, accurately, and timely		10	9.00	7.67	7.00
Standards of performance, integrity, customer service and fiscal accountability					
The extent to which the organizations structure and financial stability reflect the ability to commit to and support the requirements of this proposal					
Total		10	9.00	7.67	7.00
Technical Approach 30%		Possible Score	Actual Score	Actual Score	Actual Score
Project Management and Implementation Work Plan		15	14.67	11.67	7.67
Demonstration of an ability to meet or exceed the requirements defined in the Scope of Work and the quality of service that is likely to result from implementation of a Bidders proposed methods.		15	14.00	11.33	9.67
Total		30	28.67	23.00	17.33
Price 30%		Possible Score			
Budget Form Comparison (Attachment 11)		30	30.00	28.53	
Total		30	30.00	28.53	2
Past Performance & Experience 30%		Possible Score	Actual Score	Actual Score	Actual Score
Operating experience with Medicaid program policies and federal financial participation		30	29.67	23.67	20.33
Past Performance					
Experience with financing structure and free care					
Experience with developing fiscal models for DSH; distribution methods					
Experience working with Centers for Medicare and Medicaid (CMS)					
Experience with State Plan Amendments					
Demonstration of New Hampshire's unique needs as they relate to DSH program and challenges New Hampshire is facing as outlined in the program overview					
The ability of the vendor to financially manage this program					
Performance Bond					
Total		30	29.67	23.67	20.33
Possible 100 Final Scores			97.34	82.87	73.57

Subject: University of Massachusetts Medical School DSH Consultant
AGREEMENT

The State of New Hampshire and the Contractor hereby mutually agree as follows:

GENERAL PROVISIONS
1. IDENTIFICATION.

1.1 State Agency Name Department of Health and Human Services		1.2 State Agency Address 129 Pleasant St Concord, NH 03301	
1.3 Contractor Name University of Massachusetts Medical School		1.4 Contractor Address 333 South Street Shrewsbury, MA 01545	
1.5 Contractor Phone Number (508) 856-6222	1.6 Account Number	1.7 Completion Date October 31, 2015	1.8 Price Limitation \$602,883.00
1.9 Contracting Officer for State Agency Kathleen A. Dunn, Director		1.10 State Agency Telephone Number (603) 271-9421	
1.11 Contractor Signature 		1.12 Name and Title of Contractor Signatory Joyce A. Murphy, Executive Vice Chancellor	
1.13 Acknowledgement: State of <u>MA</u> , County of <u>Worcester</u> On <u>10/12/12</u> before the undersigned officer, personally appeared the person identified in block 1.12, or satisfactorily proven to be the person whose name is signed in block 1.11, and acknowledged that s/he executed this document in the capacity indicated in block 1.12.			
1.13.1 Signature of Notary Public or Justice of the Peace [Seal] 			
1.13.2 Name and Title of Notary or Justice of the Peace JUDITH A. NELSON, NOTARY PUBLIC			
1.14 State Agency Signature 		1.15 Name and Title of State Agency Signatory Associate Commissioner	
1.16 Approval by the N.H. Department of Administration, Division of Personnel (if applicable) By: _____ Director, On: _____			
1.17 Approval by the Attorney General (Form, Substance and Execution) By:  Jeanne P. Herick, Attorney On: 16 Oct. 2012			
1.18 Approval by the Governor and Executive Council By: _____ On: _____			

2. EMPLOYMENT OF CONTRACTOR/SERVICES TO BE PERFORMED. The State of New Hampshire, acting through the agency identified in block 1.1 ("State"), engages contractor identified in block 1.3 ("Contractor") to perform, and the Contractor shall perform, the work or sale of goods, or both, identified and more particularly described in the attached EXHIBIT A which is incorporated herein by reference ("Services").

3. EFFECTIVE DATE/COMPLETION OF SERVICES.

3.1 Notwithstanding any provision of this Agreement to the contrary, and subject to the approval of the Governor and Executive Council of the State of New Hampshire, this Agreement, and all obligations of the parties hereunder, shall not become effective until the date the Governor and Executive Council approve this Agreement ("Effective Date").

3.2 If the Contractor commences the Services prior to the Effective Date, all Services performed by the Contractor prior to the Effective Date shall be performed at the sole risk of the Contractor, and in the event that this Agreement does not become effective, the State shall have no liability to the Contractor, including without limitation, any obligation to pay the Contractor for any costs incurred or Services performed. Contractor must complete all Services by the Completion Date specified in block 1.7.

4. CONDITIONAL NATURE OF AGREEMENT.

Notwithstanding any provision of this Agreement to the contrary, all obligations of the State hereunder, including, without limitation, the continuance of payments hereunder, are contingent upon the availability and continued appropriation of funds, and in no event shall the State be liable for any payments hereunder in excess of such available appropriated funds. In the event of a reduction or termination of appropriated funds, the State shall have the right to withhold payment until such funds become available, if ever, and shall have the right to terminate this Agreement immediately upon giving the Contractor notice of such termination. The State shall not be required to transfer funds from any other account to the Account identified in block 1.6 in the event funds in that Account are reduced or unavailable.

5. CONTRACT PRICE/PRICE LIMITATION/PAYMENT.

5.1 The contract price, method of payment, and terms of payment are identified and more particularly described in EXHIBIT B which is incorporated herein by reference.

5.2 The payment by the State of the contract price shall be the only and the complete reimbursement to the Contractor for all expenses, of whatever nature incurred by the Contractor in the performance hereof, and shall be the only and the complete compensation to the Contractor for the Services. The State shall have no liability to the Contractor other than the contract price.

5.3 The State reserves the right to offset from any amounts otherwise payable to the Contractor under this Agreement those liquidated amounts required or permitted by N.H. RSA 80:7 through RSA 80:7-c or any other provision of law.

5.4 Notwithstanding any provision in this Agreement to the contrary, and notwithstanding unexpected circumstances, in no event shall the total of all payments authorized, or actually made hereunder, exceed the Price Limitation set forth in block 1.8.

6. COMPLIANCE BY CONTRACTOR WITH LAWS AND REGULATIONS/ EQUAL EMPLOYMENT OPPORTUNITY.

6.1 In connection with the performance of the Services, the Contractor shall comply with all statutes, laws, regulations, and orders of federal, state, county or municipal authorities which impose any obligation or duty upon the Contractor, including, but not limited to, civil rights and equal opportunity laws. In addition, the Contractor shall comply with all applicable copyright laws.

6.2 During the term of this Agreement, the Contractor shall not discriminate against employees or applicants for employment because of race, color, religion, creed, age, sex, handicap, sexual orientation, or national origin and will take affirmative action to prevent such discrimination.

6.3 If this Agreement is funded in any part by monies of the United States, the Contractor shall comply with all the provisions of Executive Order No. 11246 ("Equal Employment Opportunity"), as supplemented by the regulations of the United States Department of Labor (41 C.F.R. Part 60), and with any rules, regulations and guidelines as the State of New Hampshire or the United States issue to implement these regulations. The Contractor further agrees to permit the State or United States access to any of the Contractor's books, records and accounts for the purpose of

ascertaining compliance with all rules, regulations and orders, and the covenants, terms and conditions of this Agreement.

7. PERSONNEL.

7.1 The Contractor shall at its own expense provide all personnel necessary to perform the Services. The Contractor warrants that all personnel engaged in the Services shall be qualified to perform the Services, and shall be properly licensed and otherwise authorized to do so under all applicable laws.

7.2 Unless otherwise authorized in writing, during the term of this Agreement, and for a period of six (6) months after the Completion Date in block 1.7, the Contractor shall not hire, and shall not permit any subcontractor or other person, firm or corporation with whom it is engaged in a combined effort to perform the Services to hire, any person who is a State employee or official, who is materially involved in the procurement, administration or performance of this Agreement. This provision shall survive termination of this Agreement.

7.3 The Contracting Officer specified in block 1.9, or his or her successor, shall be the State's representative. In the event of any dispute concerning the interpretation of this Agreement, the Contracting Officer's decision shall be final for the State.

8. EVENT OF DEFAULT/REMEDIES.

8.1 Any one or more of the following acts or omissions of the Contractor shall constitute an event of default hereunder ("Event of Default"):

8.1.1 failure to perform the Services satisfactorily or on schedule;

8.1.2 failure to submit any report required hereunder; and/or

8.1.3 failure to perform any other covenant, term or condition of this Agreement.

8.2 Upon the occurrence of any Event of Default, the State may take any one, or more, or all, of the following actions:

8.2.1 give the Contractor a written notice specifying the Event of Default and requiring it to be remedied within, in the absence of a greater or lesser specification of time, thirty (30) days from the date of the notice; and if the Event of Default is not timely remedied, terminate this Agreement, effective two (2) days after giving the Contractor notice of termination;

8.2.2 give the Contractor a written notice specifying the Event of Default and suspending all payments to be made under this Agreement and ordering that the portion of the contract price which would otherwise accrue to the Contractor during the period from the date of such notice until such time as the State determines that the Contractor has cured the Event of Default shall never be paid to the Contractor;

8.2.3 set off against any other obligations the State may owe to the Contractor any damages the State suffers by reason of any Event of Default; and/or

8.2.4 treat the Agreement as breached and pursue any of its remedies at law or in equity, or both.

9. DATA/ACCESS/CONFIDENTIALITY/PRESERVATION.

9.1 As used in this Agreement, the word "data" shall mean all information and things developed or obtained during the performance of, or acquired or developed by reason of, this Agreement, including, but not limited to, all studies, reports, files, formulae, surveys, maps, charts, sound recordings, video recordings, pictorial reproductions, drawings, analyses, graphic representations, computer programs, computer printouts, notes, letters, memoranda, papers, and documents, all whether finished or unfinished.

9.2 All data and any property which has been received from the State or purchased with funds provided for that purpose under this Agreement, shall be the property of the State, and shall be returned to the State upon demand or upon termination of this Agreement for any reason.

9.3 Confidentiality of data shall be governed by N.H. RSA chapter 91-A or other existing law. Disclosure of data requires prior written approval of the State.

