



Jeffrey A. Meyers
Commissioner

Lisa M. Morris
Director

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STATE OF NEW HAMPSHIRE
DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH SERVICES

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September 16, 2019

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, Division of Public Health Services, to amend an existing **sole source** agreement with the University of Massachusetts (Vendor #177576-B008), 377 Plantation Street Worcester MA 01605-2300 to provide newborn screening laboratory services by increasing the price limitation by \$1,004,120 from \$5,668,173 to an amount not to exceed \$6,672,293, with no change in the completion date of June 30, 2021 effective upon the date of Governor and Executive Council approval. 100% Other Funds.

This agreement was originally approved by the Governor and Executive Council on June 24, 2015 (Item #54), and subsequently amended on June 20, 2018 (Item #27).

Funds to support this request are anticipated to be available in the following account for State Fiscal Years 2020 and 2021, upon the availability and continued appropriation of funds in the future operating budgets, with authority to adjust amounts within the price limitation and adjust encumbrances between State Fiscal Years through the Budget Office, if needed and justified.

05-95-90-902010-5240 HEALTH AND SOCIAL SERVICES, DEPT OF HEALTH AND HUMAN SVS, HHS: DIVISION OF PUBLIC HEALTH, BUREAU OF POPULATION HEALTH AND COMMUNITY SERVICES, NEWBORN SCREENING REVOLVING FUND

State Fiscal Year	Class/ Account	Class Title	Job Number	Current Budget	Increased (Decreased) Amount	Revised Modified Budget
2016	102-500731	Contracts for Prog Svc	90080013	\$906,341	\$0	\$906,341
2017	102-500731	Contracts for Prog Svc	90080013	\$932,955	\$0	\$932,955
2018	102-500731	Contracts for Prog Svc	90080013	\$960,354	\$0	\$960,354

2019	102-500731	Contracts for Prog Svc	90080013	\$928,054	\$0	\$928,054
2020	102-500731	Contracts for Prog Svc	90080013	\$955,896	\$495,430	\$1,451,326
2021	102-500731	Contracts for Prog Svc	90080013	\$984,573	\$508,690	\$1,493,263
			Total	\$5,668,173	\$1,004,120	\$6,672,293

EXPLANATION

This request is **sole source** because the University of Massachusetts has been providing newborn screening laboratory services to state of New Hampshire since 1988. Five out of the six New England states currently contract with the University of Massachusetts, increasing its proficiency and ability to adjust and respond to the state’s needs. It is also the closest laboratory geographically to New Hampshire that can perform newborn screening tests in a timely manner. Timeliness is of utmost importance with respect to newborn screening.

Funds in this amendment will be used to pay for four (4) additional screening panels; Spinal Muscular Atrophy (SMA), Pompe, X-Linked Adrenoleukodystrophy (X-ALD) and Mucopolysaccharidosis Type 1 (MPS 1) Newborn Screening to the laboratory services for newborn screening for the entire state of New Hampshire.

Approximately 25,000 individuals will be served from July 1, 2019 through March 31, 2021.

Since the establishment of RSA 132:10a in 1965, the state of New Hampshire has been responsible for the screening of all infants born in the state. The goal of newborn screening is the prevention of disability and untimely death of newborns from undiagnosed genetic disorders. New Hampshire is currently screening all infants born in the state for a panel of thirty-four (34) disorders.

Although some of these disorders are relatively rare, they do need to be identified, early so that treatment and early intervention services can be initiated before the disorder presents clinically. In some cases, this critical timeline for a positive outcome may be as short as one week. In 2018, the New Hampshire Newborn Screening Program (NBS) identified fourteen (14) infants with disorders requiring treatment and ongoing specialty evaluation. In 2017 and 2016, the program identified ten (10) infants with disorders. Newborn screening results in early identification of disorders for which timely diagnosis and treatment can mean a life without disability. The NBS has influenced the lives of these infants and their families in a very positive way.

University of Massachusetts effectiveness in delivering services will be measured through monitoring of the following performance measures the effectiveness of the amendment agreement:

- At least ninety-eight percent (98%) of Congenital Adrenal Hyperplasia results will be reported to the New Hampshire Newborn Screening Program within three (3) days of the contractor receiving the dried blood specimen.
- At least ninety-five percent (95%) of all initial screening reports will have a report date within seven days of life.

Should the Governor and Executive Council not authorize this request, the state of New Hampshire will not be able to conduct newborn screening tests: Spinal Muscular Atrophy (SMA),

Pompe, X-Linked Adrenoleukodystrophy (X-ALD) and Mucopolysaccharidosis Type 1 (MPS 1) as such increasing the risk of such possible genetic disorders being undiagnosed in newborns.

Area served: Statewide.

Source of Funds: 100% Other Funds (Newborn Screening Revolving Fund).

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

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jeffrey Meyers". The signature is written in a cursive style with a large initial "J" and "M".

Jeffrey A. Meyers

Commissioner



**State of New Hampshire
Department of Health and Human Services
Amendment #2 to the Newborn Screening Laboratory Services Contract**

This 2nd Amendment to the Newborn Screening Laboratory Services contract (hereinafter referred to as "Amendment #2") is by and between the State of New Hampshire, Department of Health and Human Services (hereinafter referred to as the "State" or "Department") and the University of Massachusetts, (hereinafter referred to as "the Contractor"), with a place of business at 377 Plantation Street, Worcester MA 01605-2300.

WHEREAS, pursuant to an agreement (the "Contract") approved by the Governor and Executive Council on June 24, 2015, (Item #54) and amended on June 20, 2018 (Item #27), the Contractor agreed to perform certain services based upon the terms and conditions specified in the Contract 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 modify the scope of work and increase the price limitation to support continued delivery of these services; and

WHEREAS, all terms and conditions of the Contract and prior amendments not inconsistent with this Amendment #2 remain in full force and effect; and

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 1.8, Price Limitation, to read:
\$6,672,293.
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. Delete Exhibit A, Scope of Services and replace in its entirety with Exhibit A, Scope of Services, Amendment #2.
5. Delete Exhibit B-3, Amendment #1, Budget Sheet in its entirety and replace with Exhibit B-3, Amendment #2, Budget Sheet.
6. Delete Exhibit B-4, Amendment #1, Budget Sheet in its entirety and replace with Exhibit B-4, Amendment #2, Budget Sheet.
7. Delete and replace Exhibit C-1, Section 6, Subparagraph (3) a. in its entirety with:
The Business Associate shall notify the Covered Entity's Privacy Officer immediately upon the Business Associate determining Confidential Data may have been exposed or compromised and of any use or disclosure of protected health information not provided

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Newborn Screening Laboratory Services**



for by the Agreement including breaches of unsecured protected health information and/or any security incident that may have an impact on the protected health information of the Covered Entity.

8. Delete Exhibit K, Amendment #1, DHHS Information Security Requirements in its entirety and replace with Exhibit K, Amendment #2, DHHS Information Security Requirements.

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Newborn Screening Laboratory Services



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

9/16/19
Date

Lisa M. Morris
Name: Lisa M. Morris
Title: Director

University of Massachusetts

9-13-19
Date

Patti Ongrato
Name: *Patti Ongrato*
Title: *Deputy Executive Vice Chancellor*

Acknowledgement of Contractor's signature:

State of Massachusetts, County of Worcester on 9-13-19, 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.

Judith A. Nelson
Signature of Notary Public or Justice of the Peace

Judith A. Nelson
Name and Title of Notary or Justice of the Peace



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

My Commission Expires: 7-24-20

New Hampshire Department of Health and Human Services
Newborn Screening Laboratory Services



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

OFFICE OF THE ATTORNEY GENERAL

Date 9/16/19

Name: *Catherine Pinos*
Title: CATHERINE PINOS
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: _____



Exhibit A

SCOPE OF SERVICES

1. Provisions Applicable to All Services

- 1.1. The Contractor shall submit a detailed description of the language assistance services they will provide to persons with limited English proficiency to ensure meaningful access to their programs and/or services within ten (10) days of the contract effective date.
- 1.2. The Contractor agrees that, to the extent future legislative action by the New Hampshire General Court or federal or state court orders may have an impact on the Services described herein, the State Agency has the right to modify Service priorities and expenditure requirements under this Agreement so as to achieve compliance therewith.
- 1.3. For the purposes of this Agreement, the Department has identified the Contractor as a Contractor, in accordance with 2 CFR 200.300.

2. Scope of Services

- 2.1. The Contractor shall provide laboratory screening services for newborn screening of all infants born in New Hampshire. The goal of New Hampshire Department of Health and Human Services (DHHS), Newborn Screening Program (NBSP) is the prevention of disability and untimely death of newborns from undiagnosed genetic disorders.
- 2.2. The Contractor shall ensure when considering clinical or sociological research using clients as subjects must adhere to the legal requirements governing human subjects' research. Contractors must inform the DHHS prior to initiating any research related to this contract.
- 2.3. The contractor shall carry out the laboratory analysis utilizing standardized, approved laboratory methods for the disorders listed on the NH Screening Panel per RSA 132:10-a. Additional disorders shall be added to the newborn screening panel based upon, but not limited to, the following considerations:
 - 2.3.1. The disorder is well defined with a known incidence.
 - 2.3.2. The disorder is associated with significant morbidity and/or mortality.
 - 2.3.3. The disorder can be detected with a screening test that is ethical, safe, accurate, and cost-effective.
 - 2.3.4. Effective treatment exists for the disorder, and that early treatment, meaning before the onset of symptoms, is more effective in improving health and outcomes than later treatment.
- 2.4. The Contractor shall supply approved filter paper collection kits as required for the collection and identification of blood samples, and for gathering the



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Newborn Screening Laboratory Services

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necessary clinical information. A supply of pre-addressed envelopes for mailing repeat specimens to the lab via the US Postal Services will also be provided.

- 2.5. The Contractor shall provide a courier service to all designated birthing centers in New Hampshire for transporting of blood samples to the testing facility to include Sunday through Friday pickup and Monday through Saturday delivery. Adherence to strict turnaround times is critical. The Contractor shall also monitor the courier service for performance and timeliness.
- 2.6. The Contractor shall report to the Newborn Screening Program all out-of-range test results according to the urgency of the laboratory findings. In addition, the laboratory shall make available to the Newborn Screening Program, condition-specific FACT SHEETS as a resource on the probable significance of the findings and recommendations for appropriate follow-up action.
- 2.7. The Contractor shall report normal test results to the Newborn Screening Program via a secure web connection in a timely manner.
- 2.8. The New Hampshire DHHS shall remain in full ownership of all residual screening specimens. Decisions about retention/use of dried blood spots (DBS) are at the sole discretion of DHHS, and must be consistent with the Newborn Screening Program policies. Additional testing of specimens for other disorders is prohibited without express permission from the Newborn Screening Program.
- 2.9. The Contractor shall maintain storage of New Hampshire's residual screening specimens in an appropriate, climate-controlled, secure facility, in sealed bags of low gas permeability containing a desiccant and humidity indicator at -20C for six months.
- 2.10. The Contractor shall ensure residual DBS be destroyed six months after the collection date, in a manner consistent with applicable state and federal requirements relating to disposal of human blood and body fluids per OSHA regulations 29 CFR, standard number 1910.1030. In the event that the storage environment of any DBS is found to have deviated from the required conditions described above, such that the stability of the specimen is likely to have been affected, the DBS shall be destroyed and the Newborn Screening Program shall be notified.
- 2.11. The Contractor shall describe the contingency plan of operations to assure maintenance of screening services in the event of a major disaster or emergency.

3. Compliance and Data Reporting Requirements

3.1. Compliance Requirements



Exhibit A

- 3.1.1. As clarified by Executive Order 13166, Improving Access to Services for persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination on the basis of Limited English Proficiency (LEP). To ensure compliance with the Omnibus Crime Control and Safe Streets Act of 1968 and Title VI of the Civil Rights Act of 1964, the Contractor must submit a detailed description of the language assistance services they will provide to persons with Limited English Proficiency to ensure meaningful access to their programs and/or services, within 10 days of the contract effective date.
- 3.2. Culturally and Linguistically Appropriate Standards of Care
 - 3.2.1. The Contractor shall ensure equal access to quality health services and provide culturally and linguistically appropriate services according to the following guidelines
 - 3.2.2. The Contractor shall assess the ethnic/cultural needs, resources and assets of their community.
 - 3.2.3. The Contractor shall promote the knowledge and skills necessary for staff to work effectively with consumers with respect to their culturally and linguistically diverse environment.
 - 3.2.4. The Contractor shall when feasible and appropriate, provide clients of limited English proficiency (LEP) with interpretation services. Persons of LEP are defined as those who do not speak English as their primary language and whose skills in listening to, speaking, or reading English are such that they are unable to adequately understand and participate in the care or in the services provided to them without language assistance.
 - 3.2.5. The Contractor shall Offer consumers a forum through which clients have the opportunity to provide feedback to providers and organizations regarding cultural and linguistic issues that may deserve response.
 - 3.2.6. The Contractor shall maintain a program policy that sets forth compliance with Title VI, Language Efficiency and Proficiency. The policy shall describe the way in which the items listed above were addressed and shall indicate the circumstances in which interpretation services are provided and the method of providing service (e.g. trained interpreter, staff person who speaks the language of the client or language line).
- 3.3. Data Reporting Requirements
 - 3.3.1. The Contractor shall provide sufficient data, upon request, on the occurrence of disorders not mandated by the State to assist the Newborn Screening Program in making appropriate decisions about what services it offers.



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- 3.3.2. The Contractor shall provide a computerized system of records to show the date each sample be received from New Hampshire birth hospitals and/or community-based health care providers, the date the laboratory tests were performed and the date results of the laboratory analyses were reported to the New Hampshire Newborn Screening Program.
- 3.3.3. The Contractor shall Maintain all newborn laboratory test and result data in a computerized record system accessible to the laboratory performing the services and to the Newborn Screening Program, for a period no less than 21 years from the date of the test.
- 3.3.4. The Contractor shall provide critical data elements necessary to and determined by the New Hampshire Maternal and Child Health Section (MCHS) Data Linkage Project on a daily basis, or other schedule determined by MCHS, to enable the state to match the screening results with the electronic birth certificate (EBC).
- 3.3.5. The Contractor shall comply with minor modifications and/or additions to the proposed activities and report format as requested by MCHS. The MCHS will provide the Contractor with advance notice of such changes and the Contractor is not expected to incur any substantial costs relative to such changes.
- 3.3.6. The Contractor shall provide documentation of current CLIA Laboratory Certification.
- 3.3.7. The Contractor shall provide documentation of participation in the CDC/APHL Newborn Screening Quality Assurance Program or other acceptable proficiency-testing program.
- 3.3.8. The Contractor shall in years when contracts or amendments are not required, the DPHS Budget Form, Budget Justification, Sources of Revenue and program Staff list forms must be completed according to the relevant instructions and submitted as requested by DPHS and, at minimum, by April 30 of each year.
- 3.3.9. The Contractor shall The Sources of Revenue report must be resubmitted at any point when changes in revenue threaten the ability of the agency to carry out the planned program.
- 3.3.10. The Contractor shall agree to participate in DPHS planning, as needed, including planning for Electronic Medical Record (EMR) enhancements and Health Information Exchange (HIE).

4. State and Federal Laws



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- 4.1. The Contractor shall be responsible for compliance with all relevant state and federal laws, with special attention called to the following statutory responsibilities:
- 4.2. The Contractor shall report all cases of communicable diseases according to New Hampshire RSA 141-C and He-P 30, effective 01/05.
- 4.3. Contractor shall ensure persons employed comply with the reporting requirements of New Hampshire RSA 169:C, Child Protection Act; RSA 161:F46, Protective Services to Adults and RSA 631:6, Assault and Related Offenses.

5. Staffing

5.1. Staffing Provisions

- 5.1.1. Maintain a listing of "on call" qualified specialists who are available by beeper response, seven days/week, 24 hours/day to provide medical consultation as needed to the Newborn Screening Program and/or the physician of record.
- 5.1.2. Provide coverage for the Newborn Screening Program staff, upon request, when Newborn Screening Program staff is unavailable, for notifying attending physicians of out-of-range lab results (i.e. after normal work hours, on weekends, holidays, and with advance notice, when there is no staff available to cover the Newborn Screening Program).

5.2. Staffing Changes

- 5.2.1. The Contractor shall notify the DHHS within one month of hire when a new administrator or coordinator or any staff person essential to carrying out this scope of services is hired to work in the program. A resume of the employee shall accompany this notification.
- 5.2.2. The Contractor must notify the DHHS if any of the critical positions required for the delivery of these services are vacant for more than three months.

5.3. Subcontractors

- 5.3.1. If services required to comply with this Exhibit are provided by a subcontracted agency or provider, the DPHS, Maternal and Child Health Section (MCHS) must be notified in writing prior to initiation of the subcontract. In addition, subcontractors must be held responsible to fulfill all relevant requirements included in this Exhibit.

6. Meetings and Trainings



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- 6.1. The Contractor shall Provide assistance to the Newborn Screening Program staff and others, upon request, on issues related to supporting the infrastructure and facilitating the Newborn Screening Program's operations, including the provision of in-services and educational programs to include:
- 6.2. The Contractor shall Technical support for the Newborn Screening Program on computer issues as needed and as related to the interface between the state system and the laboratory-computerized system.
- 6.3. The Contractor shall Technical support and assistance upon request to the state in support of the work of the New Hampshire Newborn Screening Advisory Committee. Either the director or assistant director of the Lab will be available to attend the biannual committee meeting. The program must contact the lab to confirm availability before setting the date for the meeting.
- 6.4. The Contractor shall Technical support for the Newborn Screening Program's management information system on accessing the laboratory results database.

7. On Site Reviews

- 7.1. The Contractor shall allow a team or person authorized by the DHHS to periodically review the contractor's systems of governance, administration, data collection and submission, clinical and financial management in order to assure systems are adequate to provide the contracted services.

8. Publications

- 8.1. The DHHS and/or its funders will retain COPYRIGHT ownership for any and all original materials produced with DHHS contract funding, including, but not limited to, brochures, resource directories, protocols or guidelines, posters, or reports.
- 8.2. All documents (written, video, audio) produced, reproduced or purchased under the contract shall have prior approval from DPHS before printing, production, distribution, or use.
- 8.3. The Contractor shall credit DHHS on all materials produced under this contract following the instructions outlined in Exhibit C-1 (5).

9. Performance Measures

- 9.1. The Contractor shall ensure that following performance measures are annually achieved and monitored monthly to measure the effectiveness of the agreement:
 - 9.1.1. At least ninety-eight (98%) of Congenital Adrenal Hyperplasia results will be reported to the New Hampshire Newborn Screening Program within three (3) days of the contractor receiving the dried blood specimen.



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- 9.1.2. At least ninety- five percent (95%) of all initial screening reports will have a report date within seven days of life.
- 9.2. Annually, the Contractor shall develop and submit to the DHHS, a corrective action plan for any performance measure that was not achieved.

Exhibit B-3, Amendment #2 Budget Sheet

New Hampshire Department of Health and Human Services
COMPLETE ONE BUDGET FORM FOR EACH BUDGET PERIOD

Contractor name University of Massachusetts

Budget Request for: Newborn Screening Laboratory Services

Budget Period: July 1, 2018 - June 30, 2020 SFY 20

Line Item	Total Program Cost			Contractor Share / Match			Funded by DHHS contract share		
	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
1. Total Salary/Wages	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2. Employee Benefits	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3. Consultants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4. Equipment:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rental	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Repair and Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Purchase/Depreciation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5. Supplies:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Educational	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lab	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pharmacy	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Medical	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Office	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6. Travel	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7. Occupancy	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8. Current Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Telephone	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Postage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subscriptions	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Audit and Legal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Insurance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Board Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9. Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10. Marketing/Communications	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
11. Staff Education and Training	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12. Subcontracts/Agreements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13. Other (specific details mandatory):	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Laboratory Testing (@ \$104.90 per each of 13,000 babies including SMA, MPS-1, Pompe, X-ALD)	\$ 1,363,700.00	\$ -	\$ 1,363,700.00	\$ -	\$ -	\$ -	\$ 1,363,700.00	\$ -	\$ 1,363,700.00
Shipping (including Sunday pick-ups):	\$ 87,626.00	\$ -	\$ 87,626.00	\$ -	\$ -	\$ -	\$ 87,626.00	\$ -	\$ 87,626.00
TOTAL	\$ 1,451,326.00	\$ -	\$ 1,451,326.00	\$ -	\$ -	\$ -	\$ 1,451,326.00	\$ -	\$ 1,451,326.00

Indirect As A Percent of Direct 0.0%

New Hampshire Department of Health and Human Services
 COMPLETE ONE BUDGET FORM FOR EACH BUDGET PERIOD

Contractor name University of Massachusetts

Budget Request for: Newborn Screening Laboratory Services

Budget Period: July 1, 2020 - June 30, 2021 SFY 21

Line Item	Total Program Cost			Contractor Share / Match			Funded by DHHS contract share		
	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
1. Total Salary/Wages	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2. Employee Benefits	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3. Consultants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4. Equipment:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rental	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Repair and Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Purchase/Depreciation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5. Supplies:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Educational	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lab	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pharmacy	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Medical	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Office	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6. Travel	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7. Occupancy	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8. Current Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Telephone	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Postage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subscriptions	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Audit and Legal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Insurance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Board Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9. Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10. Marketing/Communications	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
11. Staff Education and Training	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12. Subcontracts/Agreements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13. Other (specific details mandatory):	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Laboratory Testing (@ \$108.05 per each of	\$ 1,404,650.00	\$ -	\$ 1,404,650.00	\$ -	\$ -	\$ -	\$ 1,404,650.00	\$ -	\$ 1,404,650.00
Shipping (including Sunday pick-ups):	\$ 88,613.00	\$ -	\$ 88,613.00	\$ -	\$ -	\$ -	\$ 88,613.00	\$ -	\$ 88,613.00
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL	\$ 1,493,263.00	\$ -	\$ 1,493,263.00	\$ -	\$ -	\$ -	\$ 1,493,263.00	\$ -	\$ 1,493,263.00

Indirect As A Percent of Direct

0.0%

Contractor Initials

Date 9.13.19

New Hampshire Department of Health and Human Services

Exhibit K, Amendment #2

DHHS Information Security Requirements



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 successful attempts 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

New Hampshire Department of Health and Human Services

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DHHS Information Security Requirements



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

New Hampshire Department of Health and Human Services

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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, UPS, or Federal Express (or other commercial carrier) 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

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DHHS Information Security Requirements



- 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 Confidential Data and any derivative of the Confidential Data for the duration of this Contract. After such time, the Contractor will have 30 days to destroy the Confidential Data and any Confidential derivative in whatever form it may exist, unless, otherwise required by law or permitted under this Contract. If it is infeasible to return or destroy the Confidential Data, protections pursuant to this Information Security Requirements Exhibit survive 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

New Hampshire Department of Health and Human Services

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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.).

PO

9.13.19

New Hampshire Department of Health and Human Services

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DHHS Information Security Requirements



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

New Hampshire Department of Health and Human Services

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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 set forth in the principles of the latest version of NIST 800-53, as defined by that Federal Standard at a Moderate level. .
14. Contractor agrees to maintain a documented breach notification and incident response process. The Contractor will notify the State's Privacy Officer and the State's Security Officer of any security breach immediately, at the email addresses provided in Section VI. 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.

New Hampshire Department of Health and Human Services

Exhibit K, Amendment #2

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. The following exceptions apply to this provision "i":
 - 1. In applications where user name and passwords are under the management of a database manager, the authorized DB manager(s) currently have access to user names and passwords. However, the DB manager are not be permitted, by policy, from logging into such applications using other individuals' credentials. Improvements are planned that will eliminate DB manager's access to passwords. This security improvement is expected to be completed by 1/1/2020. Database transactional logs are enabled and logs are retained via file backup.
 - 2. For data programs used for processing long laboratory procedures, the programs are required to maintain continuity across staffing changes. Group usernames and passwords may be utilized to accommodate such analytical needs; such group credentials will be restricted in scope to include only those technicians necessary to complete the analytic processes. Physical access controls exist, allowing only lab personnel access to the equipment to run such tests. Additionally, passwords for group accounts are required to change every 30 days.

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 annually, upon thirty (30) days' notice, including the privacy and security requirements provided in herein, HIPAA, and other applicable laws and Federal regulations until such

New Hampshire Department of Health and Human Services

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DHHS Information Security Requirements



time the Confidential Data is disposed of in accordance with this Contract. Should a security incident or breach occur the Contractor agrees DHHS may conduct an onsite inspection, without notice, to monitor compliance with this Contract.

V. LOSS REPORTING

The Contractor must notify the State's Privacy Officer and Security Officer, at the email addresses provided in Section VI, of any Security Incidents or Breaches immediately upon the Contractor determining Confidential Data may have been exposed or compromised.

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 Privacy Officer:

DHHSPrivacyOfficer@dhhs.nh.gov

B. DHHS Security Officer:

DHHSInformationSecurityOffice@dhhs.nh.gov



Commonwealth of Massachusetts
Department of Revenue
Christopher C. Harding, Commissioner

mass.gov/dor

Letter ID: L1726704512
Notice Date: May 30, 2019
Case ID: 0-000-605-447



CERTIFICATE OF GOOD STANDING AND/OR TAX COMPLIANCE



UNIVERSITY OF MASSACHUSETTS
333 SOUTH ST STE 450
SHREWSBURY MA 01545-4176



Why did I receive this notice?

The Commissioner of Revenue certifies that, as of the date of this certificate, UNIVERSITY OF MASSACHUSETTS is in compliance with its tax obligations under Chapter 62C of the Massachusetts General Laws.

This certificate doesn't certify that the taxpayer is compliant in taxes such as unemployment insurance administered by agencies other than the Department of Revenue, or taxes under any other provisions of law.

This is not a waiver of lien issued under Chapter 62C, section 52 of the Massachusetts General Laws.

What if I have questions?

If you have questions, call us at (617) 887-6400 or toll-free in Massachusetts at (800) 392-6089, Monday through Friday, 8:30 a.m. to 4:30 p.m..

Visit us online!

Visit mass.gov/dor to learn more about Massachusetts tax laws and DOR policies and procedures, including your Taxpayer Bill of Rights, and MassTaxConnect for easy access to your account:

- Review or update your account
- Contact us using e-message
- Sign up for e-billing to save paper
- Make payments or set up autopay

Edward W. Coyle, Jr., Chief
Collections Bureau

**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 June 20, 2019, 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,

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,

Alex Fowler, Associate Provost for Research & Economic Development, 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,

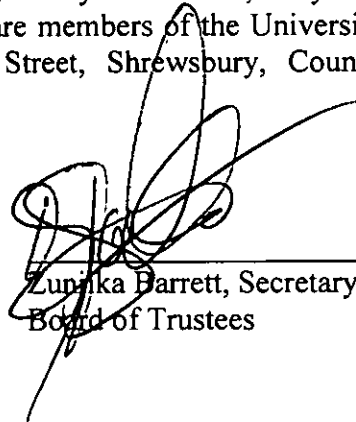
John C. Lindstedt, Executive Vice Chancellor for Administration & Finance, University of Massachusetts Medical School, Worcester, Massachusetts,

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, Managing Director, Clinical Delivery Solutions, 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, Assistant Vice Chancellor, Grants and Contracts Administration, 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,
Lisa M. Colombo, Executive Vice Chancellor for Commonwealth Medicine, 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, Alex Fowler, 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, Melissa Spragens, and Lisa M Colombo 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: 9/13/2019



Zunika Barrett, Secretary to the
Board of Trustees



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

9/9/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Arthur J. Gallagher Risk Management Services, Inc. 470 Atlantic Avenue Boston MA 02210	CONTACT NAME: Marnie Inzero PHONE (A/C, No, Ext): 617-261-6700 FAX (A/C, No): 617-646-0400 E-MAIL ADDRESS: marnie_inzero@ajg.com													
	<table border="1"> <tr> <th>INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> <tr> <td>INSURER A : United Educators Ins</td> <td>10020</td> </tr> <tr> <td>INSURER B :</td> <td></td> </tr> <tr> <td>INSURER C :</td> <td></td> </tr> <tr> <td>INSURER D :</td> <td></td> </tr> <tr> <td>INSURER E :</td> <td></td> </tr> <tr> <td>INSURER F :</td> <td></td> </tr> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A : United Educators Ins	10020	INSURER B :		INSURER C :		INSURER D :		INSURER E :		INSURER F :
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INSURER C :														
INSURER D :														
INSURER E :														
INSURER F :														
INSURED University of Massachusetts 333 South Street Suite 400 Shrewsbury MA 01545	UNIVOFM-21													

COVERAGES

CERTIFICATE NUMBER: 2024158576

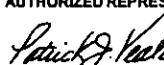
REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	N		U40-75A	5/1/2019	5/1/2020	EACH OCCURRENCE \$ 750,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 750,000 MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ Included GENERAL AGGREGATE \$ 3,000,000 PRODUCTS - COMP/OP AGG \$ Included SIR \$ 250,000
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY <input type="checkbox"/> AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTIONS						EACH OCCURRENCE \$ AGGREGATE \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		N/A				<input type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
 Requirement for executing a contract amendment with the DHHS of New Hampshire

CERTIFICATE HOLDER**CANCELLATION**

State of New Hampshire : Department of Health and Human Services c/o Jennifer Hackett 29 Hazen Drive Concord NH 03301	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 
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University of Massachusetts

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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 774-455-7586. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andrew W. Russell', written in a cursive style.

Andrew W. Russell
Senior Assistant VP of Operations &
Associate Treasurer

Mission Statements

This contract will be carried out by the New England Newborn Screening Program, which is part of Commonwealth Medicine, a division of the University of Massachusetts Medical School. We provide the mission statements for each of these levels of the organization here.

Of the University of Massachusetts Medical School:

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.

Of Commonwealth Medicine:

To apply knowledge to improve health outcomes for those served by public health and human service programs.

Of the New England Newborn Screening Program:

We provide timely, low cost, quality laboratory screening, clinical follow-up, and research to prevent disorders that can lead to death, mental retardation, and life compromising conditions in newborns.

2018

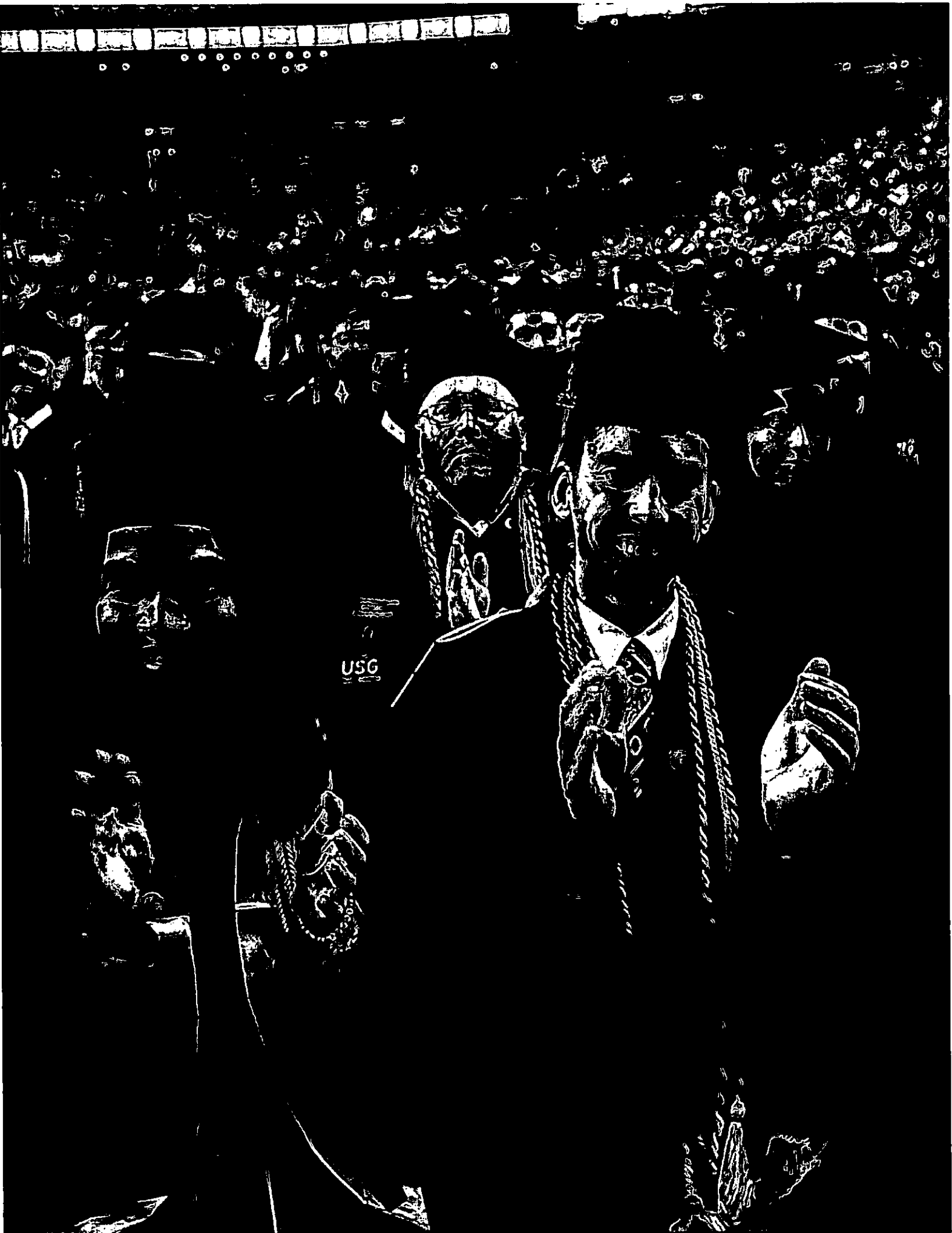
University of Massachusetts

ANNUAL FINANCIAL REPORT



University of Massachusetts

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2018

University of
Massachusetts

ANNUAL
FINANCIAL
REPORT

UNIVERSITY ADMINISTRATION

As of August 2018

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January 8, 2019

I am pleased to present the annual financial report of the University of Massachusetts, which details the university's financial position and activities over the past year and highlights our commitment to fiscal management and accountability.

Last year, UMass continued its ascension into the top-tier of public research universities and increased its impact in the Commonwealth and beyond.

Enrollment surpassed 74,500 students, a new high, and we graduated our largest class in history, with nearly 18,000 students earning degrees. Our research portfolio rose to a record \$670 million — behind only Harvard and MIT in the state — with research concentrated in areas critical to the Commonwealth's economy. And for the third year in a row, *U.S. News & World Report* differentiated UMass by making us one of the only university systems in the country with all of its undergraduate campuses nationally ranked universities.

These incredible achievements are the result of the hard work and dedication of countless individuals across our five campuses, and they're a clear indication that we are fulfilling our mission to provide an accessible, world-class education that transforms lives.

But as we continue to grow and achieve new levels of success, we must remain sharply focused on affordability, which is critical to our mission and our position in an increasingly competitive higher education marketplace.

To that end, we have taken extensive measures to increase transparency, establish frameworks for financial accountability and be good stewards. We have implemented a series of efficiency and effectiveness projects to save nearly \$300 million over 10 years. And we are focused on several key areas to ensure we remain affordable for students of all backgrounds, including expanding our digital education offerings, forming new partnerships with businesses and nonprofits, and increasing our financial aid endowment to provide more scholarships for deserving students.

These efforts have already distinguished UMass as a well-managed university. This past May, Moody's affirmed the university's Aa2 credit rating and revised the university's outlook from negative to stable, citing strong management, improvement in fiscal oversight and healthy student demand.

I am proud of what we've achieved this year, and I'm confident that as a university community we are ready to face the opportunities and challenges that lie ahead. Together, we will ensure UMass continues to fulfill its critical mission of access, opportunity and service to the Commonwealth.

Martin T. Meehan
President



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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, 2018 and 2017, and the related notes to the financial statements, which collectively comprise the University's basic financial statements as listed in the table of contents.

Management's responsibility for the financial statements

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

Auditor's responsibility

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

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

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

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, 2018 and 2017, and the respective changes in financial position and, where applicable, cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other matters

Required supplementary information

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

Emphasis of Matter

The financial statements of the University are intended to present the financial position, the changes in financial position and cash flows that are attributable to the transactions of the University. They do not purpose to, and do not present fairly the position of the Commonwealth of Massachusetts as of June 30, 2018 and 2017, the changes in its financial position, or where applicable, its cash flows for the 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.

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

Other reporting required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report, dated January 8, 2019, on our consideration of the University's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the University's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the University's internal control over financial reporting and compliance.



Boston, Massachusetts
January 8, 2019

Management's Discussion and Analysis (unaudited)

June 30, 2018

Introduction

This Management's Discussion and Analysis provides an overview of the financial position and activities of the University of Massachusetts (the University or UMass) for the fiscal years ended June 30, 2018 and 2017, and should be read in conjunction with the accompanying financial statements and notes. The financial statements, notes and this discussion are the responsibility of management.

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

UMass Amherst, founded in 1863, is the flagship of the five-campus UMass system. True to its land-grant roots, UMass Amherst is engaged in research and creative work in all fields and is classified by the Carnegie Foundation for the Advancement of Teaching as a doctoral university with the "highest research activity". Major areas of emphasis include climate science, food science, alternative energy, nano manufacturing, polymer science, computer science and linguistics. Consistently rated as a "Top Producer of Fulbright Students," UMass Amherst is ranked 26th among the nation's top public universities by *U.S. News & World Report* in 2018.

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

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

UMass Dartmouth distinguishes itself as a vibrant university dedicated to engaged learning and innovative research resulting in personal and lifelong student success. Located on 710 acres on the South Coast of Massachusetts, UMass Dartmouth ranks in the top 1 percent nationwide on the President's National Community Service Honor Roll and among Washington Monthly's national Top 25 in contribution to the public good. UMass Dartmouth offers students high-quality academic programs through majors and professional and doctoral programs, including the state's only public law school.

UMass Lowell, a nationally recognized doctoral university, is the 10th fastest growing university in the country, according to the Chronicle of Higher Education. National recognition of the campus is on the rise. *U.S. News & World Report* ranks UMass Lowell No. 157 in the National Universities Rankings, with programs support workforce and economic development through innovation, entrepreneurship and public-private partnerships. The university prepares students emphasizing experiential learning through cooperative education, service and research.

UMass Medical School (UMMS), founded in 1962 and situated in Worcester, is the Commonwealth's only public medical school and serves as the University's Nobel-prize winning health sciences campus. Consistently ranked in the top 10 percent for primary care training, UMMS has remained true to its founding mission while also becoming globally recognized in biomedical research. UMMS has three graduate schools—School of Medicine, Graduate School of Biomedical Sciences and Graduate School of Nursing. Unique among all medical schools, UMMS is also home to Commonwealth Medicine, a health care consulting division that partners with

states in delivering health services to vulnerable populations, and MassBiologics, the only non-profit, FDA-licensed vaccine manufacturer in the nation.

UMassOnline, the University of Massachusetts' nationally acclaimed online education consortium, features more than 1,500 online courses and 150 online certificate and degree programs from the five UMass campuses. Since its founding in 2001, UMassOnline continues to grow, with 67,000 course enrollments across the five campuses. UMassOnline students can pursue an associate's, bachelor's, master's or doctoral degree in a variety of in-demand subject areas, including liberal arts, education, management, nursing, public health and information technology. Online students learn from the same world-class instructors as students who study on campus, and they receive an identical degree. UMassOnline programs consistently earn high rankings in *U.S. News & World Report* and *GetEducated.com*.

Financial Highlights

The University's income before other revenues, expenses, gains, and losses was \$2.8 million for fiscal year 2018. Excluding the impact on operating expenses for both Governmental Accounting Standards Board (GASB) Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* (GASB 75) and GASB 68, *Accounting and Reporting for Pensions* (GASB 68), the, the University's income before other revenues, expenses, gains, and losses was \$78.7 million.

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

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

Using the Annual Financial Report

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

This report includes the University's Statements of Net Position, Statements of Revenues, Expenses and Changes in Net Position and the Statements of Cash Flows for the fiscal years ended June 30, 2018 and 2017. The University's net position (the difference between assets and liabilities) is one indicator of the University's financial health. Over time, increases or decreases in net position are indicators of the improvement or erosion of an institution's financial health when considered together with non-financial factors such as enrollment levels and the condition of the facilities.



The Statements of Net Position include all assets and liabilities, as well as deferred inflows and outflows of resources of the University. Net position is further broken down into three categories: net investment in capital assets, restricted and unrestricted. Amounts reported in net investment in capital assets represent the historical cost of property and equipment, reduced by the balance of related debt outstanding and depreciation expense charged over the years. Net position is reported as restricted when constraints are imposed by third parties, such as donors or enabling legislation. Restricted net position is either non-expendable, as in the case of endowment gifts to be held in perpetuity, or expendable, as in the case of funds to be spent on scholarships and research. All other assets are unrestricted; however, they may be committed for use under contract or designation by the Board of Trustees. Note 15 to the accompanying financial statements depicts the designations of unrestricted net position at June 30, 2018.

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

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

Reporting Entity

The financial statements of the University include financial activities of the following blended component units: the University of Massachusetts Building Authority (Building Authority), Worcester City Campus Corporation (WCCC) and Subsidiary, and the University of Massachusetts Amherst Foundation. Separate Statements of Financial Position and Statements of Activities are presented in this report for the University's discretely presented component units, the University of Massachusetts Foundation, Inc., and the University of Massachusetts Dartmouth Foundation, Inc. The statements for these entities are presented in accordance with Financial Accounting Standards Board (FASB) standards, which differ from GASB standards in certain areas such as reporting of pledges to endowment and net position.

Net Position

Condensed statements of net position at June 30, 2018, 2017, and 2016, respectively, are presented on page 9.

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

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

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

Revenues, Expenses, and Changes in Net Position

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

CONDENSED STATEMENTS OF NET POSITION

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

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

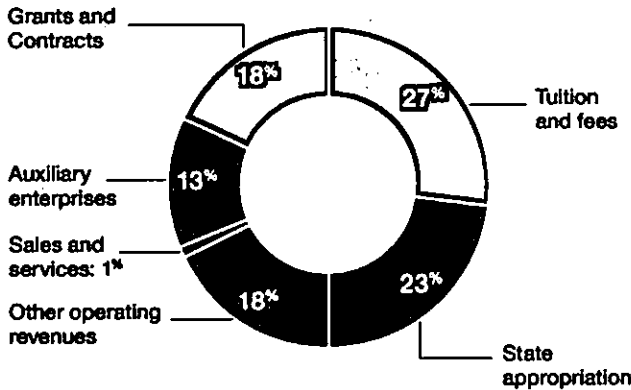
As of June 30, 2018, 2017, 2016 (\$ in thousands)	2018	2017	2016
Operating Revenues			
Tuition and fees, net of scholarships	\$ 874,826	\$ 847,832	\$ 826,815
Grants and contracts	560,990	580,081	528,352
Auxiliary enterprises	416,733	400,822	383,281
Other operating revenues	616,265	631,854	665,048
Total operating revenues	2,468,814	2,440,589	2,403,496
Operating Expenses	3,300,392	3,158,953	3,140,763
Operating Loss	(831,578)	(718,364)	(737,257)
Nonoperating Revenues (Expenses)			
Federal appropriations	6,688	6,602	6,827
State appropriations	751,894	720,817	669,748
Interest on indebtedness	(115,851)	(110,069)	(105,276)
Nonoperating federal grants	81,590	74,050	75,743
Other nonoperating income	110,062	117,248	90,443
Total nonoperating revenues (expenses)	834,383	808,648	737,485
Income Before Other Revenues, Expenses, Gains and Losses	2,805	90,284	228
Other Revenues, Expenses, Gains And Losses			
Capital appropriations, grants and other sources	76,169	150,460	172,557
Disposal of plant facilities	(8,695)	(4,274)	(10,462)
Other additions (deductions)	5,307	17,717	(29,578)
Total other revenues, expenses, gains, and losses	74,781	163,903	132,517
Total Increase In Net Position	77,586	254,187	132,745
Net Position			
Net position at the beginning of the year	3,054,280	2,800,093	2,667,348
Cumulative effect of adopting GASB 75*	(742,982)	-	-
Net position at the beginning of the year, restated	2,311,298	2,800,093	2,667,348
Net position at the end of the year	\$ 2,388,884	\$ 3,054,280	\$ 2,800,093

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

Operating revenues and expenses

While not classified on the financial statements as operating revenue, state appropriations serve as a primary source for funding the core mission of the University. State appropriation revenue, described in detail below, is used almost exclusively to fund payroll for University employees, and as such is considered as operating revenue for management's planning and analysis purposes. Total operating revenues for fiscal year 2018, including state appropriations, increased \$59.3 million (1.9%) from \$3.2 billion in fiscal year 2017. Total operating revenues in fiscal year 2017, including state appropriations, increased \$88.2 million (2.9%) from \$3.1 billion in fiscal year 2016.