10. TERMINATION. In the event of an early termination of this Agreement for any reason other than the completion of the Services, the Contractor shall deliver to the Contracting Officer, not later than fifteen (15) days after the date of termination, a report ("Termination Report") describing in detail all Services performed, and the contract price earned, to and including the date of termination. The form, subject matter, content, and number of copies of the Termination Report shall be identical to those of any Final Report described in the attached EXHIBIT A.

11. CONTRACTOR'S RELATION TO THE STATE. In the performance of this Agreement the Contractor is in all respects an independent contractor, and is neither an agent nor an employee of the State. Neither the Contractor nor any of its officers, employees, agents or members shall have authority to bind the State or receive any benefits, workers' compensation or other emoluments provided by the State to its employees.

12. ASSIGNMENT/DELEGATION/SUBCONTRACTS.

The Contractor shall not assign, or otherwise transfer any interest in this Agreement without the prior written consent of the N.H. Department of Administrative Services. None of the Services shall be subcontracted by the Contractor without the prior written consent of the State.

13. INDEMNIFICATION. The Contractor shall defend, indemnify and hold harmless the State, its officers and employees, from and against any and all losses suffered by the State, its officers and employees, and any and all claims, liabilities or penalties asserted against the State, its officers and employees, by or on behalf of any person, on account of, based or resulting from, arising out of (or which may be claimed to arise out of) the acts or omissions of the Contractor. Notwithstanding the foregoing, nothing herein contained shall be deemed to constitute a waiver of the sovereign immunity of the State, which immunity is hereby reserved to the State. This covenant in paragraph 13 shall survive the termination of this Agreement.

14. INSURANCE.

14.1 The Contractor shall, at its sole expense, obtain and maintain in force, and shall require any subcontractor or assignee to obtain and maintain in force, the following insurance:

14.1.1 comprehensive general liability insurance against all claims of bodily injury, death or property damage, in amounts of not less than \$250,000 per claim and \$2,000,000 per occurrence; and

14.1.2 fire and extended coverage insurance covering all property subject to subparagraph 9.2 herein, in an amount not less than 80% of the whole replacement value of the property.

14.2 The policies described in subparagraph 14.1 herein shall be on policy forms and endorsements approved for use in the State of New Hampshire by the N.H. Department of Insurance, and issued by insurers licensed in the State of New Hampshire.

14.3 The Contractor shall furnish to the Contracting Officer identified in block 1.9, or his or her successor, a certificate(s) of insurance for all insurance required under this Agreement. Contractor shall also furnish to the Contracting Officer identified in block 1.9, or his or her successor, certificate(s) of insurance for all renewal(s) of insurance required under this Agreement no later than fifteen (15) days prior to the expiration date of each of the insurance policies. The certificate(s) of insurance and any renewals thereof shall be attached and are incorporated herein by reference. Each certificate(s) of insurance shall contain a clause requiring the insurer to endeavor to provide the Contracting Officer identified in block 1.9, or his or her successor, no less than ten (10) days prior written notice of cancellation or modification of the policy.

15. WORKERS' COMPENSATION.

15.1 By signing this agreement, the Contractor agrees, certifies and warrants that the Contractor is in compliance with or exempt from, the requirements of N.H. RSA chapter 281-A ("Workers' Compensation").

15.2 To the extent the Contractor is subject to the requirements of N.H. RSA chapter 281-A, Contractor shall maintain, and require any subcontractor or assignee to secure and maintain, payment of Workers' Compensation in connection with activities which the person proposes to undertake pursuant to this Agreement. Contractor shall furnish the Contracting Officer identified in block 1.9, or his or her successor, proof of Workers' Compensation in the manner described in N.H. RSA chapter 281-A and any applicable renewal(s) thereof, which shall be attached and are incorporated herein by reference. The State shall not be responsible for payment of any Workers' Compensation premiums or for any other claim or benefit for Contractor, or any subcontractor or employee of Contractor, which might arise under applicable State of New Hampshire Workers' Compensation laws in connection with the performance of the Services under this Agreement.

16. WAIVER OF BREACH. No failure by the State to enforce any provisions hereof after any Event of Default shall be deemed a waiver of its rights with regard to that Event of Default, or any subsequent Event of Default. No express failure to enforce any Event of Default shall be deemed a waiver of the right of the State to enforce each and all of the provisions hereof upon any further or other Event of Default on the part of the Contractor.

17. **NOTICE.** Any notice by a party hereto to the other party shall be deemed to have been duly delivered or given at the time of mailing by certified mail, postage prepaid, in a United States Post Office addressed to the parties at the addresses given in blocks 1.2 and 1.4, herein.

18. **AMENDMENT.** This Agreement may be amended, waived or discharged only by an instrument in writing signed by the parties hereto and only after approval of such amendment, waiver or discharge by the Governor and Executive Council of the State of New Hampshire.

19. **CONSTRUCTION OF AGREEMENT AND TERMS.**

This Agreement shall be construed in accordance with the laws of the State of New Hampshire, and is binding upon and inures to the benefit of the parties and their respective successors and assigns. The wording used in this Agreement is the wording chosen by the parties to express their mutual intent, and no rule of construction shall be applied against or in favor of any party.

20. **THIRD PARTIES.** The parties hereto do not intend to benefit any third parties and this Agreement shall not be construed to confer any such benefit.

21. **HEADINGS.** The headings throughout the Agreement are for reference purposes only, and the words contained therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this Agreement.

22. **SPECIAL PROVISIONS.** Additional provisions set forth in the attached EXHIBIT C are incorporated herein by reference.

23. **SEVERABILITY.** In the event any of the provisions of this Agreement are held by a court of competent jurisdiction to be contrary to any state or federal law, the remaining provisions of this Agreement will remain in full force and effect.

24. **ENTIRE AGREEMENT.** This Agreement, which may be executed in a number of counterparts, each of which shall be deemed an original, constitutes the entire Agreement and understanding between the parties, and supersedes all prior Agreements and understandings relating hereto.

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**State of New Hampshire
Standard Exhibit A
Disproportionate Share Hospital (DSH) Program Consultant Service**

Section A. Introduction

The State of New Hampshire, Department of Health and Human Services (DHHS) is charged with providing a comprehensive and coordinated system of health and human services, to promote and protect the health, safety and wellbeing of New Hampshire's approximate 165,000 Medicaid recipients. In the area of health care, the New Hampshire Department of Health and Human Services (DHHS) is the single state agency responsible for the administration of the Medicaid Program, which includes payments made under the Disproportionate Share Hospital (DSH) program. In 2009, DHHS was mandated through HB2 to redesign the DSH program. Since that time, the DSH program has undergone significant scrutiny, analysis and modifications to meet State and Federal goals for DSH. Changes have and will continue to require additional policy and technical work, analysis of federal and state DSH regulations, state plan amendment drafting and implementation, management and payment of hospital DSH claims, assistance in stakeholder and hospital communications related to DSH implementation, and other related DSH policy analysis. The tasks require a significant level of expertise in calculating State and individual uncompensated care payments.

This contract is a fully loaded guaranteed flat fee based price for a three (3) year period with provisions for one (1) extension by amendment and is subject to the DHHS and the State's contract review process and approval by the Governor and Executive Council.

This Agreement consists of standard contract form (P-37), all exhibits A-J, all appendices or Attachments, including the Certificate of Vote entitled "Extract from the Records of University of Massachusetts" (consisting of three (3) pages), Resumes (consisting of eighteen (18) pages), Alternative Documentation Provided in lieu of Certificate of Good Standing from the State of New Hampshire Secretary of State's Office (consisting of two (2) pages), and Insurance Certificate (consisting of one (1) page).

Section B. Services to be provided by University of Massachusetts Medical School per the Scope of Work (SOW) For DSH Consultant Services

UMass (University of Massachusetts) shall:

- B.1. Perform the full scope of activities, deliverables, tasks, services, advice, assistance, and analysis as required and described in Part 3, Scope of Work of the RFP;
- B.2. Serve as subject matter expert on federal DSH policy, advising DHHS on compliance methods and policy options. Each fiscal quarter UMass will assess the need for State Plan Amendments (SPAs), public notice and external communications and complete a quarterly action plan for timely SPAs;
- B.3. Conduct a planning conference call with DHHS to finalize a project plan and ensure a bilateral understanding and agreement of the scope of work and timeline. This will take place within 7-10 days of execution of the Contract;
- B.4. Assist with implementing legislative DSH directives. UMass will analyze directives and develop, assess and describe pros and cons or all feasible options; develop implementation plan, and lead implementation;
- B.5. Assist in the review and editing of various communications related to DSH administration, including but not limited to, correspondence between DHHS, CMS and hospital providers; conference calls, public notices, Medicaid State Plan Amendments (SPA), and other policy statements. This will include staying abreast of and maintaining comprehensive understanding of all new federal law amendments, regulations and CMS policies so that conduct of review and editing is well informed;