FISCAL YEAR 2018 OPERATING REVENUES (including State Appropriations)

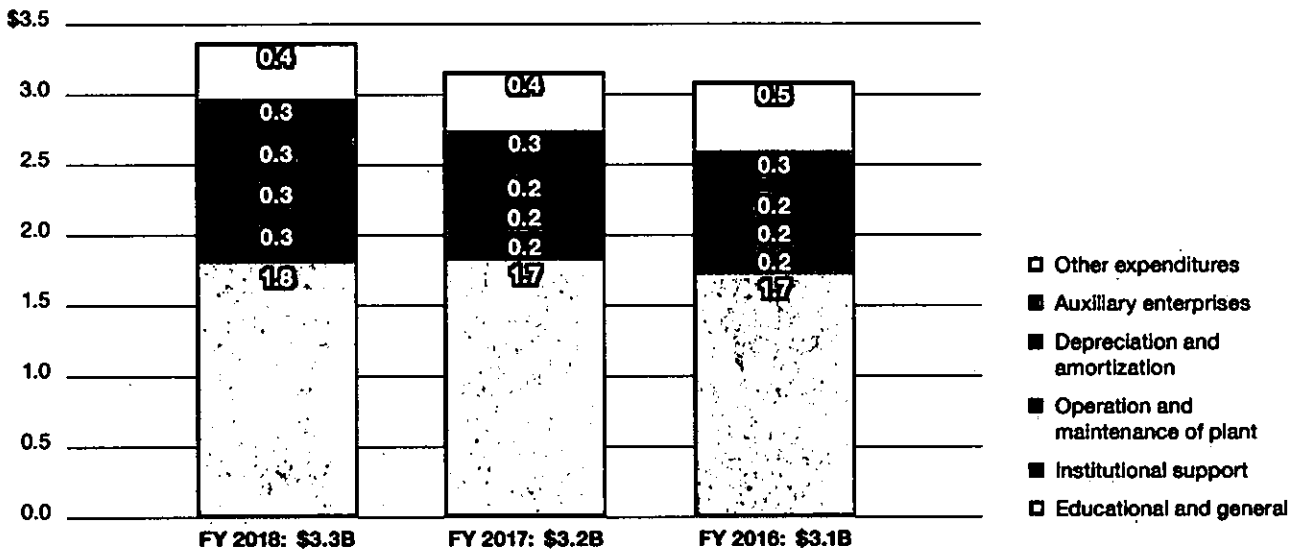


As noted in the fiscal year 2018 operating revenues chart below, the most significant sources of operating revenue for the University in fiscal year 2018 were tuition and fees, grants and contracts, and State appropriations.

Other operating revenues include revenues related to public service activities and consist largely of sales and services provided to third parties by UMMS through its Commonwealth Medicine (CWM) programs. These programs provide public consulting and services in health care financing, administration and policy to federal, state and local agencies and not-for-profit health and policy organizations. In addition to CWM activities, public service activities also include revenue received by UMMS for educational services it provides to its clinical affiliate UMass Memorial Health Care, Inc. (UMass Memorial) as required by the enabling legislation enacted by the Commonwealth in 1997. Public service activities expenditures also include payments made to the Commonwealth pursuant to requirements of legislation enacted by the State Legislature of Massachusetts.

In fiscal year 2018, operating expenses, including depreciation and amortization, totaled \$3.3 billion, as compared to \$3.2 billion in 2017 and \$3.1 billion in 2016. Of this total, \$1.8 billion or 55% was used to support the academic core activities of the University, including \$471.4 million in research. The education and general portion in the three year operating expenses chart below represents expenses in the following functional categories: instruction, research, public service, academic support, student services and scholarships and fellowships.

THREE YEAR OPERATING EXPENSES (\$ in billions)



State Appropriations

In fiscal year 2018, State appropriations represented approximately 23% of all operating and non-operating revenues. The level of state support is a key factor influencing the University's overall financial condition. Although the state appropriation is unrestricted revenue, nearly 100% of the state appropriation supports payroll and benefits for University employees. In addition to the direct state appropriation there are several smaller appropriations that add to the total state support for the University such as the Star Store lease at the Dartmouth campus and the Springfield Satellite Center, among others. While these smaller line items are in support of campus specific programs and do not support general University operations, they are included in the State appropriations line in the accompanying financial statements, and in the State appropriations line in the table below.

The Commonwealth pays the fringe benefits for University employees paid from state appropriations. Therefore, such fringe benefit support is added to the State appropriations financial statement line item in the accompanying Statements of Revenues, Expenses and Change in Net Position. The University pays the Commonwealth for the fringe benefit cost of the employees paid from funding sources other than Commonwealth operating appropriations (details of the payment are referenced in Note 11 to the accompanying financial statements). These amounts are not included in the State appropriations.

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



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

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

STATE APPROPRIATIONS— Change as a Result of Full Tuition Retention

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

Capital Appropriations

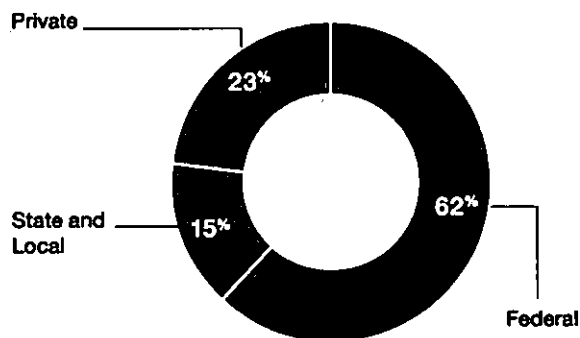
The University faces a financial challenge to maintain and upgrade its capital assets including its infrastructure, buildings and grounds. In order to have a successful capital program, the University must rely on a combination of revenue sources to fund its capital investment. In fiscal year 2018, 2017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

Grant and Contract Revenue

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

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

GRANT AND CONTRACT REVENUE



Discretely Presented Component Units

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

University of Massachusetts Foundation, Inc.

UMF was established in 1950 to foster and promote the growth, progress and general welfare of the University, and to solicit, receive and administer gifts and donations for such purposes. UMF maintains a portion of the University's investment portfolio, predominantly the endowment and the quasi-endowment investments. The total portfolio held at UMF as of June 30, 2018, 2017 and 2016 was \$871.9 million, \$819.7 million and \$734.2 million, respectively.

University of Massachusetts Dartmouth Foundation, Inc.

UMDF was established in 1973 to raise funds for the development and improvement of the academic and educational environment for students at the Dartmouth campus and the continued engagement of its alumni. In addition to holding investments for the University, UMF holds a significant portion of the UMDF investments. The total portfolio held by UMDF at June 30, 2018, 2017 and 2016 was \$54.8 million, \$53.1 million and \$52.7 million, of which the majority is invested with UMF.

Tuition and Fees

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

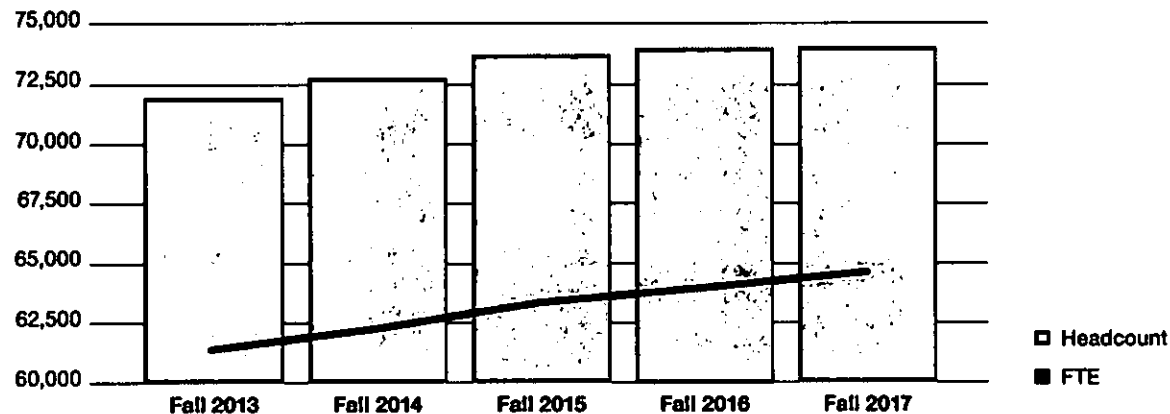
Enrollment

As shown in the table on page 14, total enrollment in the fall of 2017 was 64,530 FTE (74,572 headcount students), an increase of 0.9% over the previous year's enrollment of 63,977 FTE (74,496 headcount students). Enrollment in the fall of 2015 was 63,333 FTE (73,744 headcount students). The five year enrollment growth of 5.2% is meaningful as other institutions of higher education have seen declining enrollments over this period. This growth is consistent with the University's efforts to increase its reach across the Commonwealth and to recruit non-resident students, and is reflective of the quality education provided by the University of Massachusetts.

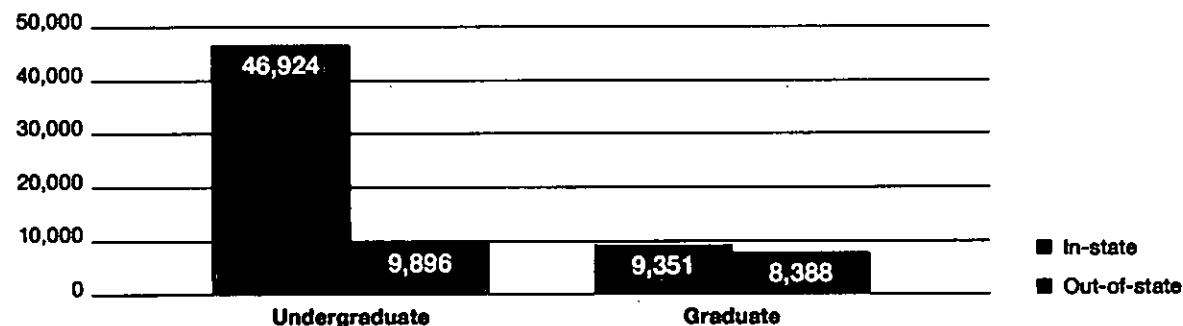
Admission to the University is open to residents of the Commonwealth and non-residents on a competitive basis. For the fall 2017 semester, Massachusetts residents accounted for 82.6% of the University's total undergraduate enrollment. Refer to the table below for detail on the fall 2017 enrollment.

The online learning consortium of the University, UMassOnline, has shown significant growth in enrollments, course offerings and revenue generation benefiting the campuses and raising the profile of the University. UMassOnline provides marketing and technology support for UMass' online offerings that enable students, professionals, and lifelong learners to take courses anywhere, anytime. For fiscal year 2018, UMassOnline and the Continuing Education units at the five campuses collaboratively generated tuition revenue of \$113.2 million and supported 78,404 course enrollments, an increase of 7.9% for revenue and an increase of 3.8% for course enrollments as compared to fiscal year 2017. For fiscal year 2017, UMassOnline generated tuition revenue of \$104.9 million and supported 75,565 course enrollments, an increase of 9.2% for revenue and an increase of 6.6% for course enrollments as compared to fiscal year 2016.

TOTAL ENROLLMENT



FALL 2017 ENROLLMENT BY TYPE



Long-Term Debt

The University had outstanding long-term debt of \$3.1 billion at June 30, 2018, 2017 and 2016. The principal issuer of the University's debt is the Building Authority. Additional issuers utilized by the University include Massachusetts Health and Educational Facilities Authority (MHEFA) and WCCC. Long-term debt is the University's largest liability as of June 30, 2018. For further details on outstanding balances with each issuer, refer to Note 9 of the accompanying financial statements.

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

University Rating

The University is relying on a carefully planned and executed debt strategy to support master and strategic planning at the campuses and for the University as a whole. Bonds issued by the University of Massachusetts and the University of Massachusetts Building Authority are rated AA, Aa2 and

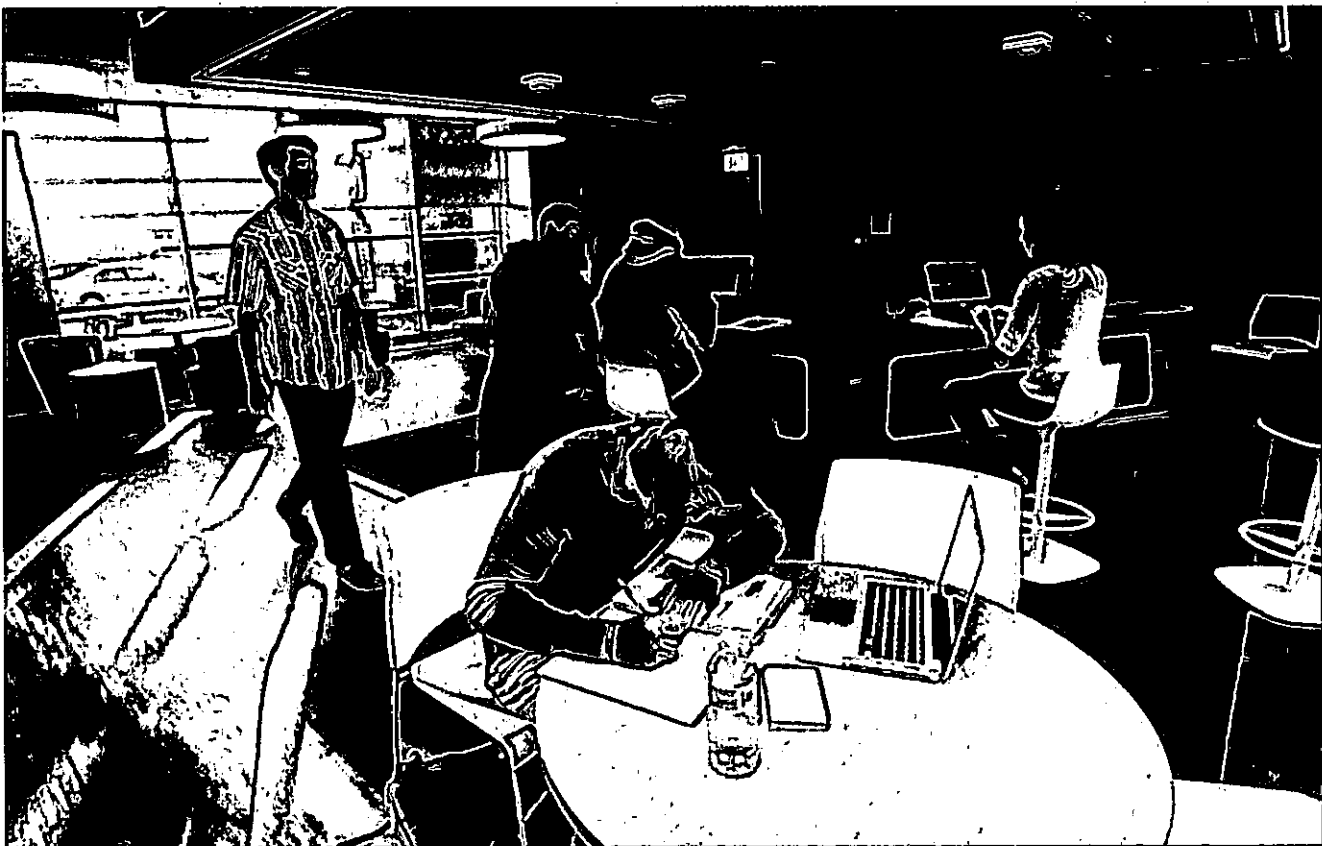
AA- as rated by Fitch, Moody's and Standard & Poor's rating agencies, respectively.

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

Limitations on Additional Indebtedness

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

The Building Authority is authorized by its enabling act to issue bonds with the unconditional guarantee of the Commonwealth



for the punctual payment of the interest and principal payments on the guaranteed bonds. The full faith and credit of the Commonwealth are pledged for the performance of its guarantee. The enabling act, as amended, presently limits to \$200.0 million the total principal amount of notes and bonds of the Building Authority that may be Commonwealth guaranteed and outstanding at any one time. The amount of bond obligations guaranteed by the Commonwealth at June 30, 2018, 2017 and 2016 was \$113.5 million, \$115.3 million and \$117.4 million, respectively.



Capital Plan

A majority of the capital spending during fiscal year 2018 related to continued investments in new buildings and renovation projects. In September 2018, the University's Trustees approved a five-year update to its capital plan for fiscal years 2019–2023, with \$2.1 billion of projects approved to continue or commence over the next 24 months. The University generally has funded its capital plans through a combination of funding received from University operations, bonds issued by the Building Authority and MHEFA, Commonwealth appropriations, and private fundraising.

The University's five-year capital plan for fiscal years 2019–2023 includes major projects that were previously approved by the University Trustees in prior-year capital plans. In recent years, the University enhanced its policy regarding the approval of capital projects to ensure a clear process and to provide for multiple reviews during the process so that the President's Office, Building Authority and the Board of Trustees (the Board) are actively involved. Since the capital program requires significant investment, the President's office and the Board wanted to ensure that the proper steps were in place for reviewing and approving projects so that the University continues to live within its current capital and debt policies.

Factors Impacting Future Periods

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

Contacting the University

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

STATEMENTS OF NET POSITION

As of June 30, 2018 and 2017 (\$ in thousands)	2018	2017
Assets		
Current assets		
Cash and cash equivalents	\$ 88,463	\$ 92,344
Cash held by state treasurer	14,689	15,114
Accounts receivable, net	310,371	316,075
Short-term investments	470,139	286,171
Other current assets	35,023	32,778
Total current assets	918,685	742,482
Noncurrent assets		
Cash held by state treasurer	8,009	7,599
Deposits with bond trustees	319,228	438,585
Accounts receivable, net	64,251	62,121
Long-term investments	775,294	766,392
Other assets	124,527	129,506
Capital assets, net	5,075,476	4,854,110
Total noncurrent assets	6,366,785	6,258,313
Total assets	7,285,470	7,000,795
Deferred Outflows of Resources	341,335	275,725
Liabilities		
Current liabilities		
Accounts payable and accrued expenses	336,077	306,463
Unearned revenues and advances	59,323	52,503
Long-term debt, current portion	445,035	207,424
Other current liabilities	94,090	55,694
Total current liabilities	934,525	622,084
Noncurrent liabilities		
Unearned revenues and advances	120,990	60,702
Long-term debt	2,644,033	2,886,927
Derivative instruments, interest rate swaps	41,602	61,839
Net pension liability	420,234	429,871
Net other postemployment benefits liability	817,357	-
Other long-term liabilities	117,695	123,146
Total noncurrent liabilities	4,161,911	3,562,485
Total liabilities	5,096,436	4,184,569
Deferred Inflows of Resources	141,485	37,671
Net Position		
Net investment in capital assets	2,288,599	2,208,370
Restricted:		
Nonexpendable	28,022	27,443
Expendable	222,343	201,710
Unrestricted	(150,080)	616,757
Total net position	\$ 2,388,884	\$ 3,054,280

See accompanying notes to the financial statements.

STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

For The Years Ended June 30, 2018 and 2017 (\$ in thousands)	2018	2017
Revenues		
Operating Revenues		
Tuition and fees (net of scholarship allowances of \$310,106 at June 30, 2018 and \$288,708 at June 30, 2017)	\$ 874,826	\$ 847,832
Grants and contracts	560,990	560,081
Sales and services, educational activities	30,591	28,910
Auxiliary enterprises	416,733	400,822
Other operating revenues:		
Sales and services, independent operations	68,497	79,261
Sales and services, public service activities	381,018	418,726
Other	136,159	104,957
Total operating revenues	2,468,814	2,440,589
Expenses		
Operating expenses		
Educational and general		
Instruction	876,235	824,042
Research	471,135	447,370
Public service	78,238	68,083
Academic support	187,495	177,173
Student services	156,934	151,033
Institutional support	271,535	247,740
Operation and maintenance of capital assets	255,825	240,501
Depreciation and amortization	261,417	245,300
Scholarships and fellowships	50,410	47,710
Auxiliary enterprises	313,741	306,850
Other expenditures		
Independent operations	52,211	57,276
Public service activities	325,216	345,875
Total operating expenses	3,300,392	3,168,953
Operating loss	(831,578)	(718,364)
Nonoperating Revenues (Expenses)		
Federal appropriations	6,688	6,802
State appropriations	751,894	720,817
Gifts	39,022	26,253
Investment income	37,622	31,567
Unrealized gain on investments	5,558	15,466
Endowment income distributed for operations	26,742	26,877
Interest on indebtedness	(115,851)	(110,069)
Nonoperating federal grants	81,590	74,050
Other nonoperating income	1,118	17,085
Net nonoperating revenues	834,383	808,648
Income before other revenues, expenses, gains, and losses	2,805	90,284
Other Revenues, Expenses, Gains and Losses¹		
Capital appropriations	67,437	121,380
Capital grants, contracts and gifts	8,732	29,080
Endowment return, net of amount used for operations	8,166	21,278
Disposal of plant facilities	(6,695)	(4,274)
Other deductions	(2,859)	(3,561)
Total other revenues, expenses, gains, and losses	74,781	163,903
Total increase in net position	77,588	254,187
Net Position		
Net position at beginning of year	3,054,280	2,800,093
Cummulative effect of adopting GASB 75	(742,982)	-
Net position at beginning of year, adjusted	2,311,298	2,800,093
Net position at end of year	\$ 2,388,884	\$ 3,054,280

See accompanying notes to the financial statements.

STATEMENTS OF CASH FLOWS

For The Years Ended June 30, 2018 and 2017 (\$ in thousands)

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

See accompanying notes to the financial statements.

COMPONENT UNITS STATEMENTS OF FINANCIAL POSITION

As of June 30, 2018 and 2017 (\$ in thousands)	2018	2017
Assets		
Cash	\$ 1,153	\$ 1,424
Bequests receivable	399	963
Pledges receivable, net	25,180	24,960
Investments of the Foundation and held on behalf of the University	1,223,596	1,165,270
Prepaid expenses and other assets	2,592	2,576
Land, property, plant and equipment, net	16,906	17,332
Total assets	1,269,826	1,212,525
Liabilities and Net Assets		
Liabilities		
Accounts payable and accrued expenses	448	74
Deferred revenue	1,049	1,162
Obligations to beneficiaries of split-interest agreements	2,384	2,764
Assets held on behalf of others	678,890	660,074
Total liabilities	682,771	684,074
Net assets		
Unrestricted	33,993	40,589
Temporarily restricted	119,694	99,883
Permanently restricted	433,368	407,979
Total net assets	587,055	548,451
Total liabilities and net assets	\$1,269,826	\$1,212,525

COMPONENT UNITS STATEMENTS OF ACTIVITIES

For The Years Ended June 30, 2018 (with summarized financial information for the year ended June 30, 2017) (\$ in thousands)	Unrestricted	Temporarily Restricted	Permanently Restricted	Total 2018	Total 2017
Support and Revenue					
Gifts, bequests and grants	\$ 552	\$ 6,056	\$ 24,995	\$ 31,603	\$ 43,573
Other contributions	946	515	509	1,970	3,199
Total investment income, including net gains (losses) - net of fees	36,000	28,998	(283)	64,715	109,274
Investment management fee	11,022	-	-	11,022	10,010
Other income	51	236	36	323	301
Net assets released from restrictions	15,783	(15,783)	-	-	-
Total support and revenue	64,354	20,022	25,257	109,633	166,357
Expenses					
Distributions to the University	30,846	-	-	30,846	31,161
University program support	10,084	-	-	10,084	11,037
Fundraising support	6,210	-	-	6,210	5,684
Administrative and general	3,122	-	-	3,122	2,611
Total expenses	50,262	-	-	50,262	60,493
Excess of support and revenue over expenses	14,092	20,022	25,257	69,371	115,864
Less: amounts held on behalf of the University	(18,697)	-	-	(18,697)	(38,633)
Less: amounts held on behalf of EMKI	(1,683)	-	-	(1,683)	(489)
Transfers to (from) other funds	(89)	(43)	132	-	-
Change in value of split interest agreements	(387)	-	-	(387)	(737)
Adjustment for underwater endowments	168	(168)	-	-	-
Change in net assets	(6,596)	19,811	25,389	38,604	76,005
Net assets, beginning of year	40,589	99,883	407,979	548,451	472,446
Net assets, end of year	\$ 33,993	\$ 119,694	\$ 433,368	\$ 587,055	\$ 548,451

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Notes to Consolidated Financial Statements

1. Summary of Significant Accounting Policies

Reporting entity

The financial statements herein present the financial position, results of operations, changes in net position, and cash flows of the University of Massachusetts (University), a federal land grant Institution. The financial statements of the University include the campuses of Amherst, Boston, Dartmouth, Lowell, Medical School, and the President's Office of the University, Worcester City Campus Corporation (WCCC), the University of Massachusetts Amherst Foundation (UMass Amherst Foundation), as well as the University of Massachusetts Building Authority (Building Authority).

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

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

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

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

Basis of presentation

The accompanying financial statements have been prepared in accordance with U.S. generally accepted accounting principles (GAAP) as prescribed by the Governmental Accounting Standards Board (GASB) using the economic resources measurement focus and the accrual basis of accounting. These financial statements are reported on a combined basis, and all intra-University transactions are eliminated.

Pursuant to GASB Statement No. 35, *Basic Financial Statements and Management's Discussion and Analysis-for Public Colleges and Universities* (GASB 35), the University's activities are considered to be a single business-type activity and accordingly, are

reported in a single column in the financial statements. Business-type activities are those that are financed in whole or part by funds received by external parties for goods or services.

On the Statement of Revenues, Expenses and Changes in Net Position, the University's operating activities consist of tuition and fees, grants and contracts, sales and services and auxiliary enterprise revenues. Operating expenses include, among other items, payroll, fringe benefits, utilities, supplies and services, depreciation, and amortization. Nonoperating revenues or expenses are those in which the University receives or gives value without directly giving or receiving equal value, such as State and Federal appropriations, Federal Pell grants, private gifts, and investment income. Revenues are recognized when earned and expenses are recognized when incurred with the exception of revenue earned on certain public service activities. Restricted grant revenue is recognized only when all eligibility requirements have been met. The University applies restricted net assets first when an expense or outlay is incurred for purposes for which both restricted and unrestricted net assets are available.

Net position

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

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

Cash and cash equivalents

Cash and cash equivalents consist primarily of demand deposit accounts, savings accounts, and money market accounts with an original maturity of three months or less.

Accounts receivable, net

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

The University receives unconditional promises to give through private donations or pledges from corporations, foundations, alumni and other supporters of the University. Revenue is recognized when a pledge is received and all eligibility requirements, including time and purpose requirements, are met. These pledges have been recorded as pledges receivable on the Statement of Net Position and as non-endowment gift revenues or capital gift revenue on the Statement of Revenues, Expenses, and Changes in Net Position, at the present value of the estimated future cash flows. Since the University cannot fulfill the time requirement for pledges to endowments until the gift is received, pledges to endowments are not reported. Because of uncertainties with regard to their realizability and valuation, bequests and other conditional promises are not recorded.

Investments

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

Endowment

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

Pooled investment funds will receive an annual distribution, based on the endowment fund's average market value for the preceding twelve quarters on a one year lag. Only quarters with funds on deposit are included in the average. In addition, a prudence rule is utilized, limiting spending from a particular endowment fund to be no lower than 93% of its carrying value. The actual spending rate approved for the years ended June 30, 2018 and 2017 was 4%.

Inventories

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

Capital assets

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

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

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

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

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

Deferred outflows of resources

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

The University's deferred outflows consist of:

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

Compensated absences

Employees earn the right to be compensated during absences for annual vacation leave and sick leave. Within the Statements of Net Position, a liability is recorded for vacation and sick leave benefits earned as of the fiscal year-end. The recorded liability is classified as current and noncurrent based on the amount estimated to be paid to eligible employees in one year and beyond one year, respectively, on the Statements of Net Position.

Unearned revenue and advances

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

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

Deferred inflows of resources

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

The University's deferred inflows consist of:

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

Tuition and fees, net of scholarship allowances

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

Grants and contracts

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

The University records the recovery of indirect costs applicable to research programs and other activities which provide for the full or partial reimbursement of such costs, as revenue. Recovery of indirect costs for the years ended June 30, 2018 and 2017 was \$131.4 million and \$131.6 million, respectively, and is a component of grants and contracts revenue on the Statements of Revenues, Expenses, and Changes in Net Position.

Auxiliary enterprises

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

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

Public service activities consist largely of sales and services provided to third parties by the UMass Medical School under its Commonwealth Medicine (CWM) programs, which provide public consulting and services in health care financing, administration and policy to federal, state and local agencies and not-for-profit health and policy organizations. Included in this category of activities are CWM revenues of \$226.2 million and \$296.0 million for the years ended June 30, 2018 and 2017, respectively. Included in expenditures are CWM expenditures of \$173.6 million and \$253.0 million for the years ended June 30, 2018 and 2017, respectively.

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

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

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

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

Use of estimates

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

Income tax status

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

WCCC, UMF and UMDF are organizations described in Section 501(c)(3) of the Code, and are generally exempt from income taxes pursuant to Section 501(a) of the Code. WCCC, UMF and UMDF are required to assess uncertain tax positions and have determined that there were no such positions that are material to the financial statements as of June 30, 2018 and 2017, respectively.

Newly implemented accounting standards

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

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

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

Reclassifications

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

2. Cash Held by State Treasurer

Accounts payable, accrued salaries and outlays for future capital projects to be funded from state-appropriated funds totaled \$22.7 million at June 30, 2018 and June 30, 2017. The University has recorded a comparable amount of cash held by the State Treasurer for the benefit of the University, which will be subsequently utilized to pay for such liabilities. The cash is held in the State Treasurer's pooled cash account. The Commonwealth requires all bank deposits in excess of insurance coverage by the FDIC to be collateralized with a perfected pledge of eligible collateral. Eligible collateral must be pledged in an amount equal to 102% of the amount of the deposits that exceed FDIC insurance. Sufficient collateral to cover total Commonwealth deposits in excess of the FDIC insured amount must be pledged and held in safekeeping by a custodian that is approved by and under the control of the Treasurer and Receiver - General.

3. Deposits with Bond Trustees

Deposits with bond trustees primarily consist of unspent bond proceeds, amounts held for the future payment of debt service on such borrowings and designated funds from the Building Authority. At June 30, 2018 and 2017, there was \$319.2 million and \$438.6 million, respectively, held by trustees related to the Building Authority.

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

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

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

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

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

Deposits are exposed to custodial risk if they are uninsured and uncollateralized. The University does not have a deposit policy for custodial credit risk. As of June 30, 2018 and June 30, 2017, the bank balances of uninsured deposits totaled \$4.4 million and \$5.1 million, respectively.

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

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

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

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

4. Investments

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

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

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

The endowment and similar investment holdings of the University, Foundation Agency Funds, and the Foundation, as of June 30, 2018 and 2017, respectively are summarized below (\$ in thousands):

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

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

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

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

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

The University held non-money market investments with a carrying and fair market value of \$811.1 million and \$778.0 million at June 30, 2018 and 2017, respectively. In the event of negligence due to the University's custodian and/or investment manager(s), it is expected that the investment balances would be fully recovered. However, these amounts are subject to both interest rate risk and credit risk.

Concentration of Credit Risk – As of June 30, 2018 and 2017, there is no concentration of investments from one issuer equal or greater than 5% of the portfolio. Investments issued or guaranteed by the U.S. government, as well as investments in mutual funds and other pooled investments are excluded from consideration when evaluating concentration risk.

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

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

Debt securities	S&P quality ratings								Total	
	AAA	AA	A	BBB	BB	B	<B	Unrated		
US treasury securities	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 44,611	\$ 44,611
Government agency bonds	-	-	-	-	-	-	-	-	351	351
Asset backed securities	11,763	-	167	389	-	-	-	-	5,333	17,652
Commercial mortgage-backed securities	298	-	-	-	-	-	-	-	6,966	7,264
Government issued commercial mortgage-backed securities	-	-	-	-	-	-	-	-	122	122
Government mortgage-backed securities	-	-	-	-	-	-	-	-	3,772	3,772
Non-government backed CMO's	640	-	-	-	-	-	-	-	799	1,439
Corporate bonds	561	4,119	28,168	29,328	314	-	-	-	763	63,253
Municipal and provincial bonds	412	731	405	647	-	-	-	-	-	2,195
Other fixed income	69,199	18,373	16,452	22,319	7,658	2,451	276	-	8,049	144,777
Total debt securities	\$ 82,873	\$ 23,223	\$ 45,192	\$ 52,683	\$ 7,972	\$ 2,451	\$ 276	\$ 70,766	\$ 285,436	

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

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

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

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

	Investment maturity (in years)				Total
	Less than 1	1 to 5	6 to 10	More than 10	
Debt securities					
US treasury securities	\$ -	\$ 39,226	\$ 5,385	\$ -	\$ 44,611
Government agency bonds	-	351	-	-	351
Asset backed securities	4,960	12,525	167	-	17,652
Commercial mortgage-backed securities	529	5,797	938	-	7,264
Government issued commercial mortgage-backed securities	122	-	-	-	122
Government mortgage-backed securities	448	3,326	-	-	3,772
Non-government backed CMO's	640	799	-	-	1,439
Corporate bonds	15,131	45,172	2,527	423	63,253
Municipal and provincial bonds	2,051	144	-	-	2,195
Other fixed income	27,843	90,162	19,541	7,231	144,777
Total debt securities	\$51,722	\$197,502	\$28,558	\$ 7,654	\$ 285,436

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

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

Fair Value Measurement – GASB Statement No. 72, *Fair Value Measurement and Application*, establishes general principles for measuring fair value and requires enhanced disclosures about fair value measurements of certain assets and liabilities, such as investments and interest-rate swaps. Fair value represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. GASB 72 requires that the University categorize these assets and liabilities measured at fair value using a three-tiered hierarchy based on the valuation methodologies employed.

The hierarchy is defined as follows:

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

Level 2 – Inputs to the valuation methodology include:

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

Level 3 – Inputs to the valuation methodology are unobservable and significant to the fair value measurement. Unobservable inputs reflect the University's own assumptions about the inputs market participants would use in pricing the asset or liability (including assumption about risk). Unobservable inputs are developed based on the best information available in the circumstances and may include the University's own data.

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

As a practical expedient to estimate the fair value of the University's interests, certain investments in commingled funds and limited partnerships are reported at the net asset value (NAV) determined by the fund managers. Because these investments are not readily marketable, their estimated fair values may differ from the values that would have been assigned had a ready market for such investments existed, and such differences could be material. As of June 30, 2018 and 2017, the University had no plans or intentions to sell such investments at amounts different from NAV.

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

	Investments measured at NAV	Investments classified in the fair value hierarchy			Total
		Level 1	Level 2	Level 3	
Cash equivalents					
Money market funds	\$ -	\$ 503,288	\$ -	\$ -	\$ 503,288
Certificates of deposit	-	48	-	-	48
Debt securities					
US treasury securities	-	44,611	-	-	44,611
Government agency bonds	-	-	351	-	351
Asset backed securities	-	-	17,652	-	17,652
Commercial mortgage-backed securities	-	-	7,264	-	7,264
Government issued commercial mortgage-backed securities	-	-	122	-	122
Government mortgage-backed securities	-	-	3,772	-	3,772
Non-government backed CMO's	-	-	1,439	-	1,439
Corporate bonds	-	-	63,209	44	63,253
Municipal and provincial bonds	-	-	2,195	-	2,195
Other fixed income	-	110,652	34,125	-	144,777
Total debt securities	-	155,263	130,129	44	285,436
Equity securities					
Domestic equities	-	120,875	-	1,384	122,259
International equities	-	106,955	-	-	106,955
Total equity securities	-	227,830	-	1,384	229,214
Alternative investments					
Multi-strategy hedge funds					
Equity	69,885	-	-	-	69,885
Long/short	19,971	-	-	-	19,971
Fixed income	34,798	-	-	-	34,798
Absolute return	40,213	-	-	-	40,213
Real assets	11,689	-	-	-	11,689
Private equity	8,652	-	-	-	8,652
Private debt	19,462	-	-	-	19,462
Private real estate	4,762	-	-	-	4,762
Total alternative investments	209,432	-	-	-	209,432
Other securities	-	18,015	-	-	18,015
Total investments	\$209,432	\$904,444	\$130,129	\$1,428	\$1,245,433

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

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

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

The following table summarizes the fair value of the University's investments by type as of June 30, 2017 (\$ in thousands):

	Investments measured at NAV	Investments classified in the fair value hierarchy			Total
		Level 1	Level 2	Level 3	
Cash equivalents					
Money market funds	\$ -	\$ 285,380	\$ -	\$ -	\$ 285,380
Certificates of deposit	-	10,500	-	-	10,500
Debt securities					
US treasury securities	-	48,919	-	-	48,919
Government agency bonds	-	-	432	-	432
Asset backed securities	-	-	20,571	-	20,571
Commercial mortgage-backed securities	-	-	5,771	-	5,771
Government issued commercial mortgage-backed securities	-	-	253	-	253
Government mortgage-backed securities	-	-	3,047	-	3,047
Non-government backed CMO's	-	-	885	-	885
Corporate bonds	-	-	63,892	237	64,129
Municipal and provincial bonds	-	-	4,149	-	4,149
Other fixed income	-	147,948	13,407	-	161,355
Total debt securities	-	196,667	112,407	237	309,511
Equity securities					
Domestic equities	-	94,729	-	1,250	95,979
International equities	-	128,458	-	-	128,458
Total equity securities	-	223,187	-	1,250	224,437
Alternative investments					
Multi-strategy hedge funds					
Equity	46,681	-	-	-	46,681
Long/short	12,640	-	-	-	12,640
Fixed income	48,196	-	-	-	48,196
Absolute return	50,623	-	-	-	50,623
Real assets	11,784	-	-	-	11,784
Private equity	3,402	-	-	-	3,402
Private debt	19,221	-	-	-	19,221
Private real estate	3,829	-	-	-	3,829
Total alternative investments	196,376	-	-	-	196,376
Other securities	-	26,359	-	-	26,359
Total investments	\$ 196,376	\$ 742,293	\$ 112,407	\$ 1,487	\$ 1,052,563

The following table presents unfunded commitments, redemption frequency and notice period for investments that have been valued using NAV as a practical expedient as of June 30, 2017 (\$ in thousands):

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

(1) As noted above, the University has made commitments to various private equity, private debt and private real estate partnerships. The University expects these funds to be called over the next 1-5 years. Liquidity is expected to be received in the next 1-8 years.

5. Accounts Receivable, Net

Accounts receivable as of June 30, 2018 and 2017 are as follows (\$ in thousands):

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

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

6. UMass Memorial Medical Center

The University has granted UMass Memorial Medical Center (UMass Memorial) the right to occupy portions of the University's Medical School campus facilities for a period of 99 years. As part of the ongoing agreement, UMass Memorial has agreed to share responsibility for various capital and operating expenses relating to the occupied premises. UMass Memorial also contributes to capital improvements to shared facilities.

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

The University is reimbursed by, and reimburses UMass Memorial for shared services, cross-funded employees, and other agreed upon activities provided and purchased. For the years ended June 30, 2018 and 2017, the reimbursements for services provided to

UMass Memorial were \$140.5 million and \$147.7 million, respectively. Included in these amounts are payroll paid by the University on behalf of UMass Memorial in an agency capacity in the amount of \$85.5 million and \$89.2 million for the years ended June 30, 2018 and 2017, respectively. As of June 30, 2018 and 2017, the University has recorded a receivable in the amount of \$42.2 million and \$33.8 million, respectively from UMass Memorial which includes \$29.6 million and \$22.0 million, respectively, in payroll and related fringe charges. The University has recorded a payable of \$4.5 million and \$4.4 million at June 30, 2018 and 2017, respectively, primarily for cross-funded payroll.

7. Capital Assets

The following table represents the University's capital assets activity for the years ended June 30, 2018 and 2017 (\$ in thousands):

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

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

The University has capitalized interest on borrowings, net of interest earned on related debt reserve funds, during the construction period of major capital projects. Capitalized interest is added to the cost of the underlying assets being constructed, and is amortized over the useful lives of the assets. For the years ended June 30, 2018 and 2017, the University capitalized net interest costs of \$11.6 million and \$20.5 million, respectively.

8. Leases

The University leases certain equipment and facilities under operating leases with terms exceeding one year, which are cancelable at the University's option with 30 day notice. The rent expense related to these operating leases amounted to \$20.6 million and \$24.6 million for the years ended June 30, 2018 and 2017, respectively. The leases primarily relate to telecommunications, software, and co-generation systems. The University also leases space to third party tenants. During the years ended June 30, 2018 and 2017, the amount reported as rental income was \$20.5 million and \$18.9 million, respectively.

The following presents a schedule of future minimum payments under non-cancelable leases for the next five years and in subsequent five-year periods for the University as of June 30, 2018 (\$ in thousands):

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

9. Long-Term Debt

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

	Original borrowing	Maturity date	Interest rate	As of July 1, 2017	Additions	Reductions	As of June 30, 2018
Building Authority							
Series 2008-A	\$ 26,580	2038	variable	\$ 19,145	\$ -	\$ (995)	\$ 18,150
Series 2008-1	232,545	2038	variable	171,430	-	(8,315)	163,115
Series 2008-2	120,560	2038	4.0-5.0%	3,065	-	(3,065)	-
Series 2009-1	247,810	2039	3.0-5.0%	28,400	-	(13,115)	15,285
Series 2009-2	271,855	2039	6.4-6.6%	271,855	-	-	271,855
Series 2009-3	28,570	2039	5.8-6.2%	25,685	-	(585)	25,100
Series 2010-1	118,985	2020	5.0%	59,230	-	(13,745)	45,485
Series 2010-2	430,320	2040	3.8-5.5%	430,320	-	-	430,320
Series 2010-3	3,005	2040	5.8%	2,730	-	(55)	2,675
Series 2011-1	135,040	2034	variable	126,540	-	(1,550)	124,990
Series 2011-2	101,700	2034	variable	96,115	-	(1,060)	95,055
Series 2013-1	212,585	2043	2.0-5.0%	198,655	-	(4,910)	193,745
Series 2013-2	71,970	2043	0.4-2.7%	65,090	-	(2,265)	62,825
Series 2013-3	24,640	2043	4.0-5.0%	24,640	-	-	24,640
Series 2014-1	293,890	2044	3.0-5.0%	293,015	-	(525)	292,490
Series 2014-2	14,085	2019	0.4-2.1%	8,555	-	(2,805)	5,750
Series 2014-4	157,855	2025	0.2-3.4%	122,125	-	(30,030)	92,095
Series 2014-3	67,635	2029	2.0-5.0%	61,840	-	(3,480)	58,160
Series 2015-1	298,795	2036	4.0-5.0%	298,795	-	-	298,795
Series 2015-2	191,825	2036	3.0-5.0%	191,825	-	(2,825)	189,000
Series 2017-1	165,130	2047	3.3-3.8%	165,130	-	-	165,130
Series 2017-2	19,510	2027	1.6-3.4%	19,510	-	-	19,510
Series 2017-3	35,945	2038	3.0-5.0%	187,680	-	(2,920)	184,760
Series 2018-1	75,000	2043	2.0-2.9%	-	37,650	-	37,650
Unamortized bond premium				164,887	-	(14,188)	150,699
				3,036,062	37,650	(106,433)	2,967,279
HEFA/MDFA							
Series A	20,000	2030	variable	20,000	-	-	20,000
Series 2011	29,970	2034	2.5-4.0%	25,925	-	(1,045)	24,880
Unamortized bond premium				870	-	(53)	817
				46,795	-	(1,098)	45,697
WCCC HEFA/MDFA							
Series 2005-D	99,325	2029	5.0-5.3%	715	-	(100)	615
Series 2011	10,495	2023	2.0-5.0%	6,690	-	(830)	5,860
Unamortized bond premium				824	-	(98)	526
				8,029	-	(1,028)	7,001
MDFA							
Clean renewable Energy bonds	1,625	2027	3.50%	956	-	(96)	860
Total bonds payable				3,091,842	37,650	(108,656)	3,020,837
Notes and commercial paper				1,917	64,535	(483)	65,969
Capital lease obligations				592	3,195	(1,525)	2,262
Total long-term debt				\$ 3,094,351	\$ 105,380	\$ (110,663)	\$ 3,089,068

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

	As of July 1, 2016	Additions	Reductions	As of June 30, 2017
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
Unamortized bond premium	122,146	55,987	(13,246)	164,887
	2,828,851	428,307	(221,096)	3,036,062
HEFA/MDFA				
2000 Series A	20,000	-	-	20,000
2007 Series D	8,645	-	(8,645)	-
Series 2011	26,940	-	(1,015)	25,925
Unamortized bond premium	949	-	(79)	870
	56,534	-	(9,739)	46,795
WCCC HEFA/MDFA				
Series 2005-D	1,335	-	(620)	715
Series 2007-E	31,250	-	(31,250)	-
Series 2007-F	51,890	-	(51,890)	-
Series 2011	7,495	-	(805)	6,690
Unamortized bond premium	1,215	-	(591)	824
	93,185	-	(85,156)	8,029
MDFA				
Clean renewable energy bonds	1,052	-	(96)	956
Total bonds payable	2,979,622	428,307	(316,087)	3,091,842
Notes and commercial paper	2,433	-	(516)	1,917
Capital lease obligations	598	161	(167)	592
Total long-term debt	\$2,982,653	\$428,468	\$ (316,770)	\$3,094,351

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

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

In accordance with GASB 1, the University classifies variable rate bonds subject to remarketing as current, unless supported by liquidity arrangements such as lines of credit or standby bond purchase agreements, which could refinance the debt on a long-term basis. In the event that variable rate bonds are put back to the University by the debt holder, management believes that the University's strong credit rating will ensure that the bonds will be remarketed within a reasonable period of time. As a result, the University's variable rate bonds are listed in the table above at their original maturities.