- B.6. Participate in a minimum of six on-site meetings as subject matter expert at the request of DHHS. Meeting venues may include Office of the Governor, CMS (Central and Regional Offices), Department of Justice, other NH State agencies, and Legislative Chairs and Committees. Meetings will be scheduled whenever new or modified policy, procedure, rate or program must garner support, approval or stakeholder input from entities in addition to DHHS;
- B.7. Participate in weekly two-hour conference calls, as needed, with DHHS upon approval of agreement. UMass will participate in additional conference calls during same week, as requested if needed to meet any interim project deadline;
- B.8. Provide subject matter expertise to DHHS and those hospitals requiring technical assistance in completing the annual DSH Data Form via conference calls to be scheduled by DHHS with each hospital;
- B.9. Assist DHHS in developing fiscal models for DSH distribution methods. Likely an exercise needed at least twice in each annual cycle; first, a model to implement the current year legislative directive, and again when briefing legislative committees about options, and impacts for the upcoming (next) annual cycle;
- B.10. Review and develop methodology to be employed for the calculations of state uncompensated care, individual DSH hospitals uncompensated care, individual hospital upper payment limits (UPL), deemed DSH hospitals, and P1/P2 waiver tests. This will be completed upon request but will need to be done at least annually in the fall of each contract year and then repeated to reach final calculation of DSH payments once extent of state funding for the payments is finalized;
- B.11. Assist in the collection of DSH data from hospitals. Complete the calculations of uncompensated care, hospital specific DSH limits, DSH payments and estimated Medicaid Enhancement Tax (MET) revenue, and present findings to DHHS and subsequently to hospitals, specific legislative committees, and other stakeholders, as requested by DHHS;
- B.12. Draft changes to the Medicaid State Plan as applicable and assist in consultations with CMS as necessary on approval of the SPA. The assistance in resolving all outstanding SPAs and related Requests for Additional Information (RAI) responses is ongoing, and in each fiscal quarter, UMass would review all contract-related program topics and issues to identify any need for a new SPA; and, when requested, assist in drafting the SPA;
- B.13. Draft changes to the State/Administrative rules as applicable and assist in rule hearings as necessary on approval of rule changes. This task would be done in consultation with DHHS' Legal office where it relates to NH State Law;
- B.14. Assist DHHS in fulfilling federal mandate for individual hospital DSH audits to include review of preliminary report from independent contractor, participation in conference calls with auditors, development of communication strategies, and drafting of NH Medicaid's response to the auditor's findings;
- B.15. Other tasks, up to the maximum compensation and resources available under this Agreement, related to (a) the modification and administration of the NH uncompensated care program and (b) the implementation of the access to care provisions as requested by DHHS officials, including assistance with analysis and implementation of the new federal CMS access to care regulations, particularly as they apply to the drafting of responses to the pending Medicaid State Plan RAIs from CMS;
- B.16. Develop new Medicaid Data Reports that would collect and compile for DHHS not only DSH related information, but also all other institutional provider information needed to meet federal and state Medicaid agency responsibilities, manage claims payments, and understand provider cost and fiscal status. This is to be completed, if DHHS requests it by March 2013, with target date for implementation in FY14.

Deliverables

3.1. DSH Program Consultant Services

RFP Task #	Task	Preparation	Ongoing Support	As-needed or upon request	Other Actions needed for successful completion of deliverable
3.1.1.	Serve as subject matter expert on federal DSH policy, advising DHHS on compliance methods and policy options.	√	√		Each fiscal quarter assess need for SPAs, public notice and external communications and complete a quarterly action plan for timely SPAs
3.1.2.	Assist with implementing legislative DSH directives.	√	√		Analyze directives and develop, assess and describe pros and cons or all feasible options; develop implementation plan, and lead implementation
3.1.3	Conduct a planning conference call with DHHS to finalize a project plan and ensure a bilateral understanding and agreement of the scope of work and timeline.	√		Within 7-10 days of execution of Contract	
3.1.4	Assist in the review and editing of various communications related to DSH administration, including but not limited to, correspondences between DHHS, CMS and hospital providers; conference calls, public notices, Medicaid State Plan Amendments (SPA), and other policy statements.	√	√		Stay abreast of and maintain comprehensive understanding of all new federal law amendments, regulations and CMS policies so that conduct of review and editing is well-informed

RFP Task #	Task	Preparation	Ongoing Support	As-needed or upon request	Other Actions needed for successful completion of deliverable
3.1.5	Participate in minimum of six meetings as subject matter expert at the request of DHHS. Meeting venues may include Office of the Governor, CMS (Centers for Medicare and Medicaid Services) (Central and Regional Offices), Department of Justice, other NH State agencies, and Legislative Chairs and Committees.	√		(likely need to do more than 6 meetings each year of the contract)	Needed whenever new or modified policy, procedure, rate or program must garner support, approval or stakeholder input from entities in addition to DHHS
3.1.6	Provide subject matter expertise to DHHS and those hospitals requiring technical assistance in completing the annual DSH Data Form via conference calls to be scheduled by DHHS with each hospital.	√	Sept – December of each Contract year	√	Although DSH Data forms are circulated and completed and finalized in the fall each year, the Contractor may also need to provide such subject matter expertise to DHHS and to hospitals requiring technical assistance at other times during the year, whenever questions arise; e.g., when final DSH and MET revenue amounts are determined later in the state budget year.
3.1.7	Assist DHHS in developing fiscal models for DSH distribution methods.	√		√	Likely an exercise needed at least twice in each annual

RFP Task #	Task	Preparation	Ongoing Support	As-needed or upon request	Other Actions needed for successful completion of deliverable
					cycle; first, a model to implement the current year legislative directive, and again when briefing legislative committees about options, and impacts for the upcoming (next) annual cycle.
3.1.8	Review and develop methodology to be employed for the calculations of state uncompensated care, individual DSH hospitals uncompensated care, individual hospital upper payment limits, deemed DSH hospitals, and P1/P2 waiver tests.	√		√	As requested, but will need to be done at least annually in the fall of each contract year and then repeated to reach final calculation of DSH payments once extent of state funding for the payments is finalized.
3.1.9	Assist in the collection of DSH data from hospitals. Complete the calculations of uncompensated care, hospital specific DSH limits, DSH payments and estimated MET revenue, and present findings to DHHS and subsequently to hospitals, specific legislative committees, and other stakeholders, as requested by DHHS.	√		√	Similar to comment for task 3.1.8, above.
3.1.10	Draft changes to the Medicaid State Plan as applicable and assist in consultations with CMS as necessary on approval of the SPA.	√	√	√	The assistance in resolving all outstanding SPAs and related RAI

RFP Task #	Task	Preparation	Ongoing Support	As-needed or upon request	Other Actions needed for successful completion of deliverable
					responses is ongoing, and in each fiscal quarter, the Contractor would review all contract-related program topics and issues to identify any need for a new SPA; and, when requested, assist in drafting the SPA.
3.1.11	Draft changes to the State Administrative rules as applicable and assist in rule hearings as necessary on approval of rule changes.	√		√	This task would be done in consultation with DHHS' Legal office where it relates to NH State law.
3.1.12	Assist DHHS in fulfilling federal mandate for individual hospital DSH audits to include review of preliminary report from independent contractor, participation in conference calls with auditors, development of communication strategies, and drafting of NH Medicaid's response to the auditor's findings.		Annually in each year of the contract; related research and prep for each annual audit would be ongoing	√	
3.1.13	Participate in weekly two-hour conference calls, as needed, with DHHS upon approval of agreement.		√	√*	*Contractor will participate in additional conference calls during same week, as requested if needed to meet

RFP Task #	Task	Preparation	Ongoing Support	As-needed or upon request	Other Actions needed for successful completion of deliverable
					any interim project deadline.
3.1.14	<p>Other tasks, up to the maximum compensation and resources available under this Agreement, related to (a) the modification and administration of the NH uncompensated care program and (b) the implementation of the access to care provisions as requested by DHHS officials, including assistance with analysis and implementation of the new federal CMS access to care regulations, particularly as they apply to the drafting of responses to the pending Medicaid State Plan RAIs from CMS.</p> <p>**The Contractor shall develop new Medicaid Data Reports that would collect and compile for DHHS not only DSH related information, but also all other institutional provider information needed to meet federal and state Medicaid agency responsibilities, manage claims payments, and understand provider cost and fiscal status.</p>	√	√	√**	**The development of new Medicaid Data Reports is to be completed, if DHHS requests it by March 2013, with target date for implementation in FY14.

Section C. Performance Bond

- C.1 The Contractor will furnish a performance bond in the amount for the amount of the resulting Contract. The performance bond furnished by the Contractor will incorporate, by reference, the terms of the Contract as fully as though they were set forth verbatim in such bonds. In the event the Contract is amended, the penal sum of the performance bond will be deemed increased by like amount;
- C.2 the bond covering the initial Contract period will be submitted to the DHHS within thirty (30) calendar days of execution of the Contract. Any required amendment to the bond will be submitted to the DHHS within thirty (30) calendar days of said amendment.

Contractor Initials: AMM
Date: 10/12/10

Section D. Project Management and Implementation Work Plan

Major Milestones

- D.1 Kick off meeting and FY13 Workplan Agreement – November 2012 and repeated once per Contract year;
- D.2 Resolution of current State Plan Amendments and CMS Access Questions – November 2012 – February 2013;
- D.3 Advice on need for new SPAs, public notice – Ongoing- November 2012-June 2015;
- D.4 Draft new SPAs and notices, as needed – November 2012 – June 2015;
- D.5 Develop fiscal models for annual DSH payments in conformity with state and federal rules and state budget directives – November 2012, August 2013-November 2013, August 2014-November 2014;
- D.5 Develop, update and issue annual DSH data form – November 2012, July 2013 – September 2013, July 2014 – September 2014;
- D.6 Review Data Feedback and calculate preliminary revenue sources (MET et al.) for DSH payment – November 2012, August 2013 – November 2013, August 2014-November 2014;
- D.7 Review DSH Data Feedback and calculate preliminary DSH payments –November 2012- December 2012, September 2013 – November 2013, September 2014 – November 2014;
- D.8 Calculate interim final DSH payments (subject to final state budget directives and federally required independent DSH audits - 2-3 years later - by independent DSH audit contractor, under 42 CFR 455.300-304) – May 2013 – June 2013, May 2014 – June 2014, May 2015 – June 2015;
- D.9 Review and develop methods for calculations of state uncompensated care costs, DSH limits, Hospital UPLs, Deemed DSH identification, and P1/P2 provider tax test whenever some hospitals may be exempted from tax –November 2012-December 2012, August 2013 –November 2013, August 2014-November 2014;
- D.10 Assist with the development of responses to CMS inquires, and draft and/or edit and as requested review all draft responses– Ongoing – November 2012 – June 2015;
- D.11 Develop agenda and materials for CMS conference calls to resolve CMS questions; participate in calls; amend SPA provisions, provide other advice as needed to secure CMS approvals – November 2012, April 2013 – June 2013, April 2014 – June 2014, April 2015 – June 2015;
- D.12 Brief hospitals, solicit input and modify proposal, as appropriate and requested, in response to hospitals feedback; assist DHHS with providing hospital technical assistance on reimbursement matters, DSH payments, hospital cost reports and related financial information – November 2012 – January 2013, August 2013-November 2013, August 2014 – November 2014;
- D.13 Develop format and all presentation materials for an annual provider/stakeholder forum with DHHS officials to review past year's program, policy and process, develop understanding of upcoming year's program requirements, policies, parameters and procedures; solicit feedback on provider and stakeholder concerns – June-August each year, or other annual period as DHHS prefers;