Bond Premium and Issuance Expenses – During the year ended June 30, 2017, premiums received totaled \$56.0 million. The University amortizes premiums received as a reduction of interest expense over the life of the respective bond issue. There were no new premiums received during the year ended June 30, 2018.

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

Commercial Paper – The maximum aggregate principal amount of commercial paper the Building Authority may have outstanding at one time is \$200.0 million. The Building Authority currently has standby liquidity facility agreements with State Street Bank and Trust Company for \$125.0 million and with U.S. Bank National Association for \$75.0 million. Each agreement expires on August 12, 2019. During the fiscal year 2018, the Building Authority issued \$64.5 million of commercial paper and has an outstanding balance of \$64.5 million as of June 30, 2018. The Building Authority incurred total fees of \$0.7 million and \$0.8 million for the years ending June 30, 2018 and 2017, respectively, associated with the use of commercial paper.

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

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

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

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

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

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

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

Swap payments and associated debt – Using rates as of June 30, 2018, the debt service requirements of the variable-rate debt and net swap payments, assuming current interest rates remain the same for their term, were as follows (\$ in thousands):

Fiscal Year Ending June 30	Principal	Interest	Interest rate swaps, net	Total
2019	\$ 12,215	\$ 8,073	\$ 7,645	\$ 25,933
2020	12,720	5,885	7,409	26,014
2021	28,390	5,576	7,020	40,986
2022	29,545	5,140	6,471	41,156
2023	33,915	4,663	5,869	44,447
2024–2028	155,640	16,102	20,259	192,001
2029–2033	112,390	5,579	7,011	124,980
2034–2038	16,495	373	469	17,337
Total	\$401,310	\$49,391	\$62,153	\$512,854

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

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

10. Other Liabilities

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

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

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

11. Fringe Benefits

During the years ended June 30, 2018 and 2017, the Commonwealth paid \$358.1 million and \$329.3 million, respectively, for the University's portion of fringe benefit costs which includes pension expense, health insurance for active employees and retirees, and terminal leave. Of this amount, the University reimbursed the Commonwealth \$134.1 million and \$123.8 million during the years ended June 30, 2018 and 2017, respectively. The remaining portion is included in revenue as state appropriations.

12. Pensions

The Massachusetts State Employees' Retirement System (MSERS) is a public employee retirement system (PERS) that administers a cost-sharing multi-employer defined benefit plan as defined by GASB Statement No. 67, *Financial Reporting for Pension Plans*, covering substantially all employees of the Commonwealth including University employees.

MSERS provides retirement, disability, survivor and death benefits to members and their beneficiaries. Massachusetts General Laws (MGL) establishes uniform benefit and contribution requirements for all contributory PERS. These requirements provide for superannuation retirement allowance benefits up to a maximum of 80% of a member's highest three-year average annual rate of regular compensation. For employees hired after April 1, 2012, retirement allowances are calculated on the basis of the last five years or any five consecutive years, whichever is greater in terms of compensation. Benefit payments are based upon a member's age, length of creditable service, and group creditable service, and group classification. The authority for amending these provisions rests with the Legislature.

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

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

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

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

The University makes contributions on behalf of the employees through a fringe benefit charge assessed by the Commonwealth. The fringe benefit charge amounted to \$107.4 million and \$89.9 million for the years ended June 30, 2018 and 2017, respectively. Annual covered payroll was 75.9% and 75.8% of annual total payroll for the University for the years ended June 30, 2018 and 2017, respectively. Pension expense of \$33.3 million and \$26.3 million was included in the fringe charge for the years ended June 30, 2018 and 2017, respectively.

As allowable under the terms of GASB 68, the University has elected to measure the net pension liability one year prior to the fiscal year end reporting date. The net pension liability as of June 30, 2018 was determined based on a measurement date of June 30, 2017 from an actuarial valuation as of January 1, 2017 rolled forward to June 30, 2017. The net pension liability measured as of June 30, 2017 was determined based on a measurement date of June 30, 2016 from an actuarial valuation as of January 1, 2016 rolled forward to June 30, 2016. There are no significant changes known which would impact the total pension liability between the measurement date and the reporting date, other than typical plan experience.

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

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

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

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

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

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

Best estimates of geometric rates of return for each major asset class included in the PRIT Fund's target asset allocation as of June 30, 2017 and 2016 are summarized in the following table:

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

Discount Rate – The discount rate used to measure the total pension liability was 7.50% at June 30, 2017 and 2016. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rates and the Commonwealth's contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rates. Based on those assumptions, the net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity Analysis – The following illustrates the impact a 1% change in the discount rate for the net pension liability at June 30, 2018 (\$ in thousands):

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

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

Related to Pensions – At June 30, 2018 and 2017, the University reported a liability of \$420.2 million and \$429.9 million, respectively, for its proportionate share of MSERS’s net pension liability, respectively. The University’s proportion of the net pension liability was based on a projection of the University’s long-term share of contributions to the pension plan relative to the total projected contributions of all participating entities, actuarially determined.

The following table shows the components of pension expense for the years ended June 30, 2018 and 2017 (\$ in thousands):

	2018	2017
Proportionate share of plan pension expense	\$ 52,383	\$ 58,723
Net amortization of deferred amounts from change in proportion	6,085	2,835
Employer contributions after measurement date	(28,292)	(25,618)
Pension expense	\$30,176	\$36,040

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

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

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

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

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

The MSERS and ORP retirement contributions of employees who become members of MSERS or ORP after January 1, 2011 are subject to a state compensation limit. Effective January 1, 2011, the University established a defined contribution plan, the University of Massachusetts 401(a) Retirement Gap Plan (Gap Plan). Employees with MSERS or ORP membership dates after January 1, 2011 are eligible to participate in the Gap Plan. Eligible employees begin participation in the Gap Plan when their regular compensation exceeds the state compensation limit in effect for the plan year, at which point their contributions to MSERS or ORP are required to stop for the remainder of the plan year. Employee contributions to the Gap Plan are mandatory and at the same rate as MSERS and ORP; the University contributes 5%. As of June 30, 2018 and 2017, the plan assets were \$3.4 million and \$2.5 million, respectively.

13. Other Postemployment Benefits

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

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

Employer and employee contribution rates are set in MGL. The Commonwealth recognizes its share of the costs on an actuarial basis. As of June 30, 2017, retirees contribute between 0% - 20% of premium costs, depending on the date of hire.

As allowable under the terms of GASB 75, the University has elected to measure the total postemployment liability one year prior to the fiscal year end reporting date. The total OPEB liability as of June 30, 2018 was determined based on a measurement date of June 30, 2017 from an actuarial valuation as of January 1, 2017 rolled forward to June 30, 2017. There are no significant changes known which would impact the total postemployment liability between the measurement date and the reporting date, other than typical plan experience.

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

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

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

These ranges are combined to produce the long-term expected rate of return by weighting the expected future rates of return by the target asset allocation percentage.

Best estimates of geometric rates of return for each major asset class included in the PRIT Fund's target asset allocation as of June 30, 2017 and 2016 are summarized in the following table:

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

Discount Rate – The discount rates used to measure the OPEB liability as of June 30, 2017 and 2016 were 3.63% and 2.88%, respectively. These rates were based on a blend of the Bond Buyer Index rates of 3.58% and 2.85%, respectively, as of the measurement dates June 30, 2017 and 2016 and the expected rates of return. The plan's fiduciary net position was not projected to be available to make all projected future benefit payments for current plan members. The projected "depletion date" when projected benefits are not covered by projected assets is 2023. Therefore, the long-term expected rate of return on plan investments of 7.50% per annum was not applied to all periods of projected benefit payments to determine the total OPEB liability as of June 30, 2017 and 2016.

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

Fiscal Year Ended	1% Decrease	Current Discount	1% Increase
June 30, 2017	\$970,268	\$817,357	\$695,780

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

Fiscal Year Ended	1% Decrease	Current Rate	1% Increase
June 30, 2017	\$676,259	\$817,357	\$1,003,033

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

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

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

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

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

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

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

14. Operating Expenses

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

	Compensation and benefits	Supplies and services	Scholarships and fellowships	Depreciation and amortization	Interest	Total
Educational and general						
Instruction	\$ 761,548	\$ 114,689	\$ -	\$ -	\$ -	\$ 876,235
Research	282,123	189,012	-	-	-	471,135
Public service	63,995	14,243	-	-	-	78,238
Academic support	134,392	53,103	-	-	-	187,495
Student services	119,601	37,333	-	-	-	156,934
Institutional support	241,374	30,161	-	-	-	271,535
Operation and maintenance of plant	126,923	128,902	-	-	-	255,825
Depreciation and amortization	-	-	-	261,417	-	261,417
Scholarships and fellowships	-	-	50,410	-	-	50,410
Auxiliary enterprises	146,623	167,118	-	-	-	313,741
Other expenditures						
Independent operations	24,854	27,357	-	-	-	52,211
Public service activities	83,260	241,958	-	-	-	325,216
Total operating expenses	1,984,691	1,003,874	50,410	261,417	-	3,300,392
Interest on indebtedness	-	-	-	-	115,851	115,851
Total operating expenses and interest	\$1,984,691	\$1,003,874	\$50,410	\$261,417	\$115,851	\$3,416,243

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

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

15. Unrestricted Net Position

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

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

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

	2018
Unrestricted resources	
Unexpended plant and facilities	\$ 267,319
Auxiliary enterprises	91,539
Education and general	244,472
Quasi-endowment	280,517
Stabilization	109,168
Other unrestricted	(12,024)
Subtotal	980,991
Unfunded portion of pension liabilities	(339,530)
Unfunded portion of postretirement benefits other than pension liabilities	(791,541)
Total unrestricted net position	\$(150,080)

16. Commitments and Contingencies

The Building Authority, University, and WCCC have outstanding purchase commitments under construction contracts and real estate agreements of \$120.7 million and \$283.6 million at June 30, 2018 and 2017, respectively. In connection with investments in certain limited partnership agreements, the University has \$35.2 million and \$39.0 million in committed calls as of June 30, 2018 and 2017, respectively, which are scheduled to be funded over a number of years. The University has entered an Energy Performance Contract that is being managed by the Commonwealth's Division of Capital Asset Management (DCAM) under its Clean Energy Investment Program. This project includes 32 energy conservation measures. The installation costs will be incurred over 2 phases with Phase 1 being \$18.0 million and Phase 2 being \$13.5 million. The term of these transactions is 20 years. The University has a commitment to the Commonwealth for Clean Energy Investment Program Funds used through June 30, 2018 and 2017 of \$26.1 million and \$27.1 million, respectively.

The University, as an agency of the Commonwealth, is self-insured for property loss exposure, subject to appropriation from the state legislature. However, properties owned by the Building Authority located on a campus of the University, such as the Mullins Center, dining commons, and most dormitories, are insured by the Building Authority. The University and its employees are protected against tort claims through sovereign immunity under Chapter 258 of the Massachusetts General Laws. The University maintains certain liability insurance policies, including commercial general liability, leased automotive liability, directors and officers and comprehensive crime policies. Employees of the University are covered for Worker's Compensation protection under Chapter 152 of the Massachusetts General Laws. The University has recorded a liability for future expected costs of its workers' compensation claims of \$14.7 million and \$14.6 million as of June 30, 2018 and 2017, respectively. Estimated future payments related to such costs have been discounted at a rate of 4.0%.

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

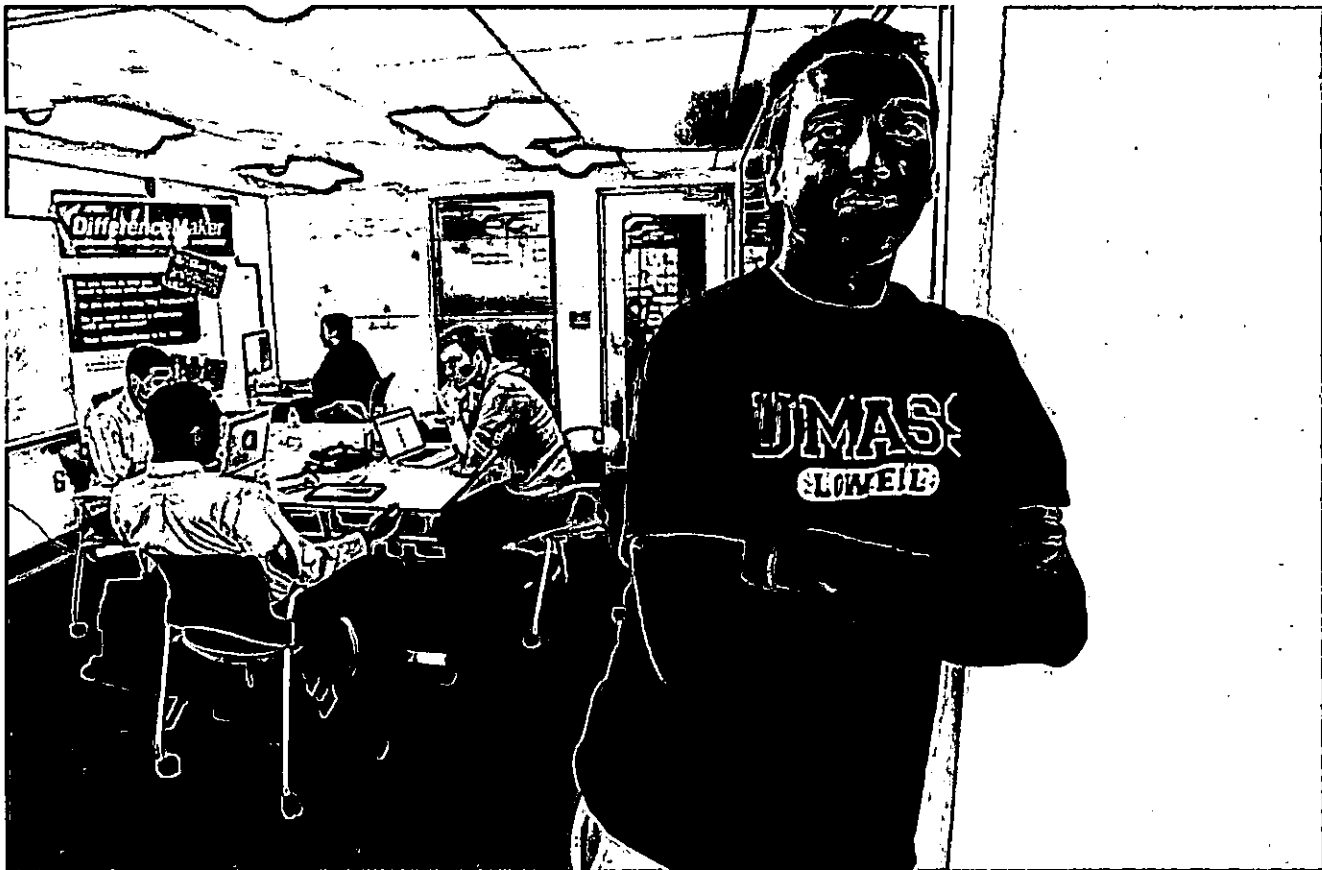
17. Subsequent Events

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

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

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

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



Required Supplementary Information (unaudited)

For the last ten years¹ (\$ in thousands)

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

	6/30/2018	6/30/2017	6/30/2016	6/30/2015
University's proportion of the net pension liability	3.56%	3.39%	3.92%	3.49%
University's proportionate share of the net pension liability	\$ 420,234	\$ 429,871	\$ 408,418	\$ 237,134
University's covered-employee payroll	\$1,168,661	\$1,156,082	\$1,139,719	\$1,061,132
University's proportionate share of the net pension liability as a percentage of its covered-employee payroll	35.96%	37.18%	35.83%	22.35%
Plan fiduciary net position as a percentage of total pension liability	67.21%	63.48%	67.87%	76.32%

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

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

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

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

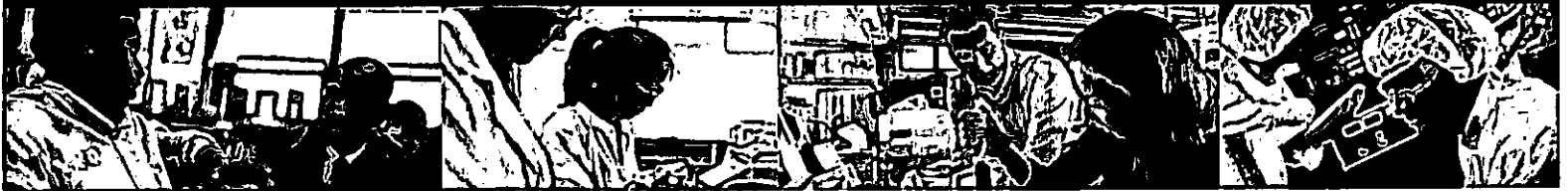
SCHEDULE OF THE UNIVERSITY'S CONTRIBUTIONS STATE RETIREES' BENEFIT TRUST

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

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

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UMass Medical School '17 M.D.
Exp. 2023

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ex-officio

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Education

- | | | |
|-----------|----------------|---|
| 1976-1981 | M.S. and Ph.D. | State University of New York at Buffalo, Buffalo, New York (Department of Microbiology) |
| 1970-1974 | B.A. | University of Vermont, Burlington, Vermont. |

Appointments

- | | |
|--------------|--|
| 1998-Present | Acting Director, then Director, New England Newborn Screening Program, 305 South Street, Jamaica Plain, MA 02130 |
| | Associate Professor, Department of Pediatrics, University of Massachusetts Medical School, Worcester, MA 01655 |
| 1991-Present | Chief of Laboratory-Serology, New England Newborn Screening Program, 305 South Street, Jamaica Plain, MA 02130 |
| 1987-1991 | Associate in Rheumatology and Immunology, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115 |
| 1984-1991 | Instructor in Medicine, Harvard Medical School, Department of Rheumatology and Immunology, Boston, MA 02115 |
| 1981-1984 | Postdoctoral Fellow, Harvard Medical School, and Research Fellow, Brigham and Women's Hospital (joint appointment), Boston, MA 02115 |

Additional Professional Experience

- | | |
|-------------|---|
| 2016 | Invited expert, Quality Indicator Working Group, NewSteps, Association of Public Health Laboratories. National workgroup conference. Feb. 10, 2016, Silver Spring, MD. Association of Public Health Laboratories, |
| 2014 – 2018 | Member, Steering Committee for the Newborn Screening Technical assistance and Evaluation Program (NewSTEPS), Association of Public Health Laboratories, |

2014-Present	Member, Association of Public Health Laboratories, Health Information Technology Workgroup
2013-2015	Advisory Board Member, HRSA-grant Sickle Cell Disease Newborn Screening Program Advisory Board. (Barry Zuckerman, M.D., Boston Medical Center, Principal Investigator).
2012-2013	Member, Massachusetts Department of Health Critical Congenital Heart Disease (CCHD) Screening Advisory Group
2011	Member of Organizing Committee, APHL Newborn Screening and Genetic Testing Symposium, San Diego, CA (November, 2011)
2010-2016	Member, UMass Medical School Commonwealth Medicine Division Strategic Planning Goal #1 (Quality Improvement) Workgroup
2010-2013	Member, Newborn Screening Translational Research Network (NBSTRN) Newborn Screening Laboratories Workgroup
2010	Member, Health Information Technology Workgroup for the Secretary's Advisory Committee on Heritable Disorders in Newborns and Children (HIT Workgroup for SACHDNC)
2009	NBSTRN participation: a) Participant, NCC Meeting with State Public Health, NBS and Diagnostic Providers, April 6-7, Bethesda, MD b) Participant, NCC NBSTRN Planning Meeting, April 16-17.
2009-2013	Member, National Coordinating Center for the Genetics and Newborn Screening Regional Collaborative Groups (NCC) Emergency Preparedness Workgroup.
2009	Invited Expert: A Stakeholder's Conference - Determine the Feasibility of G6PD Deficiency Identification for Prevention of Severe Neonatal Hyperbilirubinemia. Jointly Sponsored by HRSA and HHS. July 29-29, 2009, Bethesda, MD.
2008	Invited Expert to the National Contingency Planning for Newborn Screening Stakeholders Workgroup Meeting, Sept. 24-26, CDC, Atlanta, GA. A workgroup co-sponsored by CDC and APHL to develop the national newborn screening emergency response plan, which was required by the Newborn Screening Saves Lives Act of 2007 (Public Law 110-204)
2007-Present	Committee Member, Clinical Affairs Committee of the Commonwealth Medicine Division, University of Massachusetts Medical School.
2007-2011	Project Leader, <i>Multicenter Validation of Algorithms to Improve Communications of Positive Newborn Screening Results to the Medical</i>