- D.14 Provide advice, analysis, document drafting, meeting participation, presentations for state Legislative Committees, Legislative leadership, as requested and no less than annually – Ongoing – November 2012-June 2015;
- D.15 Provide advice, analysis, document drafting, meeting participation and presentations, as requested, for Executive Branch communication needs, including Governor's office or staff, DRA officials, Department of Justice attorneys, and DHHS leadership – Ongoing – November 2012-June 2015;
- D.16 Provide advice, analysis, document drafting, meeting participation and/or preparation, and presentations, as requested, for conference calls, negotiations or meetings with CMS staff and officials, the Secretary of the United States Department of Health and Human Services or other federal oversight agency (e.g. OIG) – Ongoing – November 2012-June 2015;
- D.17 Provide advice and assistance to DHHS on relationship management and negotiation strategies – Ongoing – November 2012-June 2015;
- D.18 Develop modeling for alternative DSH and Provider Tax programs that are aligned with and leverage State options and mandates under the federal health law, PPACA, in advance of the effective dates of various options and mandates – Ongoing – November 2012 – June 2015;
- D.19 Assist in development of periodic reports, as requested;
- D.20 Assist, advise and participate in CMS conference calls and meetings, as requested;
- D.21 Analyze and explain any final or new federal regulations or guidance relative to Access compliance – Ongoing – November 2012 – June 2015;
- D.22 Assist with Provider - CHHS communications relative to access policies, plans, issues and reporting, as requested;
- D.23 Assist DHHS staff, provide advice and assist in the preparation or review of materials relating to the incorporation of Access monitoring and measurement procedures into the terms, contract provisions and contractor management and oversight of the recently procured Care Management Plans – December 2012 – March 2013, January 2014 – March 2014, January 2015 – March 2015. Ongoing November 2012-June 2015;

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**Exhibit B
 Methods and Conditions Precedent to Payment
 Disproportionate Share Hospital (DSH) Program Consultant Service**

Payment shall be made to the Contractor on a monthly basis, up to a total maximum of \$602,883 as specified in block 1.8, Price Limitation, of the General Provisions on Form Number P-37. Reimbursement in year one shall start in November 2012, or the date of approval of contract by Governor and Executive Council, whichever is later.

Invoices shall be submitted monthly, on Contractor letterhead, to:

Valerie Brown
 Office of Medicaid Business and Policy
 129 Pleasant Street – Brown Building
 Concord, NH 03301-3857

The monthly invoice shall identify deliverables and support on an item basis and charges aggregated to a total amount for the month.

The Contractor agrees to request and receive prior written approval from the State to engage any subcontractors under this Agreement, and further agrees to pay the expenses of any subcontractors awarded under this Agreement in accordance with Exhibit A, Scope of Work.

The Contractor agrees to request and receive prior written approval from the State for any modifications to the total project budget for any state fiscal year (SFY), which change any expenditure levels from the levels projected in the budget of this Agreement.

The Contractor agrees to use and apply all payments made by the State for direct and indirect costs, and expenses associated with the execution of this Agreement. The Contractor's expenses for administration of any subcontractors shall not exceed the amounts identified in the project budget. Allowable costs and expenses shall be determined by the State in accordance with the project budget and applicable state and federal laws and regulations.

The Contractor agrees to not use or apply such payments for capital additions or improvements, dues to societies and organizations, entertainment costs, or any other costs not prior approved in writing by the State.

Payments will be made upon receipt of Contractor invoices that identify the contract components delivered and are consistent with the negotiated payment schedule. The total contract payment from DHHS will not exceed the agreed upon contract price. Estimated deliverable dates are included for reference. Monthly invoices should include only those deliverables that occurred during the month being billed for.

Pricing Worksheet

LINE	Scope of Work Specific Services	Part 3 RFP Section	***Estimated Hours Per State Fiscal Year	Total Cost SFY13	Total Cost SFY14	Total Cost SFY15	Total Cost SFY 16
1	Serve as subject matter	3.1.1	400 hrs	42,600	\$65,498	\$67,135	\$21,300

DHHS, Office of Medicaid Business and Policy

Standard Exhibit A – Scope of Work

Contractor Initials: *JAM*

Date: 10/2/12

LINE	Scope of Work Specific Services	Part 3 RFP Section	***Estimated Hours Per State Fiscal Year	Total Cost SFY13	Total Cost SFY14	Total Cost SFY15	Total Cost SFY 16
	expert on federal DSH policy, advising DHHS on compliance methods and policy options;						
2	Assist with implementing legislative DSH directives;	3.1.2	40 hrs	\$4,750	\$7,303	\$7,486	\$2,375
3	Conduct a planning conference call with DHHS to finalize a project plan and ensure a bilateral understanding and agreement of the scope of work and timeline;	3.1.3	3 hrs	\$390	\$600	\$615	\$195
4	Assist in the review and editing of various communications related to DSH administration, including but not limited to, correspondences between NH DHHS, CMS and hospital providers; conference calls, public notices, Medicaid State Plan Amendments (SPA), and other policy statements;	3.1.4	50 hrs	\$5,467	\$8,405	\$8,615	\$2,733
5	Participate in minimum of six meetings as subject matter expert at the request of DHHS. Meeting venues may include Office of the Governor, CMS (Central and Regional Offices), Department of Justice, other NH State agencies, and Legislative Chairs and Committees;	3.1.5	60 hrs	\$6,460	\$9,932	\$10,181	\$3,230
6	Provide subject matter expertise to DHHS and those hospitals requiring technical assistance in completing the annual DSH Data Form via conference calls to be scheduled by DHHS with each hospital;	3.1.6	20 hrs	\$2,274	\$3,495	\$3,583	\$1,136
7	Assist DHHS in developing fiscal models for DSH distribution methods;	3.1.7	20 hrs	\$1,750	\$2,691	\$2,758	\$875
8	Review and develop methodology to be employed for the calculations of state	3.1.8	40 hrs	\$3,674	\$5,648	\$5,789	\$1,836

DHHS, Office of Medicaid Business and Policy

Standard Exhibit A - Scope of Work

Contractor Initials: *JAM*

Date: 10/12/12

LINE	Scope of Work Specific Services	Part 3 RFP Section	***Estimated Hours Per State Fiscal Year	Total Cost SFY13	Total Cost SFY14	Total Cost SFY15	Total Cost SFY 16
	uncompensated care, individual DSH hospitals uncompensated care, individual hospital upper payment limits, deemed DSH hospitals, and P1/P2 waiver tests;						
9	Assist in the collection of DSH data from hospitals. Complete the calculations of uncompensated care, hospital specific DSH limits, DSH payments and estimated MET revenue, and present findings to DHHS and subsequently to hospitals, specific legislative committees, and other stakeholders, as requested by DHHS;	3.1.9	40 hrs	\$3,346	\$5,146	\$5,274	\$1,674
10	Draft changes to the Medicaid State Plan as applicable and assist in consultations with CMS as necessary on approval of the SPA;	3.1.10	12 hrs	\$1,548	\$2,380	\$2,440	\$774
11	Draft changes to the State Administrative rules as applicable and assist in rule hearings as necessary on approval of rule changes;	3.1.11	30 hrs	\$3,456	\$5,312	\$5,445	\$1,727
12	Assist DHHS in fulfilling federal mandate for individual hospital DSH audits to include review of preliminary report from independent contractor, participation in conference calls with auditors, development of communication strategies, and drafting of NH Medicaid's response to the auditor's findings;	3.1.12	20 hrs	\$2,206	\$3,393	\$3,478	\$1,104
13	Participate in weekly two-hour conference calls, as needed, with DHHS upon approval of agreement;	3.1.13	120 hrs	\$16,350	\$25,138	\$25,767	\$8,175
14	Other tasks, up to the maximum compensation and resources available under this Agreement, related to (a) the modification and administration of the	3.1.14	375 hrs	\$36,409	\$55,979	\$57,377	\$18,206

LINE	Scope of Work Specific Services	Part 3 RFP Section	***Estimated Hours Per State Fiscal Year	Total Cost SFY13	Total Cost SFY14	Total Cost SFY15	Total Cost SFY 16
	NH uncompensated care program and (b) the implementation of the access to care provisions as requested by DHHS officials, including assistance with analysis and implementation of the new federal CMS access to care regulations, particularly as they apply to the drafting of responses to the pending Medicaid State Plan RAIs from CMS. The Contractor shall develop new Medicaid Data Reports that would collect and compile for DHHS not only DSH related information, but also all other institutional provider information needed to meet federal and state Medicaid agency responsibilities, manage claims payments, and understand provider cost and fiscal status.						
Total			***1200 hrs	\$130,680	\$200,920	\$205,943	\$65,340

***Note: The costs for SFY 13, SFY 14, SFY 15 and SFY16 shall equal the total maximum amount for which the State shall be invoiced for all services provided as outlined in the RFP. The hours listed above are approximate; however, the total project budget for each fiscal year may not be exceed the price limitation specified in block 8. of the P-37. The State shall not pay any expenses or additional fees presented by the Contractor over and above fees quoted in this financial section.

Staff Hourly Rates

SFY 2013 Staff Position	Rate Per Hour
Jean Sullivan	\$235
Thomas Friedman	\$115
Larry Crehan	\$125
Katharine London or other Principal Associate	\$180
Michael Grenier or other Senior Associate	\$165
Senior Research Policy Analysts	\$98
Research Policy Analysts	\$80
SFY 2014 Staff Position	Rate Per Hour
Jean Sullivan	\$241
Thomas Friedman	\$118
Larry Crehan	\$128
Katharine London or other Principal Associate	\$185

DHHS, Office of Medicaid Business and Policy

Standard Exhibit A – Scope of Work

Contractor Initials: *JAM*

Date: *10/12/10*

Michael Grenier or other Senior Associate	\$169
Senior Research Policy Analysts	\$100
Research Policy Analysts	\$82
SFY 2015 Staff Position	Rate Per Hour
Jean Sullivan	\$247
Thomas Friedman	\$121
Larry Crehan	\$131
Katharine London or other Principal Associate	\$189
Michael Grenier or other Senior Associate	\$173
Senior Research Policy Analysts	\$102
Research Policy Analysts	\$84
SFY 2016 Staff Position	Rate Per Hour
Jean Sullivan	\$247
Thomas Friedman	\$121
Larry Crehan	\$131
Katharine London or other Principal Associate	\$189
Michael Grenier or other Senior Associate	\$173
Senior Research Policy Analysts	\$102
Research Policy Analysts	\$84

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NH Department of Health and Human Services
STANDARD EXHIBIT C

SPECIAL PROVISIONS

1. Contractors Obligations: The Contractor covenants and agrees that all funds received by the Contractor under the Contract shall be used only as payment to the Contractor for services provided to eligible individuals and, in the furtherance of the aforesaid covenants, the Contractor hereby covenants and agrees as follows:

2. Compliance with Federal and State Laws: If the Contractor is permitted to determine the eligibility of individuals such eligibility determination shall be made in accordance with applicable federal and state laws, regulations, orders, guidelines, policies and procedures.

3. Time and Manner of Determination: Eligibility determinations shall be made on forms provided by the Department for that purpose and shall be made and remade at such times as are prescribed by the Department.

4. Documentation: In addition to the determination forms required by the Department, the Contractor shall maintain a data file on each recipient of services hereunder, which file shall include all information necessary to support an eligibility determination and such other information as the Department requests. The Contractor shall furnish the Department with all forms and documentation regarding eligibility determinations that the Department may request or require.

5. Fair Hearings: The Contractor understands that all applicants for services hereunder, as well as individuals declared ineligible have a right to a fair hearing regarding that determination. The Contractor hereby covenants and agrees that all applicants for services shall be permitted to fill out an application form and that each applicant or re-applicant shall be informed of his/her right to a fair hearing in accordance with Department regulations.

6. Gratuities or Kickbacks: The Contractor agrees that it is a breach of this Contract to accept or make a payment, gratuity or offer of employment on behalf of the Contractor, any Sub-Contractor or the State in order to influence the performance of the Scope of Work detailed in Exhibit A of this Contract. The State may terminate this Contract and any sub-contract or sub-agreement if it is determined that payments, gratuities or offers of employment of any kind were offered or received by any officials, officers, employees or agents of the Contractor or Sub-Contractor.

7. Retroactive Payments: Notwithstanding anything to the contrary contained in the Contract or in any other document, contract or understanding, it is expressly understood and agreed by the parties hereto, that if the Contractor is required under this Contract to provide medical services to individuals, no payments will be made hereunder to reimburse the Contractor for such costs incurred for any purpose or for any services provided to any individual prior to the Effective Date of the Contract and no payments shall be made for expenses incurred by the Contractor for any services provided prior to the date *on which the individual applies for services or (except as otherwise provided by the federal regulations) prior to a determination that the individual is eligible for such services.*

8. Conditions of Purchase: Notwithstanding anything to the contrary contained in the Contract, nothing herein contained shall be deemed to obligate or require the Department to purchase services hereunder at a rate which reimburses the Contractor in excess of the Contractor's costs, at a rate which exceeds the amounts reasonable and necessary to assure the quality of such service, or at a rate which exceeds the rate charged by the Contractor to ineligible individuals or other third party fundors for such service. If at any time during the term of this Contract or after receipt of the Final Expenditure Report hereunder, the Department shall determine that the Contractor has used payments hereunder to reimburse items of expense other than such costs, or has received payment in excess of such costs or in excess of such rates charged by the Contractor to ineligible individuals or other third party fundors, the Department may elect to:

8.1 Renegotiate the rates for payment hereunder, in which event new rates shall be established;

8.2 Deduct from any future payment to the Contractor the amount of any prior reimbursement in excess of costs;

8.3 Demand repayment of the excess payment by the Contractor in which event failure to make such repayment shall constitute an Event of Default hereunder. When the Contractor is permitted to determine the eligibility of individuals for services, the Contractor agrees to reimburse the Department for all funds paid by the Department to the Contractor for services provided to any individual who is found by the Department to be ineligible for such services at any time during the period of retention of records established herein.

RECORDS: MAINTENANCE, RETENTION, AUDIT, DISCLOSURE AND CONFIDENTIALITY:

9. **Maintenance of Records:** In addition to the eligibility records specified above, the Contractor covenants and agrees to maintain the following records during the Contract Period:

9.1 **Fiscal Records:** books, records, documents and other data evidencing and reflecting all costs and other expenses incurred by the Contractor in the performance of the Contract, and all income received or collected by the Contractor during the Contract Period, said records to be maintained in accordance with accounting procedures and practices which sufficiently and properly reflect all such costs and expenses, and which are acceptable to the Department, and to include, without limitation, all ledgers, books, records, and original evidence of costs such as purchase requisitions and orders, vouchers, requisitions for materials, inventories, valuations of in-kind contributions, labor time cards, payrolls, and other records requested or required by the Department.

9.2 **Statistical Records:** Statistical, enrollment, attendance or visit records for each recipient of services during the Contract Period, which records shall include all records of application and eligibility (including all forms required to determine eligibility for each such recipient), records regarding the provision of services and all invoices submitted to the Department to obtain payment for such services.

9.3 **Medical Records:** Where appropriate and as prescribed by the Department regulations, the Contractor shall retain medical records on each patient/recipient of services.

10. **Audit:** Contractor shall submit an annual audit to the Department within 60 days after the close of the agency fiscal year. It is recommended that the report be prepared in accordance with the provision of Office of Management and Budget Circular A-133, "Audits of States, Local Governments, and Non Profit Organizations" and the provisions of Standards for Audit of Governmental Organizations, Programs, Activities and Functions, issued by the US General Accounting Office (GAO standards) as they pertain to financial compliance audits.

10.1 **Audit and Review:** During the term of this Contract and the period for retention hereunder, the Department, the United States Department of Health and Human Services, and any of their designated representatives shall have access to all reports and records maintained pursuant to the Contract for purposes of audit, examination, excerpts and transcripts.

10.2 **Audit Liabilities:** In addition to and not in any way in limitation of obligations of the Contract, it is understood and agreed by the Contractor that the Contractor shall be held liable for any state or federal audit exceptions and shall return to the Department, all payments made under the Contract to which exception has been taken or which have been disallowed because of such an exception.

11. **Confidentiality of Records:** All information, reports, and records maintained hereunder or collected in connection with the performance of the services and the Contract shall be confidential and shall not be disclosed by the Contractor, provided however, that pursuant to state laws and the regulations of the Department regarding the use and disclosure of such information, disclosure may be made to public officials requiring such information in connection with their official duties and for purposes directly connected to the administration of the services and the Contract; and provided further, that the use or disclosure by any party of any information concerning a recipient for any purpose not directly connected with the administration of the Department or the Contractor's responsibilities with respect to purchased services hereunder is prohibited except on written consent of the recipient, his attorney or guardian.

Notwithstanding anything to the contrary contained herein the covenants and conditions contained in the Paragraph shall survive the termination of the Contract for any reason whatsoever.

12. Reports: Fiscal and Statistical: The Contractor agrees to submit the following reports at the following times if requested by the Department.

12.1 Interim Financial Reports: Written interim financial reports containing a detailed description of all costs and non-allowable expenses incurred by the Contractor to the date of the report and containing such other information as shall be deemed satisfactory by the Department to justify the rate of payment hereunder. Such Financial Reports shall be submitted on the form designated by the Department or deemed satisfactory by the Department.

12.2 Final Report: A final report shall be submitted within thirty (30) days after the end of the term of this Contract. The Final Report shall be in a form satisfactory to the Department and shall contain a summary statement of progress toward goals and objectives stated in the Proposal and other information required by the Department.

13. Completion of Services: Disallowance of Costs: Upon the purchase by the Department of the maximum number of units provided for in the Contract and upon payment of the price limitation hereunder, the Contract and all the obligations of the parties hereunder (except such obligations as, by the terms of the Contract are to be performed after the end of the term of this Contract and/or survive the termination of the Contract) shall terminate, provided however, that if, upon review of the Final Expenditure Report the Department shall disallow any expenses claimed by the Contractor as costs hereunder the Department shall retain the right, at its discretion, to deduct the amount of such expenses as are disallowed or to recover such sums from the Contractor.

14. Credits: All documents, notices, press releases, research reports and other materials prepared during or resulting from the performance of the services of the Contract shall include the following statement:

14.1 The preparation of this (report, document etc.) was financed under a Contract with the State of New Hampshire, Department of Health and Human Services, Office of Medicaid Business and Policy, with funds provided in part by the State of New Hampshire and/or such other funding sources as were available or required, e.g., the United States Department of Health and Human Services.

15. Operation of Facilities: Compliance with Laws and Regulations: In the operation of any facilities for providing services, the Contractor shall comply with all laws, orders and regulations of federal, state, county and municipal authorities and with any direction of any Public Officer or officers pursuant to laws which shall impose an order or duty upon the contractor with respect to the operation of the facility or the provision of the services at such facility. If any governmental license or permit shall be required for the operation of the said facility or the performance of the said services, the Contractor will procure said license or permit, and will at all times comply with the terms and conditions of each such license or permit. In connection with the foregoing requirements, the Contractor hereby covenants and agrees that, during the term of this Contract the facilities shall comply with all rules, orders, regulations, and requirements of the State Office of the Fire Marshal and the local fire protection agency, and shall be in conformance with local building and zoning codes, by-laws and regulations.

SPECIAL PROVISIONS - DEFINITIONS

As used in the Contract, the following terms shall have the following meanings:

COSTS: Shall mean those direct and indirect items of expense determined by the Department to be allowable and reimbursable in accordance with cost and accounting principles established in accordance with state and federal laws, regulations, rules and orders.

DEPARTMENT: NH Department of Health and Human Services.

FINANCIAL MANAGEMENT GUIDELINES: Shall mean that section of the Contractor Manual which is entitled "Financial Management Guidelines" and which contains the regulations governing the financial activities of contractor agencies which have contracted with the State of NH to receive funds.

PROPOSAL: If applicable, shall mean the document submitted by the Contractor on a form or forms required by the Department and containing a description of the Services to be provided to eligible individuals by the Contractor in accordance with the terms and conditions of the Contract and setting forth the total cost and sources of revenue for each service to be provided under the Contract.

UNIT: For each service that the Contractor is to provide to eligible individuals hereunder, shall mean that period of time or that specified activity determined by the Department and specified in Exhibit B of the Contract.