Home. Priority Focus 1 of Region 1, New England Regional Genetics and Newborn Screening Collaborative Grant. HRSA

- 2006-Present Member, Leadership Forum, Commonwealth Medicine Division, University of Massachusetts Medical School.
- 2006 Invited expert to workgroup co-sponsored by APHL, CDC, HRSA, and NNSRG to develop strategy to definitively determine the need for routine second specimens for effective newborn screening in the USA. Washington, D.C.
- 2005-Present Expert Consultant and Presenter, Newborn Screening Advisory Committee to the State of New Hampshire Department of Public Health
- 2004-2015 Expert Consultant and Presenter, Newborn Screening Technical Advisory Committee to the Commonwealth of Pennsylvania Department of Public Health
- 2000-Present Member, International Society of Newborn Screening.
- 1998-Present Expert Consultant and Presenter, Newborn Screening Advisory Committee to the Commissioner of the Massachusetts Department of Public Health.
- 2006 and 2016 Participant, Strategic Planning Workshop Series for Strategic Planning and Development of Commonwealth Medicine Division, University of Massachusetts Medical School.
- 2006 Invited expert to workgroup co-sponsored by APHL, CDC, HRSA, and NNSRG to develop strategy to definitively determine the need for routine second specimens for effective newborn screening in the USA. Washington, D.C.
- 2003-2006 Member, HRSA sponsored National Laboratory Workgroup, for newborn screening Program Evaluation and Assessment Scheme (PEAS) development
- 2003-2006 Member, The Systematic Review On Congenital Toxoplasmosis (SYOCOT) study group (European-based)
- 2001-2003 Principal Investigator, HRSA 6H46MC 00198. *Development of a Multistate Database and Other Materials for Assessing the Validity and Utility of Tandem Mass Spectrometry-based and Cystic Fibrosis Newborn Screening.*
- 2002 Participant, NIH National Workshop “Workshop to Develop Newborn Screening Technology for SCID”
- 2002 Participant, CDC National Workshop “Banking of Newborn Dried Blood Spots for Public Health”

- 2002 Participant, HRSA National Workshop “Challenges for the Future: Newborn Screening State Policies and Procedures”
- 2001 Participant, HRSA National Workshop “Interfacing MS-MS Outcome Information into Newborn Screening Systems”
- 2001 Participant, CDC National Workshop “Applying Genetic and Public Health Strategies to Primary Immunodeficiency Diseases”
- 1998 Member, Centers for Disease Control, National Workgroup on Toxoplasmosis.

Major National and International Presentations

- 2010 Special Challenges of State Programs that Screen for Other States: Program – to – Program Communications. Issues and Answers Series: Newborn Screening Laboratory Health Information Exchange Bethesda , MD. November 1-2, 2010
- 2010 Hemoglobin Codes: Some Issues Still Requiring Resolution. Issues and Answers Series: Newborn Screening Laboratory Health Information Exchange Bethesda , MD. November 1-2, 2010
- 2008 *Evaluation of State Data on Congenital Hypothyroidism: Massachusetts.* Presentation to a national workshop co-sponsored by the Division of Birth Defects and Developmental Disabilities, CDC: Newborn Screening and Molecular Biology Branch, CDC: Genetics Services Branch, HRSA: National Newborn Screening and Genetics Resource Center. CDC, Atlanta, Georgia. February 2008.
- 2008 *Newborn Screening Systems: Utilizing Partnerships For Follow-up ; New England Newborn Screening Program: Follow-up Activities for Massachusetts and Rhode Island.* Invited Speaker, Secretary’s Advisory Committee on Heritable Disorders and Genetic Diseases in Newborns and Children. Washington, DC. January 2008
- 2007 *Programa de Tamizaje Neonatal UMASS Medical Center.* Plenary Speaker, I Congreso Centro Americano de Neonatología and XX Curso Internacional de Perinatología y Neonatología. Guatemala City, Guatemala. November 2007
- 2007 *Quality Assurance Plan: Making it Work to Improve Laboratory Quality.* Plenary Lecture to 2007 Newborn Screening and Genetic Testing Symposium, Minneapolis, MN.

- 2005 *Panorama del Desarrollo y Evolución de los Programas de Tamiz Neonatal*. Conferencias Magistrales, 35th Congreso Mexicano de Patología Clínica, Monterrey, Mexico.
- 2000 Co-Chairman and Presenter at the session "Focus on Preventive Strategies." *Newborn Screening for Congenital Toxoplasmosis*. European Conference on Congenital Toxoplasmosis, Vienna.
- 1999 *Newborn Screening for Congenital Toxoplasmosis: The Boston Experience*. Presentation at the meeting "Toxoplasmosi Congenita", organized by the National Institute of Health of Italy in Rome, May 24, 1999.
- 1994 *Progress and Problems of Serologic Screening: The New England Experience*. Presented the laboratory aspects of toxoplasmosis screening to the 2nd Annual Meeting of the European Research Network on Congenital Toxoplasmosis, Bonn, Germany.
- 1988 *Pruebas Immunoenzimaticas En Immunologia* (Immunoenzymatic Assays in Immunology). Delivered lecture to the Simposio de Immunologia Clinica Talleres de Histocompatibilidad y Autoinmunidad, December 1-3, 1988, Bogota, Colombia.

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CONTRACTOR NAME

Key Personnel

Name	Job Title	Salary	% Paid from this Contract	Amount Paid from this Contract
Roger B. Eaton	Director, New England Newborn Screening Program	\$151,773	0	0

27 mac



STATE OF NEW HAMPSHIRE
DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH SERVICES

Jeffrey A. Meyers
Commissioner

Lisa M. Morris
Director

29 HAZEN DRIVE, CONCORD, NH 03301
603-271-4501 1-800-852-3345 Ext. 4501
Fax: 603-271-4827 TDD Access: 1-800-735-2964
www.dhhs.nh.gov

May 15, 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, Division of Public Health Services, to exercise a renewal option to amend an existing **sole source** contract with the University of Massachusetts (Vendor #177576-B008), 305 South Street, Jamaica Plain, MA 02130-3597 for the provision of newborn screening laboratory services by increasing the price limitation by \$2,868,523 from \$2,799,650 to an amount not to exceed \$5,668,173 and extend the completion date from June 30, 2018 to June 30, 2021, effective upon the date of Governor and Executive Council approval. This agreement was originally approved by the Governor and Executive Council on June 24, 2015 (Item #54). 100% Other Funds.

Funds are available in the following account(s) for State Fiscal Year 2019, and are anticipated to be available in State Fiscal Year 2020 and State Fiscal Year 2021, upon the availability and continued appropriation of funds in the future operating budgets, with authority to adjust encumbrances between state fiscal years through the Budget Office without further approval from the Governor and Executive Council, if needed and justified.

05-95-90-902010-5240 HEALTH AND SOCIAL SERVICES, DEPT OF HEALTH AND HUMAN SVS, HHS: DIVISION OF PUBLIC HEALTH, BUREAU OF POPULATION HEALTH AND COMMUNITY SERVICES, NEWBORN SCREENING REVOLVING FUND

State Fiscal Year	Class / Account	Class Title	Job Number	Current Budget	Increased (Decreased) Amount	Revised Modified Budget
2016	102-500731	Contracts for Prog Svc	90080013	\$906,341	\$0	\$906,341
2017	102-500731	Contracts for Prog Svc	90080013	\$932,955	\$0	\$932,955

2018	102-500731	Contracts for Prog Svc	90080013	\$960,354	\$0	\$960,354
2019	102-500731	Contracts for Prog Svc	90080013	\$0	\$928,054	\$928,054
2020	102-500731	Contracts for Prog Svc	90080013	\$0	\$955,896	\$955,896
2021	102-500731	Contracts for Prog Svc	90080013	\$0	\$984,573	\$984,573
			Total	\$2,799,650	\$2,868,523	\$5,668,173

EXPLANATION

This request is **sole source** because the University of Massachusetts Newborn Screening Laboratory is the closest laboratory that can perform newborn screening tests. Timeliness of receipt of specimens and reporting results is of utmost importance with respect to newborn screening. The University of Massachusetts is nationally recognized for its quality work. Five out of the six New England states currently contract with this laboratory, increasing its proficiency and ability to adjust and respond to the state's needs. The University of Massachusetts has been providing newborn screening laboratory services for New Hampshire since 1988.

Funds in this amendment will be used to pay for the provision of laboratory services for newborn screening for the entire state of New Hampshire.

Since the establishment of RSA 132:10a in 1965, the state of New Hampshire has been responsible for the screening of all infants born in the state. The goal of newborn screening is the prevention of disability and untimely death of newborns from undiagnosed genetic disorders. New Hampshire is currently screening all infants born in the state for a panel of thirty-four (34) disorders.

Although some of these disorders are relatively rare, they do need to be identified and intervention initiated before the disorder presents clinically. In some cases this critical timeline for a positive outcome may be as short as one week. In 2017, the New Hampshire Newborn Screening Program identified ten (10) infants with disorders requiring treatment and ongoing specialty evaluation. In 2016, the program identified ten (10) infants with disorders, and in 2015, the program identified twenty-five (25) infants with disorders. Newborn screening results in early identification of disorders for which timely diagnosis and treatment can mean a life without disability. The lives of these infants and their families have been impacted in a very positive way by timely and accurate screening services.

Notwithstanding any other provision of the Contract to the contrary, no services shall continue after June 30, 2021, and the Department shall not be liable for any payments for services provided after June 30, 2021, unless and until an appropriation for these services has been received from the state legislature and funds encumbered for the SFY 2020-2021 biennium.

As referenced in Exhibit C-1 of this contract, this Agreement has the option to extend for up to three (3) additional years, contingent upon satisfactory delivery of services, available funding,

agreement of the parties, and approval of the Governor and Council. The Department is exercising this renewal option.

The Contractor successfully fulfilled and achieved the performance measures (or deliverables) in the original contract, which include:

- At least ninety-eight percent (98%) of Congenital Adrenal Hyperplasia results will be reported to the New Hampshire Newborn Screening Program within three (3) days of the contractor receiving the dried blood specimen.
- At least ninety-five percent (95%) of all initial screening reports will have a report date within seven days of life.

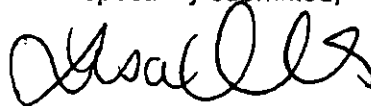
Should the Governor and Executive Council not authorize this request, New Hampshire will be out of compliance with the mandate established in RSA 132:10a, and newborns would be in jeopardy of serious harm, potentially even death.

Area served: Statewide.

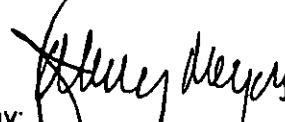
Source of Funds: 100% Other Funds (Newborn Screening Revolving Fund).

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

Respectfully submitted,



Lisa Morris, MSSW
Director



Approved by:

Jeffrey A. Meyers
Commissioner



State of New Hampshire
Department of Health and Human Services
Amendment #1 to the Newborn Screening Laboratory Services Contract

This 1st Amendment to the Newborn Screening Laboratory Services contract (hereinafter referred to as "Amendment One") dated this 15th day of May, 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 the University of Massachusetts, (hereinafter referred to as "the Contractor"), with a place of business at 305 South Street, Jamaica Plain, MA 02130-3597.

WHEREAS, pursuant to an agreement (the "Contract") approved by the Governor and Executive Council on June 24, 2015, (Item #54), the Contractor agreed to perform certain services based upon the terms and conditions specified in the Contract 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, and Exhibit C-1, Paragraph 2 (10.6), the Department reserves the right to renew the Contract for up to three (3) additional years, subject to mutual agreement, continued availability of funds, satisfactory performance of service, and approval by the Governor and Executive Council; and

WHEREAS, the parties agree to extend the term of the agreement and increase the price limitation; and

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, 2021.
2. Form P-37, General Provisions, Block 1.8, Price Limitation, to read:
\$5,668,173.
3. Form P-37, General Provisions, Block 1.9, Contracting Officer for State Agency, to read:
E. Maria Reinemann, Esq., Director of Contracts and Procurement.
4. Form P-37, General Provisions, Block 1.10, State Agency Telephone Number, to read:
603-271-9330.
5. Exhibit A Newborn Screening Laboratory Services, SCOPE OF SERVICES, Section 1. General Provisions, Subsection 1.1 Required Services, Paragraph 1.1.5, to read:
1.1.5. The Contractor shall provide a courier service to all designated birthing centers in New Hampshire for transporting of blood samples to the testing facility to include Sunday through Friday pickup and Monday through Saturday delivery. Adherence to strict turnaround times is critical. The Contractor shall also monitor the courier service for performance and timeliness
6. Delete and replace Exhibit B Method and Conditions Precedent to Payment with Exhibit B Amendment #1 Method and Conditions Precedent to Payment.
7. Add Exhibit B-2 Budget Form Amendment #1, Budget for State Fiscal Year 2019.
8. Add Exhibit B-3 Budget Form Amendment #1, Budget for State Fiscal Year 2020.
9. Add Exhibit B-4 Budget Form Amendment #1, Budget for State Fiscal Year 2021.
10. Add Exhibit K, DHHS Information Security Requirements.

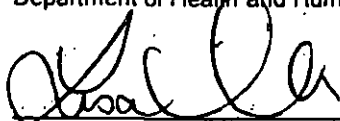


New Hampshire Department of Health and Human Services
Newborn Screening Laboratory Services

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

5/21/18
Date


Name: Lisa M. Morris
Title: Director

University of Massachusetts

Date

Patti Onorato 5.16.18
Name: Patti Onorato
Title: Associate Vice Chancellor, Operations, CWM

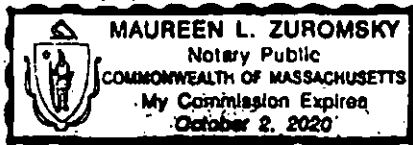
Acknowledgement of Contractor's signature:

State of Massachusetts, County of Worcester on May 16, 2018, 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 of Notary Public or Justice of the Peace

MAUREEN L. ZUROMSKY, NOTARY PUBLIC
Name and Title of Notary or Justice of the Peace

My Commission Expires: 10/2/2020



New Hampshire Department of Health and Human Services
Newborn Screening Laboratory Services



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

OFFICE OF THE ATTORNEY GENERAL

6/5/18
Date

[Signature]
Name: Mark A. Ladd
Title: Attorney General

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:



Exhibit B Amendment #1

Method and Conditions Precedent to Payment

1. This contract is funded from 100% other funds from the Newborn Screening Revolving Fund to provide services pursuant to Exhibit A, Scope of Services.
2. The State shall pay the Contractor an amount not to exceed the amount identified in Form P37, General Provisions, Block 1.8; price limitation for the services provided by the Contractor pursuant to Exhibit A, Scope of Services.
3. Payment for expenses shall be on a cost reimbursement basis only for actual expenditures in accordance with the approved line item budgets shown in Exhibits B-1 and B-4.
4. Payment for services shall be made as follows:
 - 4.1. The Contractor shall submit quarterly reports as specified in Exhibit A, Scope of Services, Sections 3, with an invoice for reimbursement of actual expenses incurred during the quarter.
 - 4.2. The State shall make payment to the Contractor within thirty (30) days of receipt of each invoice for Contractor services provided pursuant to this Agreement.
 - 4.3. Invoices and reports identified in Section 4.1 must be submitted to:

NH Department of Health and Human Services
Division of Public Health Services
Email address: DPHcontractbilling@dhhs.state.nh.us
5. Payments may be withheld pending receipt of required reports.
6. A final payment request shall be submitted no later than forty-five (45) days after the contract ends. Failure to submit the invoice and accompanying documentation may result in nonpayment.
7. Notwithstanding anything to the contrary herein, the Contractor agrees that funding under this Contract may be withheld, in whole or in part, in the event of noncompliance with any State or Federal law, rule or regulation applicable to the services provided, or if the said services have not been completed in accordance with the terms and conditions of this Agreement.
8. Notwithstanding paragraph 18 of Form P-37, General Provisions, an amendment limited to adjusting the encumbrances between State fiscal years within the price limitation, may be made by written agreement of both parties without obtaining further approval from the Governor and Executive Council.

Exhibit B-2 Budget Form Amendment #1

New Hampshire Department of Health and Human Services

Bidder/Contractor Name: University of Massachusetts

Budget Request for: Newborn Screening Laboratory Services

Budget Period: SFY 2019

Line Item	Direct Incremental	Indirect Fixed	Total	Allocation Method for Indirect/Fixed Cost
1. Total Salary/Wages	\$ -	\$ -	\$ -	
2. Employee Benefits	\$ -	\$ -	\$ -	
3. Consultants	\$ -	\$ -	\$ -	
4. Equipment:	\$ -	\$ -	\$ -	
Rental	\$ -	\$ -	\$ -	
Repair and Maintenance	\$ -	\$ -	\$ -	
Purchase/Depreciation	\$ -	\$ -	\$ -	
5. Supplies:	\$ -	\$ -	\$ -	
Educational	\$ -	\$ -	\$ -	
Lab	\$ -	\$ -	\$ -	
Pharmacy	\$ -	\$ -	\$ -	
Medical	\$ -	\$ -	\$ -	
Office	\$ -	\$ -	\$ -	
6. Travel	\$ -	\$ -	\$ -	
7. Occupancy	\$ -	\$ -	\$ -	
8. Current Expenses	\$ -	\$ -	\$ -	
Telephone	\$ -	\$ -	\$ -	
Postage	\$ -	\$ -	\$ -	
Subscriptions	\$ -	\$ -	\$ -	
Audit and Legal	\$ -	\$ -	\$ -	
Insurance	\$ -	\$ -	\$ -	
Board Expenses	\$ -	\$ -	\$ -	
9. Software	\$ -	\$ -	\$ -	
10. Marketing/Communications	\$ -	\$ -	\$ -	
11. Staff Education and Training	\$ -	\$ -	\$ -	
12. Subcontracts/Agreements	\$ -	\$ -	\$ -	
13. Other (specific details mandatory):	\$ -	\$ -	\$ -	
Laboratory Testing (current, @\$68.73)	\$ 893,490.00	\$ -	\$ 893,490.00	
Specimen Shipping	\$ 34,564.00	\$ -	\$ 34,564.00	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
TOTAL	\$ 928,054.00	\$ -	\$ 928,054.00	

Indirect As A Percent of Direct

0.0%

Contractor Initials:

Date: 5.16.18

Exhibit B-3 Budget Form Amendment #1

New Hampshire Department of Health and Human Services

Bidder/Contractor Name: University of Massachusetts

Budget Request for: Newborn Screening Laboratory Services

Budget Period: SFY 2020

Line/Item	Direct Incremental	Indirect Fixed	Total	Allocation/Method for Indirect/Fixed Cost
1. Total Salary/Wages	\$ -	\$ -	\$ -	
2. Employee Benefits	\$ -	\$ -	\$ -	
3. Consultants	\$ -	\$ -	\$ -	
4. Equipment:	\$ -	\$ -	\$ -	
Rental	\$ -	\$ -	\$ -	
Repair and Maintenance	\$ -	\$ -	\$ -	
Purchase/Depreciation	\$ -	\$ -	\$ -	
5. Supplies:	\$ -	\$ -	\$ -	
Educational	\$ -	\$ -	\$ -	
Lab	\$ -	\$ -	\$ -	
Pharmacy	\$ -	\$ -	\$ -	
Medical	\$ -	\$ -	\$ -	
Office	\$ -	\$ -	\$ -	
6. Travel	\$ -	\$ -	\$ -	
7. Occupancy	\$ -	\$ -	\$ -	
8. Current Expenses	\$ -	\$ -	\$ -	
Telephone	\$ -	\$ -	\$ -	
Postage	\$ -	\$ -	\$ -	
Subscriptions	\$ -	\$ -	\$ -	
Audit and Legal	\$ -	\$ -	\$ -	
Insurance	\$ -	\$ -	\$ -	
Board Expenses	\$ -	\$ -	\$ -	
9. Software	\$ -	\$ -	\$ -	
10. Marketing/Communications	\$ -	\$ -	\$ -	
11. Staff Education and Training	\$ -	\$ -	\$ -	
12. Subcontracts/Agreements	\$ -	\$ -	\$ -	
13. Other (specific details mandatory):	\$ -	\$ -	\$ -	
Laboratory Testing (current, @\$70.79)	\$ 920,295.00	\$ -	\$ 920,295.00	
Specimen Shipping	\$ 35,601.00	\$ -	\$ 35,601.00	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
TOTAL	\$ 955,896.00	\$ -	\$ 955,896.00	

Indirect As A Percent of Direct

0.0%

Newborn Screening Laboratory Services

University of Massachusetts

Page 1 of 1

Contractor Initials:

Date: 5.16.17

Exhibit B-4 Budget Form Amendment #1

New Hampshire Department of Health and Human Services

Bidder/Contractor Name: University of Massachusetts

Budget Request for: Newborn Screening Laboratory Services

Budget Period: SFY 2021

Line/Item	Direct (Incremental)	Indirect (Fixed)	Total	Allocation Method for (Indirect/Fixed/Cost)
1. Total Salary/Wages	\$ -	\$ -	\$ -	
2. Employee Benefits	\$ -	\$ -	\$ -	
3. Consultants	\$ -	\$ -	\$ -	
4. Equipment:	\$ -	\$ -	\$ -	
Rental	\$ -	\$ -	\$ -	
Repair and Maintenance	\$ -	\$ -	\$ -	
Purchase/Depreciation	\$ -	\$ -	\$ -	
5. Supplies:	\$ -	\$ -	\$ -	
Educational	\$ -	\$ -	\$ -	
Lab	\$ -	\$ -	\$ -	
Pharmacy	\$ -	\$ -	\$ -	
Medical	\$ -	\$ -	\$ -	
Office	\$ -	\$ -	\$ -	
6. Travel	\$ -	\$ -	\$ -	
7. Occupancy	\$ -	\$ -	\$ -	
8. Current Expenses	\$ -	\$ -	\$ -	
Telephonic	\$ -	\$ -	\$ -	
Postage	\$ -	\$ -	\$ -	
Subscriptions	\$ -	\$ -	\$ -	
Audit and Legal	\$ -	\$ -	\$ -	
Insurance	\$ -	\$ -	\$ -	
Board Expenses	\$ -	\$ -	\$ -	
9. Software	\$ -	\$ -	\$ -	
10. Marketing/Communications	\$ -	\$ -	\$ -	
11. Staff Education and Training	\$ -	\$ -	\$ -	
12. Subcontracts/Agreements	\$ -	\$ -	\$ -	
13. Other (specific details mandatory):	\$ -	\$ -	\$ -	
Laboratory Testing (current, @\$72.92)	\$ 947,904.00	\$ -	\$ 947,904.00	
Specimen Shipping	\$ 36,669.00	\$ -	\$ 36,669.00	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
TOTAL	\$ 984,573.00	\$ -	\$ 984,573.00	

Indirect As A Percent of Direct

0.0%

Newborn Screening Laboratory Services

University of Massachusetts

Page 1 of 1

Contractor Initials: P

Date: 5.16.18



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 (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

New Hampshire Department of Health and Human Services

Exhibit K

DHHS Information Security Requirements



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

DHHS Information Security Requirements



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, UPS or Federal Express 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

New Hampshire Department of Health and Human Services

Exhibit K

DHHS Information Security Requirements



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. The two UMMS automated NH SFTP jobs running is acceptable to DHHS; One is on a 24 hour cycle and is deleted the next time it is run. The other is a weekly extract. This one sits on the SFTP server for one week and is deleted once per week.
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

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.).