FEDERAL/STATE LAW: Wherever federal or state laws, regulations, rules, orders, and policies, etc. are referred to in the Contract; the said reference shall be deemed to mean all such laws, regulations, etc. as they may be amended or revised from the time to time.

CONTRACTOR MANUAL: Shall mean that document prepared by the NH Department of Administrative Services containing a compilation of all regulations promulgated pursuant to the New Hampshire Administrative Procedures Act. NH RSA Ch 541-A, for the purpose of implementing State of NH and federal regulations promulgated thereunder.

SUPPLANTING OTHER FEDERAL FUNDS: The Contractor guarantees that funds provided under this Contract will not supplant any existing federal funds available for these services.

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NH Department of Health and Human Services

STANDARD EXHIBIT C-1

ADDITIONAL SPECIAL PROVISIONS

Exceptions to Terms and Conditions of P-37, Standard Exhibit C and Standard Exhibit I

1) Indemnification:

Form P-37 Addendum:

Subparagraph 13 of the General Provisions of this Agreement is hereby amended to read:

"Contractor shall comply with any and all requirements of this Agreement; in the event that the Contractor fails to comply with any such requirements, including, but not limited, to disclosure of any PHI in violation of this Agreement, the Covered Entity may pursue all available remedies, at law and in equity, including without limitation any damages or losses it suffers from Contractor's breach of this Agreement. The respective rights and obligations of Contractor under this Agreement shall survive termination for this Agreement."

Standard Exhibit C

"The parties acknowledge that the Contractor will not be providing services to Medicaid eligible individuals or to applicants for Medicaid pursuant to this Agreement. Therefore, the parties agree that the provisions in Standard Exhibit C, Special Provisions, related to such services, including but not limited to subparagraphs 1, 4, 5, 7, 8, 9.2, and 9.3, are not applicable to this Agreement."

Standard Exhibit I Addendum:

The section entitled "Survival" in Subparagraph 6 of the Standard Exhibit I executed in connection with this Agreement is hereby amended to read:

"Survival". Provisions in this Exhibit I regarding the use and disclosure of PHI, return or destruction of PHI, extensions of the protections of the Agreement in section 3 k., the defense and indemnification provisions of section 3 d. and standard contract provision #13, as amended, shall survive the termination of the Agreement."

2) Subparagraph 14. INSURANCE

Subparagraph 14.1.2 shall be struck from Form P-37.

Subparagraph 14.3 of Form P-37 is hereby amended to read:

"The Contractor shall furnish to the Contracting Officer identified in block 1.9, or his or her successor, a certificate(s) of insurance for all insurance required under this Agreement. Contractor shall also furnish to the Contracting Officer identified in block 1.9, or his or her successor, certificate(s) of insurance for all renewal(s) of insurance required under this Agreement no later

than fifteen (15) days prior to the expiration date of each of the insurance policies. The certificates(s) of insurance and any renewals thereof shall be attached and are incorporated herein by reference. Each certificate(s) of insurance shall contain a clause requiring the insurer to provide notice in accordance with the policy provisions. The Contractor shall endeavor to provide the Contracting Officer identified in block 1.9, or his or her successor, no less than ten (10) days prior written notice of cancellation or modification of the policy.”

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**NH Department of Health and Human Services
STANDARD EXHIBIT D
CERTIFICATION REGARDING DRUG-FREE WORKPLACE REQUIREMENTS**

The Contractor identified in Section 1.3 of the General Provisions agrees to comply with the provisions of Sections 5151-5160 of the Drug-Free Workplace Act of 1988 (Pub. L. 100-690, Title V, Subtitle D; 41 U.S.C. 701 et seq.), and further agrees to have the Contractor's representative, as identified in Sections 1.11 and 1.12 of the General Provisions execute the following Certification:

ALTERNATIVE I - FOR GRANTEES OTHER THAN INDIVIDUALS

**US DEPARTMENT OF HEALTH AND HUMAN SERVICES - CONTRACTORS
US DEPARTMENT OF EDUCATION - CONTRACTORS
US DEPARTMENT OF AGRICULTURE - CONTRACTORS**

This certification is required by the regulations implementing Sections 5151-5160 of the Drug-Free Workplace Act of 1988 (Pub. L. 100-690, Title V, Subtitle D; 41 U.S.C. 701 et seq.). The January 31, 1989 regulations were amended and published as Part II of the May 25, 1990 Federal Register (pages 21681-21691), and require certification by grantees (and by inference, sub-grantees and sub-contractors), prior to award, that they will maintain a drug-free workplace. Section 3017.630(c) of the regulation provides that a grantee (and by inference, sub-grantees and sub-contractors) that is a State may elect to make one certification to the Department in each federal fiscal year in lieu of certificates for each grant during the federal fiscal year covered by the certification. The certificate set out below is a material representation of fact upon which reliance is placed when the agency awards the grant. False certification or violation of the certification shall be grounds for suspension of payments, suspension or termination of grants, or government wide suspension or debarment. Contractors using this form should send it to:

Commissioner
NH Department of Health and Human Services
129 Pleasant Street,
Concord, NH 03301-6505

- (A) The grantee certifies that it will or will continue to provide a drug-free workplace by:
- (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
 - (b) Establishing an ongoing drug-free awareness program to inform employees about
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's policy of maintaining a drug-free workplace;
 - (3) Any available drug counseling, rehabilitation, and employee assistance programs; and
 - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
 - (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);

- (d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will
 - (1) Abide by the terms of the statement; and
 - (2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;
- (e) Notifying the agency in writing, within ten calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;
- (f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted
 - (1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or
 - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;
- (g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e), and (f).

(B) The grantee may insert in the space provided below the site(s) for the performance of work done in connection with the specific grant.

Place of Performance (street address, city, county, state, zip code) (list each location)

529 Main Street, Charlestown, MA 02129

Check if there are workplaces on file that are not identified here.

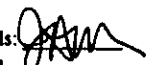
University of Massachusetts Medical School From: November 1, 2012 To: October 31, 2015
(Contractor Name) (Period Covered by this Certification)

Joyce A. Murphy, Executive Vice Chancellor, Commonwealth Medicine, UMMS
(Name & Title of Authorized Contractor Representative)


(Contractor Representative Signature)

10/12/12
(Date)

NH DHHS, Office of Medicaid Business and Policy

Contractor Initials: 

Standard Exhibit D

Date: 10/12/12

NH Department of Health and Human Services

STANDARD EXHIBIT E
CERTIFICATION REGARDING LOBBYING

The Contractor identified in Section 1.3 of the General Provisions agrees to comply with the provisions of Section 319 of Public Law 101-121, Government wide Guidance for New Restrictions on Lobbying, and 31 U.S.C. 1352, and further agrees to have the Contractor's representative, as identified in Sections 1.11 and 1.12 of the General Provisions execute the following Certification:

US DEPARTMENT OF HEALTH AND HUMAN SERVICES - CONTRACTORS
US DEPARTMENT OF EDUCATION - CONTRACTORS
US DEPARTMENT OF AGRICULTURE - CONTRACTORS

Programs (indicate applicable program covered):

- *Temporary Assistance to Needy Families under Title IV-A
- *Child Support Enforcement Program under Title IV-D
- *Social Services Block Grant Program under Title XX
- *Medicaid Program under Title XIX
- *Community Services Block Grant under Title VI
- *Child Care Development Block Grant under Title IV

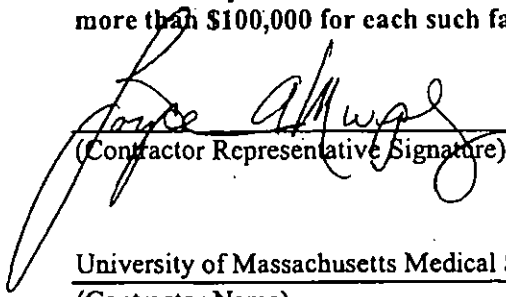
Contract Period: November 1, 2012 through October 31, 2015

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement (and by specific mention sub-grantee or sub-contractor).
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement (and by specific mention sub-grantee or sub-contractor), the undersigned shall complete and submit Standard Form LLL, (Disclosure Form to Report Lobbying, in accordance with its instructions, attached and identified as Standard Exhibit E-1.)
- (3) The undersigned shall require that the language of this certification be included in the award document for sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails

to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.


(Contractor Representative Signature)

Joyce A. Murphy, Executive Vice Chancellor,
Commonwealth Medicine, UMMS.
(Authorized Contractor Representative Name & Title)

University of Massachusetts Medical School
(Contractor Name)

10/12/12
(Date)

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NH Department of Health and Human Services

STANDARD EXHIBIT F

CERTIFICATION REGARDING DEBARMENT, SUSPENSION
AND OTHER RESPONSIBILITY MATTERS

The Contractor identified in Section 1.3 of the General Provisions agrees to comply with the provisions of Executive Office of the President, Executive Order 12549 and 45 CFR Part 76 regarding Debarment, Suspension, and Other Responsibility Matters, and further agrees to have the Contractor's representative, as identified in Sections 1.11 and 1.12 of the General Provisions execute the following Certification:

INSTRUCTIONS FOR CERTIFICATION

1. By signing and submitting this proposal (contract), the prospective primary participant is providing the certification set out below.
2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. If necessary, the prospective participant shall submit an explanation of why it cannot provide the certification. The certification or explanation will be considered in connection with the NH Department of Health and Human Services' (DHHS) determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.
3. The certification in this clause is a material representation of fact upon which reliance was placed when DHHS determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, DHHS may terminate this transaction for cause or default.
4. The prospective primary participant shall provide immediate written notice to the DHHS agency to whom this proposal (contract) is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549: 45 CFR Part 76. See the attached definitions.
6. The prospective primary participant agrees by submitting this proposal (contract) that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by DHHS.
7. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and

Voluntary Exclusion - Lower Tier Covered Transactions," provided by DHHS; without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

8. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or involuntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List (of excluded parties).
9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
10. Except for transactions authorized under paragraph 6 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal government, DHHS may terminate this transaction for cause or default.

PRIMARY COVERED TRANSACTIONS

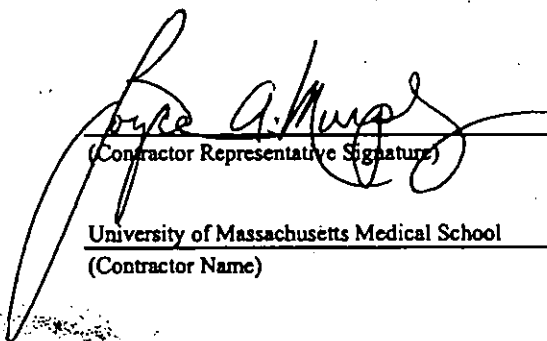
- (1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
 - (a) are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - (b) have not within a three-year period preceding this proposal (contract) been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or a contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (c) are not presently indicted for otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
 - (d) have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- (2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal (contract).

LOWER TIER COVERED TRANSACTIONS

By signing and submitting this lower tier proposal (contract), the prospective lower tier participant, as defined in 45 CFR Part 76, certifies to the best of its knowledge and belief that it and its principals:

- (a) are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.
- (b) where the prospective lower tier participant is unable to certify to any of the above, such prospective participant shall attach an explanation to this proposal (contract).

The prospective lower tier participant further agrees by submitting this proposal (contract) that it will include this clause entitled "Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion - Lower Tier Covered Transactions," without modification in all lower tier covered transactions and in all solicitations for lower tier covered transactions.



(Contractor Representative Signature)

Joyce A. Murphy, Executive Vice Chancellor,
Commonwealth Medicine, UMMS

(Authorized Contractor Representative Name & Title)

University of Massachusetts Medical School

(Contractor Name)

10/12/12

(Date)

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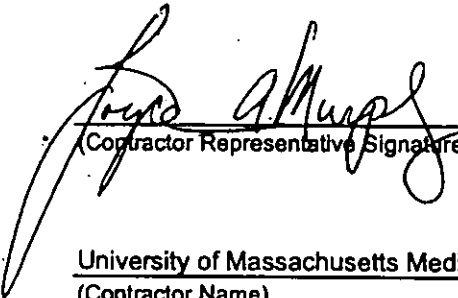
NH Department of Health and Human Services

STANDARD EXHIBIT G

CERTIFICATION REGARDING
THE AMERICANS WITH DISABILITIES ACT COMPLIANCE

The Contractor identified in Section 1.3 of the General Provisions agrees by signature of the Contractor's representative as identified in Sections 1.11 and 1.12 of the General Provisions, to execute the following certification:

1. By signing and submitting this proposal (contract) the Contractor agrees to make reasonable efforts to comply with all applicable provisions of the Americans with Disabilities Act of 1990.



(Contractor Representative Signature)

Joyce A. Murphy, Executive Vice Chancellor,
Commonwealth Medicine, UMMS

(Authorized Contractor Representative Name & Title)

University of Massachusetts Medical School

(Contractor Name)

10/12/12

(Date)

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NH Department of Health and Human Services

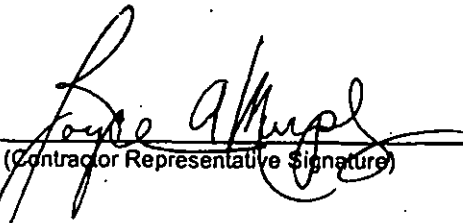
STANDARD EXHIBIT H

CERTIFICATION REGARDING ENVIRONMENTAL TOBACCO SMOKE

Public Law 103-227, Part C - Environmental Tobacco Smoke, also known as the Pro-Children Act of 1994 (Act), requires that smoking not be permitted in any portion of any indoor facility owned or leased or contracted for by an entity and used routinely or regularly for the provision of health, day care, education, or library services to children under the age of 18, if the services are funded by Federal programs either directly or through State or local governments, by Federal grant, contract, loan, or loan guarantee. The law does not apply to children's services provided in private residences, facilities funded solely by Medicare or Medicaid funds, and portions of facilities used for inpatient drug or alcohol treatment. Failure to comply with the provisions of the law may result in the imposition of a civil monetary penalty of up to \$1000 per day and/or the imposition of an administrative compliance order on the responsible entity.

The Contractor identified in Section 1.3 of the General Provisions agrees, by signature of the Contractor's representative as identified in Section 1.11 and 1.12 of the General Provisions, to execute the following certification:

1. By signing and submitting this contract, the Contractor agrees to make reasonable efforts to comply with all applicable provisions of Public Law 103-227, Part C, known as the Pro-Children Act of 1994.


(Contractor Representative Signature)

Joyce A. Murphy, Executive Vice Chancellor,
Commonwealth Medicine, UMMS
(Authorized Contractor Representative Name & Title)

University of Massachusetts Medical School
(Contractor Name)

10/12/12
(Date)

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NH Department of Health and Human Services

STANDARD EXHIBIT I

HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT
BUSINESS ASSOCIATE AGREEMENT

The Contractor identified in Section 1.3 of the General Provisions of the Agreement agrees to comply with the Health Insurance Portability and Accountability Act, Public Law 104-191 and with the Standards for Privacy and Security of Individually Identifiable Health Information, 45 CFR Parts 160 and 164 and those parts of the HITECH Act applicable to business associates. As defined herein, "Business Associate" shall mean the Contractor and subcontractors and agents of the Contractor that receive, use or have access to protected health information under this Agreement and "Covered Entity" shall mean the State of New Hampshire, Department of Health and Human Services.

BUSINESS ASSOCIATE AGREEMENT

(1) **Definitions.**

- a. "**Breach**" shall have the same meaning as the term "Breach" in Title XXX, Subtitle D. Sec. 13400.
- b. "**Business Associate**" has the meaning given such term in section 160.103 of Title 45, Code of Federal Regulations.
- c. "**Covered Entity**" has the meaning given such term in section 160.103 of Title 45, Code of Federal Regulations.
- d. "**Designated Record Set**" shall have the same meaning as the term "designated record set" in 45 CFR Section 164.501.
- e. "**Data Aggregation**" shall have the same meaning as the term "data aggregation" in 45 CFR Section 164.501.
- f. "**Health Care Operations**" shall have the same meaning as the term "health care operations" in 45 CFR Section 164.501.
- g. "**HITECH Act**" means the Health Information Technology for Economic and Clinical Health Act, Title XIII, Subtitle D, Part 1 & 2 of the American Recovery and Reinvestment Act of 2009.
- h. "**HIPAA**" means the Health Insurance Portability and Accountability Act of 1996, Public Law 104-191 and the Standards for Privacy and Security of Individually Identifiable Health Information, 45 CFR Parts 160, 162 and 164.
- i. "**Individual**" shall have the same meaning as the term "individual" in 45 CFR Section 164.501 and shall include a person who qualifies as a personal representative in accordance with 45 CFR Section 164.501(g).
- j. "**Privacy Rule**" shall mean the Standards for Privacy of Individually Identifiable Health Information at 45 CFR Parts 160 and 164, promulgated under HIPAA by the United States Department of Health and Human Services.

- k. "Protected Health Information" shall have the same meaning as the term "protected health information" in 45 CFR Section 164.501, limited to the information created or received by Business Associate from or on behalf of Covered Entity.
- l. "Required by Law" shall have the same meaning as the term "required by law" in 45 CFR Section 164.501.
- m. "Secretary" shall mean the Secretary of the Department of Health and Human Services or his/her designee.
- n. "Security Rule" shall mean the Security Standards for the Protection of Electronic Protected Health Information at 45 CFR Part 164, Subpart C, and amendments thereto.
- o. "Unsecured Protected Health Information" means protected health information that is not secured by a technology standard that renders protected health information unusable, unreasonable, or indecipherable to unauthorized individuals and is developed or endorsed by a standards developing organization that is accredited by the American National Standards Institute.
- p. Other Definitions - All terms not otherwise defined herein shall have the meaning established under 45 C.F.R. Parts 160, 162 and 164, as amended from time to time, and the HITECH Act.

(2) Use and Disclosure of Protected Health Information.

- a. Business Associate shall not use, disclose, maintain or transmit Protected Health Information (PHI) except as reasonably necessary to provide the services outlined under Exhibit A of the Agreement. Further, the Business Associate shall not, and shall ensure that its directors, officers, employees and agents, do not use, disclose, maintain or transmit PHI in any manner that would constitute a violation of the Privacy and Security Rule.
- b. Business Associate may use or disclose PHI:
 - I. For the proper management and administration of the Business Associate;
 - II. As required by law, pursuant to the terms set forth in paragraph d. below; or
 - III. For data aggregation purposes for the health care operations of Covered Entity.
- c. To the extent Business Associate is permitted under the Agreement to disclose PHI to a third party, Business Associate must obtain, prior to making any such disclosure, (i) reasonable assurances from the third party that such PHI will be held confidentially and used or further disclosed only as required by law or for the purpose for which it was disclosed to the third party; and (ii) an agreement from such third party to notify Business Associate, in accordance with the HITECH Act, Subtitle D, Part 1, Sec. 13402 of any breaches of the confidentiality of the PHI, to the extent it has obtained knowledge of such breach.
- d. The Business Associate shall not, unless such disclosure is reasonably necessary to provide services under Exhibit A of the Agreement, disclose any PHI in response to a request for disclosure on the basis that it is required by law, without first notifying Covered Entity so that Covered Entity has an opportunity to object to the disclosure and to seek appropriate relief. If Covered Entity objects to such disclosure, the Business Associate shall refrain from disclosing the PHI until Covered Entity has exhausted all remedies.

- e. If the Covered Entity notifies the Business Associate that Covered Entity has agreed to be bound by additional restrictions over and above those uses or disclosures or security safeguards of PHI pursuant to the Privacy and Security Rule, the Business Associate shall be bound by such additional restrictions and shall not disclose PHI in violation of such additional restrictions and shall abide by any additional security safeguards.

(3) Obligations and Activities of Business Associate.