New Hampshire Department of Health and Human Services

Exhibit K

DHHS Information Security Requirements



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

New Hampshire Department of Health and Human Services

Exhibit K

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 set forth in the principles of NIST 800-53, as defined by that Federal Standard at a Moderate level .
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 three (3) business days 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.

New Hampshire Department of Health and Human Services

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 annually, upon thirty (30) days' notice, 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 three (3) business days 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

New Hampshire Department of Health and Human Services

Exhibit K

DHHS Information Security Requirements



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



Nicholas A. Toumpas
Commissioner

Marcella Jordan Boblosky
Acting Director

STATE OF NEW HAMPSHIRE

DEPARTMENT OF HEALTH AND HUMAN SERVICES

29 HAZEN DRIVE, CONCORD, NH 03301-6527
603-271-4501 1-800-852-3345 Ext. 4501
Fax: 603-271-4827 TDD Access: 1-800-735-2964



May 20, 2015

G&C Approved

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

Date

6/24/15

Item #

54

REQUESTED ACTION

Authorize the Department of Health and Human Services, Division of Public Health Services, to enter into a **sole source** agreement with University of Massachusetts (Vendor #177576-B008), 305 South Street, Jamaica Plain, MA 02130-3597, in an amount not to exceed \$2,799,650 to provide newborn screening laboratory services for the state of New Hampshire, to be effective July 1, 2015, or date of Governor and Council approval, whichever is later, through June 30, 2018. 100% Other Funds.

Funds are anticipated to be available in SFY 2016, SFY 2017 and SFY 2018, upon the availability and continued appropriation of funds in the future operating budget, with authority to adjust encumbrances between State Fiscal Years through the Budget Office, without further approval from the Governor and Executive Council, if needed and justified.

05-95-90-902010-5240 HEALTH AND SOCIAL SERVICES, DEPT OF HEALTH AND HUMAN SVS, HHS: DIVISION OF PUBLIC HEALTH, BUREAU OF POPULATION HEALTH AND COMMUNITY SERVICES, NEWBORN SCREENING REVOLING FUND

Fiscal Year	Class/Account	Class Title	Job Number	Total Amount
SFY 2016	102-500731	Contracts for Prog Svc	90080013	906,341
SFY 2017	102-500731	Contracts for Prog Svc	90080013	932,955
SFY 2018	102-500731	Contracts for Prog Svc	90080013	960,354
			Total	\$2,799,650

EXPLANATION

This request is **sole source** because the University of Massachusetts has been providing newborn screening laboratory services to New Hampshire since 1988. Five out of the six New England states currently contract with the University of Massachusetts, increasing its proficiency and ability to adjust and respond to the State's needs. It is also the closest laboratory geographically to New Hampshire that can perform newborn screening tests. Timeliness is of utmost importance with respect to newborn screening. In addition, there has not been another bid in response to a Request for Proposals in more than a decade.

Funds in this agreement will be used to pay for the provision of laboratory services for newborn screening for the entire state of New Hampshire.

Her Excellency, Governor Margaret Wood Hassan
and the Honorable Council
May 20, 2015
Page 2

Since the establishment of RSA 132:10a in 1965, the state of New Hampshire has been responsible for the screening of all infants born in the state. The goal of newborn screening is the prevention of disability and untimely death of newborns from undiagnosed genetic disorders. New Hampshire is currently screening all infants born in the state for a panel of thirty-four (34) disorders.

Although some of these disorders are relatively rare, they do need to be identified and intervention initiated before the disorder presents clinically. In some cases this critical timeline for a positive outcome may be as short as one week. In 2014, the New Hampshire Newborn Screening Program identified eighteen (18) infants with disorders requiring treatment and ongoing specialty evaluation. In 2013 the program identified twenty-six (26) infants with disorders. Newborn screening results in early identification of disorders for which timely diagnosis and treatment can mean a life without disability. Clearly the lives of these infants and their families have been impacted in a very positive way.

Should Governor and Executive Council not authorize this Request, New Hampshire would be out of compliance with the mandate (RSA 132:10a) and newborns would be in jeopardy of serious harm, potentially even death.

This Agreement has the option to extend for three (3) additional year(s), contingent upon satisfactory delivery of services, available funding, agreement of the parties and approval of the Governor and Council.

The following performance measures will be used to measure the effectiveness of the agreement:

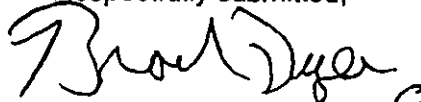
- At least ninety-eight (98%) of Congenital Adrenal Hyperplasia results will be reported to the New Hampshire Newborn Screening Program within three (3) days of the contractor receiving the dried blood specimen.
- At least ninety-five percent (95%) of all initial screening reports will have a report date within seven days of life.

Area served: Statewide.

Source of Funds: 100% Other Funds (Newborn Screening Revolving Fund).

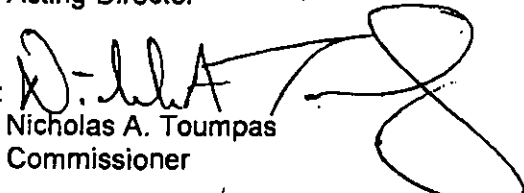
In the event that the Other Funds become no longer available, General Funds will not be requested to support this program.

Respectfully submitted,



Marcella Jordan Bobinsky
Acting Director

Approved by:



Nicholas A. Toumpas
Commissioner

Subject: Newborn Screening Laboratory Services

AGREEMENT

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

GENERAL PROVISIONS

1. IDENTIFICATION.

1.1 State Agency Name NH Department of Health and Human Services Division of Public Health Services		1.2 State Agency Address 29 Hazen Drive Concord, NH 03301-6504	
1.3 Contractor Name University of Massachusetts		1.4 Contractor Address 305 South Street Jamaica Plain, Massachusetts 02130	
1.5 Contractor Phone Number 617-983-6300	1.6 Account Number 05-95-90-902010-5240-102-500731	1.7 Completion Date June 30, 2018	1.8 Price Limitation \$2,799,650
1.9 Contracting Officer for State Agency Eric D. Borin, Director Contracts and Procurement Unit		1.10 State Agency Telephone Number 603-271-9558	
1.11 Contractor Signature <i>[Signature]</i>		1.12 Name and Title of Contractor Signatory Joyce A. Murphy, Executive Vice Chancellor Commonwealth of Massachusetts	
1.13 Acknowledgement: State of <u>MA</u> , County of <u>WORCESTER</u> On <u>5/14/15</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] <i>[Signature]</i>		ERIN M. SEGAL Notary Public COMMONWEALTH OF MASSACHUSETTS My Commission Expires April 2, 2021	
1.13.2 Name and Title of Notary or Justice of the Peace Erin Segal, Notary Public			
1.14 State Agency Signature <i>[Signature]</i>		1.15 Name and Title of State Agency Signatory Brook Dupee, Bureau Chief	
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: <i>[Signature]</i> Megan A. York - Attorney On: 6/10/15			
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.

Contractor Initials:
Date:

faa
6/19/13

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

Contractor Initials:
Date:

[Handwritten Signature]
5/19/05

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.



Exhibit A

SCOPE OF SERVICES

1. General Provisions

1.1. Required Services

1.1.1. The University of Massachusetts, hereinafter referred to as the "Contractor", shall provide laboratory screening services for newborn screening of all infants born in New Hampshire. The goal of New Hampshire Department of Health and Human Services (DHHS), Newborn Screening Program (NBSP) is the prevention of disability and untimely death of newborns from undiagnosed genetic disorders. New Hampshire is currently screening all infants born in the state for a panel of thirty-four (34) disorders. Although some of these disorders are relatively rare, they do need to be identified and intervention initiated before the disorder presents clinically.

1.1.2. Contractors considering clinical or sociological research using clients as subjects must adhere to the legal requirements governing human subjects' research. Contractors must inform the DHHS prior to initiating any research related to this contract.

1.1.3. The contractor shall carry out the laboratory analysis utilizing standardized, approved laboratory methods for the following disorders, for all New Hampshire births for the following mandated panel of disorders:

1. Phenylketonuria (PKU)
2. Galactosemia (GALT)
3. Homocystinuria (HCY)
4. Maple Syrup Urine Disease (MSUD)
5. Congenital Hypothyroidism (CH)
6. Congenital Toxoplasmosis (TOXO)
7. Biotinidase (BIOT)
8. Congenital Adrenal Hyperplasia (CAH)
9. Cystic Fibrosis (CF)
10. Hemoglobinopathies (Hb SS)
11. Hemoglobinopathies HbS/Bth
12. Hemoglobinopathies Hb S/C)
13. Medium Chain Acyl CoA Dehydrogenase Deficiency (MCAD)
14. Argininosuccinic Aciduria (ASA)
15. Argininemia (ARG)
16. Carnitine Uptake Defect (CUD)
17. Carnitine Palmitoyltransferase II Deficiency (CPTII)
18. Citrullinemia I (ASA Synthetase Def) (CIT)
19. Cobalamin A, B (Cbl A,B)
20. Glutaric Aciduria Type I (GAI)
21. 3-Hydroxy-3-Methylglutaryl-CoA Lysase Deficiency (HMG)
22. Hyperomithinemia Hyperammoninemia, Homocitrullinemia Syndrome (HHH)
23. Isovaleric Acidemia (IVA)
24. Long Chain 3-hydroxyacyl-CoA Dehydrogenase Deficiency (LCHAD)
25. 3-Methylcrotonyl-CoA Carboxylase Deficiency (3MCC)
26. Methylmalonic Acidemia (MUT)
27. Mitochondrial Acetoacetyl-CoA Thiolase Deficiency (BKT)
28. Multiple Acyl-CoA Dehydrogenase Deficiency (GA2)
29. Multiple Carboxylase Deficiency (MCD)
30. Propionic Acidemia (PROP)



Date 5/19/15



Exhibit A

31. Severe Combined Immunodeficiency (SCID)
 32. Trifunctional Protein Deficiency (TFP)
 33. Tyrosinemia
 34. Very Long Chain Acyl-CoA Dehydrogenase Deficiency (VLCAD)
- 1.1.4. The Contractor shall supply approved filter paper collection kits as required for the collection and identification of blood samples, and for gathering the necessary clinical information. A supply of pre-addressed envelopes for mailing repeat specimens to the lab via the US Postal Services will also be provided.
 - 1.1.5. The Contractor shall provide a courier service to all designated birthing centers in New Hampshire for transporting of blood samples to the testing facility to include weekend and holiday pick-up. Adherence to strict turnaround times is critical. The Contractor shall also monitor the courier service for performance and timeliness.
 - 1.1.6. The Contractor shall report to the Newborn Screening Program all out-of-range test results according to the urgency of the laboratory findings. In addition, the laboratory shall make available to the Newborn Screening Program, condition-specific FACT SHEETS as a resource on the probable significance of the findings and recommendations for appropriate follow-up action.
 - 1.1.7. The Contractor shall report normal test results to the Newborn Screening Program via a secure web connection in a timely manner.
 - 1.1.8. The New Hampshire DHHS shall remain in full ownership of all residual screening specimens. Decisions about retention/use of dried blood spots (DBS) are at the sole discretion of DHHS, and must be consistent with the Newborn Screening Program policies. Additional testing of specimens for other disorders is prohibited without express permission from the Newborn Screening Program.
 - 1.1.9. The Contractor shall maintain storage of New Hampshire's residual screening specimens in an appropriate, climate-controlled, secure facility, in sealed bags of low gas permeability containing a desiccant and humidity indicator at -20°C for six months.
 - 1.1.10. Residual DBS shall be destroyed six months after the collection date, in a manner consistent with applicable state and federal requirements relating to disposal of human blood and body fluids per OSHA regulations 29 CFR, standard number 1910.1030. In the event that the storage environment of any DBS is found to have deviated from the required conditions described above, such that the stability of the specimen is likely to have been affected, the DBS shall be destroyed and the Newborn Screening Program shall be notified.
 - 1.1.11. The Contractor will describe the contingency plan of operations to assure maintenance of screening services in the event of a major disaster or emergency.

2. Compliance and Data Reporting Requirements

2.1. Compliance Requirements

- 2.1.1. The Contractor shall submit a detailed description of the language assistance services they will provide to persons with Limited English Proficiency to ensure meaningful access to their programs and/or services, within 10 days of the contract effective date.

2.2. Data Reporting Requirements

The Contractor shall:

- 2.2.1. Provide sufficient data, upon request, on the occurrence of disorders not mandated by the State to assist the Newborn Screening Program in making appropriate decisions about what services it offers.



Exhibit A

- 2.2.2. Provide a computerized system of records to show the date each sample was received from New Hampshire birth hospitals and/or community-based health care providers, the date the laboratory tests were performed and the date results of the laboratory analyses were reported to the New Hampshire Newborn Screening Program.
- 2.2.3. Maintain all newborn laboratory test and result data in a computerized record system accessible to the laboratory performing the services and to the Newborn Screening Program, for a period no less than 21 years from the date of the test.
- 2.2.4. Provide critical data elements necessary to and determined by the New Hampshire Maternal and Child Health Section (MCHS) Data Linkage Project on a daily basis, or other schedule determined by MCHS, to enable the state to match the screening results with the electronic birth certificate (EBC).
- 2.2.5. Comply with minor modifications and/or additions to the proposed activities and report format as requested by MCHS. The MCHS will provide the Contractor with advance notice of such changes and the Contractor is not expected to incur any substantial costs relative to such changes.
- 2.2.6. Provide documentation of current CLIA Laboratory Certification.
- 2.2.7. Provide documentation of participation in the CDC/APHL Newborn Screening Quality Assurance Program or other acceptable proficiency-testing program.
- 2.2.8. In years when contracts or amendments are not required, the DPHS Budget Form, Budget Justification, Sources of Revenue and program Staff list forms must be completed according to the relevant instructions and submitted as requested by DPHS and, at minimum, by April 30 of each year.
- 2.2.9. The Sources of Revenue report must be resubmitted at any point when changes in revenue threaten the ability of the agency to carry out the planned program.
- 2.2.10. The contractor will agree to participate in DPHS planning, as needed, including planning for Electronic Medical Record (EMR) enhancements and Health Information Exchange (HIE).

3. State and Federal Laws

- 3.1. The Contractor is responsible for compliance with all relevant state and federal laws, with special attention called to the following statutory responsibilities:
- 3.2. The Contractor shall report all cases of communicable diseases according to New Hampshire RSA 141-C and He-P 30, effective 01/05.
- 3.3. Persons employed by the Contractor shall comply with the reporting requirements of New Hampshire RSA 169:C, Child Protection Act; RSA 161:F46, Protective Services to Adults and RSA 631:6, Assault and Related Offenses.

4. Staffing

- 4.1. Staffing Provisions
 - 4.1.1. Maintain a listing of "on call" qualified specialists who are available by beeper response, seven days/week, 24 hours/day to provide medical consultation as needed to the Newborn Screening Program and/or the physician of record.
 - 4.1.2. Provide coverage for the Newborn Screening Program staff, upon request, when Newborn Screening Program staff is unavailable, for notifying attending physicians of out-of-range lab results (i.e. after normal work hours, on weekends, holidays, and with advance notice, when there is no staff available to cover the Newborn Screening Program).

Exhibit A – Scope of Services

Contractor Initials

Date

Date 01/15



Exhibit A

4.2. Staffing Changes

- 4.2.1. The Contractor shall notify the DHHS within one month of hire when a new administrator or coordinator or any staff person essential to carrying out this scope of services is hired to work in the program. A resume of the employee shall accompany this notification.
- 4.2.2. The Contractor must notify the DHHS if any of the critical positions required for the delivery of these services are vacant for more than three months.

4.3. Subcontractors

- 4.3.1. If services required to comply with this Exhibit are provided by a subcontracted agency or provider, the DPHS, Maternal and Child Health Section (MCHS) must be notified in writing prior to initiation of the subcontract. In addition, subcontractors must be held responsible to fulfill all relevant requirements included in this Exhibit.

5. Meetings and Trainings

The Contractor shall:

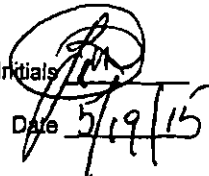
Handwritten initials "JL" and date "5/19/15" written over a line.



Exhibit A

- 5.1. Provide assistance to the Newborn Screening Program staff and others, upon request, on issues related to supporting the infrastructure and facilitating the Newborn Screening Program's operations, including the provision of in-services and educational programs to include:
 - 5.1.1. Technical support for the Newborn Screening Program on computer issues as needed and as related to the interface between the state system and the laboratory computerized system.
 - 5.1.2. Technical support and assistance upon request to the state in support of the work of the New Hampshire Newborn Screening Advisory Committee.
 - 5.1.3. Technical support for the Newborn Screening Program's management information system on accessing the laboratory results database

6. On Site Reviews

- 6.1. The Contractor shall allow a team or person authorized by the DHHS to periodically review the contractor's systems of governance, administration, data collection and submission, clinical and financial management in order to assure systems are adequate to provide the contracted services.

7. Publications

- 7.1. The DHHS and/or its funders will retain COPYRIGHT ownership for any and all original materials produced with DHHS contract funding, including, but not limited to, brochures, resource directories, protocols or guidelines, posters, or reports.
- 7.2. All documents (written, video, audio) produced, reproduced or purchased under the contract shall have prior approval from DPHS before printing, production, distribution, or use.
- 7.3. The Contractor shall credit DHHS on all materials produced under this contract following the instructions outlined in Exhibit C-1 (5).

8. Performance Measures

- 8.1. The Contractor shall ensure that following performance measures are annually achieved and monitored monthly to measure the effectiveness of the agreement:
 - 8.1.1. At least ninety-eight (98%) of Congenital Adrenal Hyperplasia results will be reported to the New Hampshire Newborn Screening Program within three (3) days of the contractor receiving the dried blood specimen.
 - 8.1.2. At least ninety- five percent (95%) of all initial screening reports will have a report date within seven days of life.
- 8.2. Annually, the Contractor shall develop and submit to the DHHS, a corrective action plan for any performance measure that was not achieved.



Date 5/19/15



Exhibit B

Method and Conditions Precedent to Payment

1) Funding Sources:

a. \$2,799,650 = 100% Other Funds from the Newborn Screening Revolving Fund, \$906,341 in SFY 2016, \$932,955 in SFY 2017, and \$960,354 in SFY 2018.

2) The State shall pay the Contractor an amount not to exceed the Price Limitation, block 1.8, for the services provided by the Contractor pursuant to Exhibit A, Scope of Services.

a. Payment for said services shall be made as follows:

The Contractor will submit an invoice in a form satisfactory to the State by the twentieth working day of each month, which identifies and requests reimbursement for authorized expenses incurred in the prior month. The State shall make payment to the Contractor within thirty (30) days of receipt of each invoice for Contractor services provided pursuant to this Agreement. The final invoice shall be due to the State no later than thirty (30) days after the contract Completion Date.

b. The invoice must be submitted to:

Department of Health and Human Services
Division of Public Health Services
Email address: DPHScontractbilling@dhhs.state.nh.us

3) This is a cost-reimbursement contract. The Contractor agrees to use and apply all contract funds from the State for direct and indirect costs and expenses including, but not limited to, personnel costs and operating expenses related to the Services, as detailed in Exhibit B-1 Budgets for SFY 2016, SFY 2017, and SFY 2018, and reimbursement shall be made monthly based on actual costs incurred during the previous month. Allowable costs and expenses shall be determined by the State in accordance with applicable state and federal laws and regulations. The Contractor agrees not to use or apply such funds for capital additions or improvements, entertainment costs, or any other costs not approved by the State. DHHS funding may not be used to replace funding for a program already funded from another source.

4) Payment will be made by the State agency subsequent to approval of the submitted invoice and if sufficient funds are available in the Service category budget line items submitted by the Contractor to cover the costs and expenses incurred upon compliance with reporting requirements and performance and utilization review. Contractors will keep detailed records of their activities related to DHHS-funded programs and services.