- a. Business Associate shall report to the designated Privacy Officer of Covered Entity, in writing, any use or disclosure of PHI in violation of the Agreement, including any security incident involving Covered Entity data, in accordance with the HITECH Act, Subtitle D, Part 1, Sec. 13402.
- b. The Business Associate shall comply with all sections of the Privacy and Security Rule as set forth in, the HITECH Act, Subtitle D, Part 1, Sec. 13401 and Sec. 13404.
- c. Business Associate shall make available all of its internal policies and procedures, books and records relating to the use and disclosure of PHI received from, or created or received by the Business Associate on behalf of Covered Entity to the Secretary for purposes of determining Covered Entity's compliance with HIPAA and the Privacy and Security Rule.
- d. Business Associate shall require all of its business associates that receive, use or have access to PHI under the Agreement, to agree in writing to adhere to the same restrictions and conditions on the use and disclosure of PHI contained herein, including the duty to return or destroy the PHI as provided under Section (3)b and (3)k herein. The Covered Entity shall be considered a direct third party beneficiary of the Contractor's business associate agreements with Contractor's intended business associates, who will be receiving PHI pursuant to this Agreement, with rights of enforcement and indemnification from such business associates who shall be governed by standard provision #13 of this Agreement for the purpose of use and disclosure of protected health information.
- e. Within five (5) business days of receipt of a written request from Covered Entity, Business Associate shall make available during normal business hours at its offices all records, books, agreements, policies and procedures relating to the use and disclosure of PHI to the Covered Entity, for purposes of enabling Covered Entity to determine Business Associate's compliance with the terms of the Agreement.
- f. Within ten (10) business days of receiving a written request from Covered Entity, Business Associate shall provide access to PHI in a Designated Record Set to the Covered Entity, or as directed by Covered Entity, to an individual in order to meet the requirements under 45 CFR Section 164.524.
- g. Within ten (10) business days of receiving a written request from Covered Entity for an amendment of PHI or a record about an individual contained in a Designated Record Set, the Business Associate shall make such PHI available to Covered Entity for amendment and incorporate any such amendment to enable Covered Entity to fulfill its obligations under 45 CFR Section 164.526.

- h. Business Associate shall document such disclosures of PHI and information related to such disclosures as would be required for Covered Entity to respond to a request by an individual for an accounting of disclosures of PHI in accordance with 45 CFR Section 164.528.
- i. Within ten (10) business days of receiving a written request from Covered Entity for a request for an accounting of disclosures of PHI, Business Associate shall make available to Covered Entity such information as Covered Entity may require to fulfill its obligations to provide an accounting of disclosures with respect to PHI in accordance with 45 CFR Section 164.528.
- j. In the event any individual requests access to, amendment of, or accounting of PHI directly from the Business Associate, the Business Associate shall within two (2) business days forward such request to Covered Entity. Covered Entity shall have the responsibility of responding to forwarded requests. However, if forwarding the individual's request to Covered Entity would cause Covered Entity or the Business Associate to violate HIPAA and the Privacy and Security Rule, the Business Associate shall instead respond to the individual's request as required by such law and notify Covered Entity of such response as soon as practicable.
- k. Within ten (10) business days of termination of the Agreement, for any reason, the Business Associate shall return or destroy, as specified by Covered Entity, all PHI received from, or created or received by the Business Associate in connection with the Agreement, and shall not retain any copies or back-up tapes of such PHI. If return or destruction is not feasible, or the disposition of the PHI has been otherwise agreed to in the Agreement, Business Associate shall continue to extend the protections of the Agreement, to such PHI and limit further uses and disclosures of such PHI to those purposes that make the return or destruction infeasible, for so long as Business Associate maintains such PHI. If Covered Entity, in its sole discretion, requires that the Business Associate destroy any or all PHI, the Business Associate shall certify to Covered Entity that the PHI has been destroyed.

(4) Obligations of Covered Entity

- a. Covered Entity shall notify Business Associate of any changes or limitation(s) in its Notice of Privacy Practices provided to individuals in accordance with 45 CFR Section 164.520, to the extent that such change or limitation may affect Business Associate's use or disclosure of PHI.
- b. Covered Entity shall promptly notify Business Associate of any changes in, or revocation of permission provided to Covered Entity by individuals whose PHI may be used or disclosed by Business Associate under this Agreement, pursuant to 45 CFR Section 164.506 or 45 CFR Section 164.508.
- c. Covered entity shall promptly notify Business Associate of any restrictions on the use or disclosure of PHI that Covered Entity has agreed to in accordance with 45 CFR 164.522, to the extent that such restriction may affect Business Associate's use or disclosure of PHI.

(5) Termination for Cause

In addition to standard provision #10 of this Agreement the Covered Entity may immediately terminate the Agreement upon Covered Entity's knowledge of a breach by Business Associate of the Business Associate Agreement set forth herein as Exhibit I. The Covered Entity may either immediately terminate the Agreement or provide an opportunity for Business Associate to cure the alleged breach within a timeframe specified by Covered Entity. If Covered Entity determines

that neither termination nor cure is feasible, Covered Entity shall report the violation to the Secretary.

(6) Miscellaneous

- a. Definitions and Regulatory References. All terms used, but not otherwise defined herein, shall have the same meaning as those terms in the Privacy and Security Rule, and the HITECH Act as amended from time to time. A reference in the Agreement, as amended to include this Exhibit I, to a Section in the Privacy and Security Rule means the Section as in effect or as amended.
- b. Amendment. Covered Entity and Business Associate agree to take such action as is necessary to amend the Agreement, from time to time as is necessary for Covered Entity to comply with the changes in the requirements of HIPAA, the Privacy and Security Rule, and applicable federal and state law.
- c. Data Ownership. The Business Associate acknowledges that it has no ownership rights with respect to the PHI provided by or created on behalf of Covered Entity.
- d. Interpretation. The parties agree that any ambiguity in the Agreement shall be resolved to permit Covered Entity to comply with HIPAA, the Privacy and Security Rule and the HITECH Act.
- e. Segregation. If any term or condition of this Exhibit I or the application thereof to any person(s) or circumstance is held invalid, such invalidity shall not affect other terms or conditions which can be given effect without the invalid term or condition; to this end the terms and conditions of this Exhibit I are declared severable.
- f. Survival. Provisions in this Exhibit I regarding the use and disclosure of PHI, return or destruction of PHI, extensions of the protections of the Agreement in section 3 k, the defense and indemnification provisions of section 3 d and standard contract provision #13, shall survive the termination of the Agreement.

IN WITNESS WHEREOF, the parties hereto have duly executed this Exhibit I.

Department of Health + Human Services
The State Agency Name

University of Massachusetts Medical School
Name of the Contractor

Kathleen A. Dunn
Signature of Authorized Representative

Joyce A. Murphy
Signature of Authorized Representative

Kathleen A. Dunn
Name of Authorized Representative

Joyce A. Murphy
Name of Authorized Representative

Associate Commissioner
Title of Authorized Representative

Executive Vice Chancellor,
Commonwealth Medicine, UMMS
Title of Authorized Representative

10-12-12
Date

10/12/12
Date

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STANDARD EXHIBIT J

CERTIFICATION REGARDING THE FEDERAL FUNDING ACCOUNTABILITY AND
TRANSPARENCY ACT (FFATA) COMPLIANCE

The Federal Funding Accountability and Transparency Act (FFATA) requires prime awardees of individual Federal grants equal to or greater than \$25,000 and awarded on or after October 1, 2010, to report on data related to executive compensation and associated first-tier sub-grants of \$25,000 or more. If the initial award is below \$25,000 but subsequent grant modifications result in a total award equal to or over \$25,000, the award is subject to the FFATA reporting requirements, as of the date of the award.

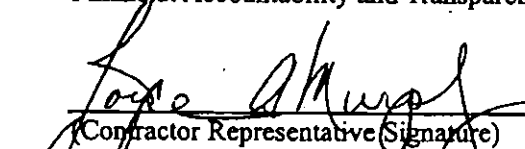
In accordance with 2 CFR Part 170 (*Reporting Subaward and Executive Compensation Information*), the Department of Health and Human Services (DHHS) must report the following information for any subaward or contract award subject to the FFATA reporting requirements:

- 1) Name of entity
- 2) Amount of award
- 3) Funding agency
- 4) NAICS code for contracts / CFDA program number for grants
- 5) Program source
- 6) Award title descriptive of the purpose of the funding action
- 7) Location of the entity
- 8) Principle place of performance
- 9) Unique identifier of the entity (DUNS #)
- 10) Total compensation and names of the top five executives if:
 - a. More than 80% of annual gross revenues are from the Federal government, and those revenues are greater than \$25M annually and
 - b. Compensation information is not already available through reporting to the SEC.

Prime grant recipients must submit FFATA required data by the end of the month, plus 30 days, in which the award or award amendment is made.

The Contractor identified in Section 1.3 of the General Provisions agrees to comply with the provisions of The Federal Funding Accountability and Transparency Act, Public Law 109-282 and Public Law 110-252, and 2 CFR Part 170 (*Reporting Subaward and Executive Compensation Information*), and further agrees to have the Contractor's representative, as identified in Sections 1.11 and 1.12 of the General Provisions execute the following Certification:

The below named Contractor agrees to provide needed information as outlined above to the NH Department of Health and Human Services and to comply with all applicable provisions of the Federal Financial Accountability and Transparency Act.



(Contractor Representative Signature)

Joyce A. Murphy, Executive Vice Chancellor,
Commonwealth Medicine, UMMS

(Authorized Contractor Representative Name & Title)

University of Massachusetts Medical School

(Contractor Name)

10/12/12

(Date)

STANDARD EXHIBIT J

FORM A

As the Contractor identified in Section 1.3 of the General Provisions, I certify that the responses to the below listed questions are true and accurate.

1. The DUNS number for your entity is: 603847393
2. In your business or organization's preceding completed fiscal year, did your business or organization receive (1) 80 percent or more of your annual gross revenue in U.S. federal contracts, subcontracts, loans, grants, sub-grants, and/or cooperative agreements; and (2) \$25,000,000 or more in annual gross revenues from U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements?

NO YES

If the answer to #2 above is NO, stop here

If the answer to #2 above is YES, please answer the following:

3. Does the public have access to information about the compensation of the executives in your business or organization through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C.78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986?

NO YES

If the answer to #3 above is YES, stop here

If the answer to #3 above is NO, please answer the following:

4. The names and compensation of the five most highly compensated officers in your business or organization are as follows:

Name: _____	Amount: _____
Name: _____	Amount: _____
Name: _____	Amount: _____
Name: _____	Amount: _____
Name: _____	Amount: _____