5) Contractors are accountable to meet the scope of services. Failure to meet the scope of services may jeopardize the funded contractor's current and/or future funding. Corrective action may include actions such as a contract amendment or termination of the contract. The contracted organization shall prepare progress reports, as required.

Exhibit B – Methods and Conditions Precedent to Payment_Contractor Initials

Date 07/15



Exhibit B

- 6) The Contractor shall have written authorization from the State prior to using contract funds to purchase any equipment with a cost in excess of three hundred dollars (\$300) and with a useful life beyond one year.
- 7) Notwithstanding paragraph 18 of the General Provisions P-37, an amendment limited to adjustments to amounts between and among account numbers, within the price limitation, may be made by written agreement of both parties and may be made without obtaining approval of the Governor and Executive Council.

Exhibit B – Methods and Conditions Precedent to Payment_Contractor Initials

[Handwritten Signature]
Date 6/19/15

Exhibit B-1 Budget Form

New Hampshire Department of Health and Human Services

Bidder/Contractor Name: University of Massachusetts

Budget Request for: Newborn Screening Laboratory Services
(Name of RFP)

Budget Period: SFY 2016

Line Item	Direct Incremental	Indirect Fixed	Total	Allocation Method for Indirect/Fixed Cost
1. Total Salary/Wages	\$ -	\$ -	\$ -	
2. Employee Benefits	\$ -	\$ -	\$ -	
3. Consultants	\$ -	\$ -	\$ -	
4. Equipment:	\$ -	\$ -	\$ -	
Rental	\$ -	\$ -	\$ -	
Repair and Maintenance	\$ -	\$ -	\$ -	
Purchase/Depreciation	\$ -	\$ -	\$ -	
5. Supplies:	\$ -	\$ -	\$ -	
Educational	\$ -	\$ -	\$ -	
Lab	\$ -	\$ -	\$ -	
Pharmacy	\$ -	\$ -	\$ -	
Medical	\$ -	\$ -	\$ -	
Office	\$ -	\$ -	\$ -	
6. Travel	\$ -	\$ -	\$ -	
7. Occupancy	\$ -	\$ -	\$ -	
8. Current Expenses	\$ -	\$ -	\$ -	
Telephone	\$ -	\$ -	\$ -	
Postage	\$ -	\$ -	\$ -	
Subscriptions	\$ -	\$ -	\$ -	
Audit and Legal	\$ -	\$ -	\$ -	
Insurance	\$ -	\$ -	\$ -	
Board Expenses	\$ -	\$ -	\$ -	
9. Software	\$ -	\$ -	\$ -	
10. Marketing/Communications	\$ -	\$ -	\$ -	
11. Staff Education and Training	\$ -	\$ -	\$ -	
12. Subcontracts/Agreements	\$ -	\$ -	\$ -	
13. Other (specific details mandatory):	\$ -	\$ -	\$ -	
Laboratory Testing	\$ 848,607.00	\$ -	\$ 848,607.00	
Specimen Shipping	\$ 57,734.00	\$ -	\$ 57,734.00	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
TOTAL	\$ 906,341.00	\$ -	\$ 906,341.00	

Indirect As A Percent of Direct

0.0%

Exhibit B-1 - Budget

Contractor Initials: 

Date: 5/19/15

Exhibit B-1 Budget Form

New Hampshire Department of Health and Human Services

Bidder/Contractor Name: University of Massachusetts

Budget Request for: Newborn Screening Laboratory Services
(Name of RFP)

Budget Period: SFY 2017

Line Item	Direct Incremental	Indirect Fixed	Total	Allocation Method for Indirect/Fixed Cost
1. Total Salary/Wages	\$ -	\$ -	\$ -	
2. Employee Benefits	\$ -	\$ -	\$ -	
3. Consultants	\$ -	\$ -	\$ -	
4. Equipment:	\$ -	\$ -	\$ -	
Rental	\$ -	\$ -	\$ -	
Repair and Maintenance	\$ -	\$ -	\$ -	
Purchase/Depreciation	\$ -	\$ -	\$ -	
5. Supplies:	\$ -	\$ -	\$ -	
Educational	\$ -	\$ -	\$ -	
Lab	\$ -	\$ -	\$ -	
Pharmacy	\$ -	\$ -	\$ -	
Medical	\$ -	\$ -	\$ -	
Office	\$ -	\$ -	\$ -	
8. Travel	\$ -	\$ -	\$ -	
7. Occupancy	\$ -	\$ -	\$ -	
8. Current Expenses	\$ -	\$ -	\$ -	
Telephone	\$ -	\$ -	\$ -	
Postage	\$ -	\$ -	\$ -	
Subscriptions	\$ -	\$ -	\$ -	
Audit and Legal	\$ -	\$ -	\$ -	
Insurance	\$ -	\$ -	\$ -	
Board Expenses	\$ -	\$ -	\$ -	
9. Software	\$ -	\$ -	\$ -	
10. Marketing/Communications	\$ -	\$ -	\$ -	
11. Staff Education and Training	\$ -	\$ -	\$ -	
12. Subcontracts/Agreements	\$ -	\$ -	\$ -	
13. Other (specific details mandatory):	\$ -	\$ -	\$ -	
Laboratory Testing	\$ 874,066.00	\$ -	\$ 874,066.00	
Specimen Shipping	\$ 58,889.00	\$ -	\$ 58,889.00	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
TOTAL	\$ 932,955.00	\$ -	\$ 932,955.00	

Indirect As A Percent of Direct

0.0%

Exhibit B-1 - Budget

Contractor Initials: *[Signature]*

Date: 5/19/15

Exhibit B-1 Budget Form

New Hampshire Department of Health and Human Services

Bidder/Contractor Name: University of Massachusetts

Budget Request for: Newborn Screening Laboratory Services
(Name of RFP)

Budget Period: SFY 2018

Line Item	Direct Incremental	Indirect Fixed	Total	Allocation Method for Indirect/Fixed Cost
1. Total Salary/Wages	\$ -	\$ -	\$ -	
2. Employee Benefits	\$ -	\$ -	\$ -	
3. Consultants	\$ -	\$ -	\$ -	
4. Equipment:	\$ -	\$ -	\$ -	
Rental	\$ -	\$ -	\$ -	
Repair and Maintenance	\$ -	\$ -	\$ -	
Purchase/Depreciation	\$ -	\$ -	\$ -	
5. Supplies:	\$ -	\$ -	\$ -	
Educational	\$ -	\$ -	\$ -	
Lab	\$ -	\$ -	\$ -	
Pharmacy	\$ -	\$ -	\$ -	
Medical	\$ -	\$ -	\$ -	
Office	\$ -	\$ -	\$ -	
6. Travel	\$ -	\$ -	\$ -	
7. Occupancy	\$ -	\$ -	\$ -	
8. Current Expenses	\$ -	\$ -	\$ -	
Telephone	\$ -	\$ -	\$ -	
Postage	\$ -	\$ -	\$ -	
Subscriptions	\$ -	\$ -	\$ -	
Audit and Legal	\$ -	\$ -	\$ -	
Insurance	\$ -	\$ -	\$ -	
Board Expenses	\$ -	\$ -	\$ -	
9. Software	\$ -	\$ -	\$ -	
10. Marketing/Communications	\$ -	\$ -	\$ -	
11. Staff Education and Training	\$ -	\$ -	\$ -	
12. Subcontracts/Agreements	\$ -	\$ -	\$ -	
13. Other (specific details mandatory):	\$ -	\$ -	\$ -	
Laboratory Testing	\$ 900,287.00	\$ -	\$ 900,287.00	
Specimen Shipping	\$ 60,067.00	\$ -	\$ 80,067.00	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
TOTAL	\$ 960,354.00	\$ -	\$ 960,354.00	

Indirect As A Percent of Direct

0.0%

Exhibit B-1 - Budget

Contractor Initials: 

Date: 5/19/15



SPECIAL PROVISIONS

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:

1. **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.
2. **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.
3. **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.
4. **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.
5. **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.
6. **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 no payments will be made hereunder to reimburse the Contractor for 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.
7. **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 Contractors 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 funders 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 funders, the Department may elect to:
 - 7.1. Renegotiate the rates for payment hereunder, in which event new rates shall be established;
 - 7.2. Deduct from any future payment to the Contractor the amount of any prior reimbursement in excess of costs;

Handwritten signature and date: 5/9/15



- 7.3. 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:

8. **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:
- 8.1. **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.
- 8.2. **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.
- 8.3. **Medical Records:** Where appropriate and as prescribed by the Department regulations, the Contractor shall retain medical records on each patient/recipient of services.
9. **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.
- 9.1. **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.
- 9.2. **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.
10. **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.


Date 5/19/15

New Hampshire Department of Health and Human Services
Exhibit C



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.

11. **Reports: Fiscal and Statistical:** The Contractor agrees to submit the following reports at the following times if requested by the Department.
 - 11.1. **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.
 - 11.2. **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.
12. **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.
13. **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:
 - 13.1. The preparation of this (report, document etc.) was financed under a Contract with the State of New Hampshire, Department of Health and Human Services, 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.
14. **Prior Approval and Copyright Ownership:** All materials (written, video, audio) produced or purchased under the contract shall have prior approval from DHHS before printing, production, distribution or use. The DHHS will retain copyright ownership for any and all original materials produced, including, but not limited to, brochures, resource directories, protocols or guidelines, posters, or reports. Contractor shall not reproduce any materials produced under the contract without prior written approval from DHHS.
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.
16. **Equal Employment Opportunity Plan (EEO):** The Contractor will provide an Equal Employment Opportunity Plan (EEO) to the Office for Civil Rights, Office of Justice Programs (OCR), if it has received a single award of \$500,000 or more. If the recipient receives \$25,000 or more and has 50 or

[Handwritten Signature]
Date 5/19/15



more employees, it will maintain a current EEOP on file and submit an EEOP Certification Form to the OCR, certifying that its EEOP is on file. For recipients receiving less than \$25,000, or public grantees with fewer than 50 employees, regardless of the amount of the award, the recipient will provide an EEOP Certification Form to the OCR certifying it is not required to submit or maintain an EEOP. Non-profit organizations, Indian Tribes, and medical and educational institutions are exempt from the EEOP requirement, but are required to submit a certification form to the OCR to claim the exemption. EEOP Certification Forms are available at: <http://www.ojp.usdoj/about/ocr/pdfs/cert.pdf>.

17. **Limited English Proficiency (LEP):** As clarified by Executive Order 13166, Improving Access to Services for persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination on the basis of limited English proficiency (LEP). To ensure compliance with the Omnibus Crime Control and Safe Streets Act of 1968 and Title VI of the Civil Rights Act of 1964, Contractors must take reasonable steps to ensure that LEP persons have meaningful access to its programs.
18. **Pilot Program for Enhancement of Contractor Employee Whistleblower Protections:** The following shall apply to all contracts that exceed the Simplified Acquisition Threshold as defined in 48 CFR 2.101 (currently, \$150,000)

CONTRACTOR EMPLOYEE WHISTLEBLOWER RIGHTS AND REQUIREMENT TO INFORM EMPLOYEES OF
WHISTLEBLOWER RIGHTS (SEP 2013)

- (a) This contract and employees working on this contract will be subject to the whistleblower rights and remedies in the pilot program on Contractor employee whistleblower protections established at 41 U.S.C. 4712 by section 828 of the National Defense Authorization Act for Fiscal Year 2013 (Pub. L. 112-239) and FAR 3.908.
 - (b) The Contractor shall inform its employees in writing, in the predominant language of the workforce, of employee whistleblower rights and protections under 41 U.S.C. 4712, as described in section 3.908 of the Federal Acquisition Regulation.
 - (c) The Contractor shall insert the substance of this clause, including this paragraph (c), in all subcontracts over the simplified acquisition threshold.
19. **Subcontractors:** DHHS recognizes that the Contractor may choose to use subcontractors with greater expertise to perform certain health care services or functions for efficiency or convenience, but the Contractor shall retain the responsibility and accountability for the function(s). Prior to subcontracting, the Contractor shall evaluate the subcontractor's ability to perform the delegated function(s). This is accomplished through a written agreement that specifies activities and reporting responsibilities of the subcontractor and provides for revoking the delegation or imposing sanctions if the subcontractor's performance is not adequate. Subcontractors are subject to the same contractual conditions as the Contractor and the Contractor is responsible to ensure subcontractor compliance with those conditions.
When the Contractor delegates a function to a subcontractor, the Contractor shall do the following:
 - 19.1. Evaluate the prospective subcontractor's ability to perform the activities, before delegating the function
 - 19.2. Have a written agreement with the subcontractor that specifies activities and reporting responsibilities and how sanctions/revocation will be managed if the subcontractor's performance is not adequate
 - 19.3. Monitor the subcontractor's performance on an ongoing basis

[Handwritten Signature]
Date 5/19/15

New Hampshire Department of Health and Human Services
Exhibit C



- 19.4. Provide to DHHS an annual schedule identifying all subcontractors, delegated functions and responsibilities, and when the subcontractor's performance will be reviewed
- 19.5. DHHS shall, at its discretion, review and approve all subcontracts.

If the Contractor identifies deficiencies or areas for improvement are identified, the Contractor shall take corrective action.

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.



ADDITIONAL SPECIAL PROVISIONS

1. Subparagraph 4 of the General Provisions of this contract, Conditional Nature of Agreement, is replaced as follows:

Notwithstanding any provision of this Agreement to the contrary, all obligations of the State hereunder, including without limitation, the continuance of payments, in whole or in part, under this Agreement are contingent upon continued appropriation or availability of funds, including any subsequent changes to the appropriation or availability of funds affected by any state or federal legislative or executive action that reduces, eliminates, or otherwise modifies the appropriation or availability of funding for this Agreement and the Scope of Services provided in Exhibit A, Scope of Services, in whole or in part. In no event shall the State be liable for any payments hereunder in excess of appropriated or available funds. In the event of a reduction, termination or modification of appropriated or available funds, the State shall provide reasonable written notification to the Contractor and, upon such notification, have the right to withhold payment until such funds become available, if ever. The State, in consultation with the Contractor, shall have the right to reduce, terminate or modify services under this Agreement immediately upon giving the Contractor notice of such reduction, termination or modification. The State shall not be required to transfer funds from any other source or account into the Account(s) identified in block 1.6 of the General Provisions, Account Number, or any other account, in the event funds are reduced or unavailable.

2. Subparagraph 10 of the General Provisions of this contract, Termination, is amended by adding the following language;

- 10.1 The State may terminate the Agreement at any time for any reason, at the sole discretion of the State, ninety (90) days after giving the Contractor written notice that the State is exercising its option to terminate the Agreement.
- 10.2 In the event of early termination, the Contractor shall, within 15 days of notice of early termination, develop and submit to the State a Transition Plan for services under the Agreement, including but not limited to, identifying the present and future needs of clients receiving services under the Agreement and establishes a process to meet those needs.
- 10.3 The Contractor shall fully cooperate with the State and shall promptly provide detailed information to support the Transition Plan including, but not limited to, any information or data requested by the State related to the termination of the Agreement and Transition Plan and shall provide ongoing communication and revisions of the Transition Plan to the State as requested.
- 10.4 In the event that services under the Agreement, including but not limited to clients receiving services under the Agreement are transitioned to having services delivered by another entity including contracted providers or the State, the Contractor shall provide a process for uninterrupted delivery of services in the Transition Plan.
- 10.5 The Contractor shall establish a method of notifying clients and other affected individuals about the transition. The Contractor shall include the proposed communications in its Transition Plan submitted to the State as described above.
- 10.6 The Department reserves the right to renew this Agreement for up to three

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Date: 9/19/15

New Hampshire Department of Health and Human Services
Exhibit C-1



(3) additional years, subject to mutual agreement, continued availability of funds, satisfactory performance of services, and approval by the Governor and Executive Council.

3. Subparagraph 13 of the General Provisions of this contract, Indemnification, is replaced as follows:

The 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. 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.

4. Subparagraph 14 of the General Provisions of this contract, Insurance, is revised as follows:

Subparagraph 14.1.2 of the General Provisions shall be struck.

Subparagraph 14.3 is replaced as follows:

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 provide notice in accordance with the policy provisions. The Contractor shall 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.

5. Standard Exhibit C of this contract, Special Provisions, is revised as follows:

The preamble is replaced as follows:

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 the Department and, in the furtherance of the aforesaid covenants, the Contractor hereby covenants and agrees as follows:

Subparagraph 3 – Documentation, is replaced as follows:

3. **Documentation:** The Contractor shall furnish the Department with all forms and documentation regarding eligibility determinations that the Department may request or require. Contractor shall provide documentation as required for all applicants as described in Exhibit A – Scope of Services.

Subparagraph 6 – Retroactive Payments, shall be struck.

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Subparagraphs 7, 7.1, 7.2, and 7.3 – Conditions of Purchase, shall be struck.

Subparagraph 8.2 – is replaced as follows:

Contractor shall maintain records as specified in Exhibit A – Scope of Services

Subparagraph 8.3 – Medical Records, shall be struck.

6. Standard Exhibit I of this contract, Business Associate Agreement, is revised as follows:

Subparagraph (3) a. is revised as follows:

The Business Associate shall notify the Covered Entity's Privacy Officer without unreasonable delay and in no case later than three (3) business days following the date upon which the Business Associate becomes aware of any use or disclosure of protected health information not provided for by the Agreement including breaches of unsecured protected health information and/or any security incident that may have an impact on the protected health information of the Covered Entity.

The last sentence of Subparagraph (3) b. is revised as follows:


The Business Associate shall complete the risk assessment without unreasonable delay and in no case later than three (3) business days of discovery of the breach and report the findings of the risk assessment in writing to the Covered Entity.

Subparagraph 3(e) is revised as follows:

e. 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 (l). 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 from such business associates who shall be governed by standard Paragraph #13 of the standard contract provisions (P-37) of this Agreement (as amended) for the purpose of use and disclosure of protected health information.

Subparagraph (6) f. is revised as follows:

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) l, the defense provisions of section (3) e (as amended) and Paragraph 13 of the standard terms and conditions (P-37), (as amended) shall survive the termination of the Agreement.


5/19/15



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

1. The grantee certifies that it will or will continue to provide a drug-free workplace by:
 - 1.1. 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;
 - 1.2. Establishing an ongoing drug-free awareness program to inform employees about
 - 1.2.1. The dangers of drug abuse in the workplace;
 - 1.2.2. The grantee's policy of maintaining a drug-free workplace;
 - 1.2.3. Any available drug counseling, rehabilitation, and employee assistance programs; and
 - 1.2.4. The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
 - 1.3. 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);
 - 1.4. Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will
 - 1.4.1. Abide by the terms of the statement; and
 - 1.4.2. 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;
 - 1.5. Notifying the agency in writing, within ten calendar days after receiving notice under subparagraph 1.4.2 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

[Handwritten Signature]
Date 2/19/15

New Hampshire Department of Health and Human Services
Exhibit D



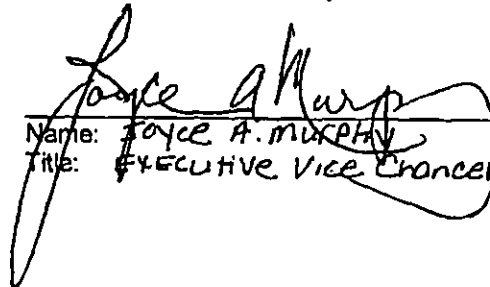
- has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;
- 1.6. Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph 1.4.2, with respect to any employee who is so convicted
 - 1.6.1. 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
 - 1.6.2. 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;
 - 1.7. Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs 1.1, 1.2, 1.3, 1.4, 1.5, and 1.6.
2. 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)

Check if there are workplaces on file that are not identified here.

Contractor Name: University of Massachusetts

Date 5/19/15


Name: Joyce A. Murphy
Title: EXECUTIVE VICE CHANCELLOR, CUM

Contractor Initials [Signature]
Date 5/19/15



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

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 Name: University of Massachusetts

5/19/15
Date

Joyce A. Murphy
Name: Joyce A. Murphy
Title: Executive Vice Chancellor, CWM

Contractor Initials
Date 5/19/15



**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 Order 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

[Handwritten Signature]
Date 5/19/15



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

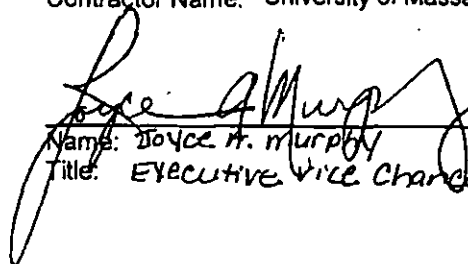
11. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
 - 11.1. are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - 11.2. 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;
 - 11.3. 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 (l)(b) of this certification; and
 - 11.4. 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.
12. 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

13. 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:
 - 13.1. are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.
 - 13.2. 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):
14. 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 Name: University of Massachusetts

Date 5/19/15


Name: Joyce H. Murphy
Title: Executive Vice Chancellor, CWM



**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 5/9/15

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: University of Massachusetts

5/19/15
Date

[Signature]
Name: Foyce W. Murphy
Title: Executive Vice Chancellor, CWM

Exhibit G

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

Contractor Initials [Signature]

Date 5/19/15



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 Name: University of Massachusetts

Date 5/19/15

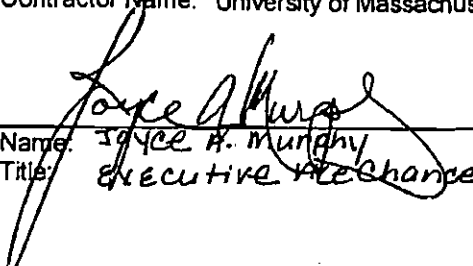

Name: Joyce A. Mungny
Title: Executive Vice Chancellor, CWU



Exhibit I

HEALTH INSURANCE PORTABILITY 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 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.

(1) **Definitions.**

- a. "**Breach**" shall have the same meaning as the term "Breach" in section 164.402 of Title 45, Code of Federal Regulations.
- 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 and amendments thereto.
- i. "**Individual**" shall have the same meaning as the term "individual" in 45 CFR Section 160.103 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 160.103, limited to the information created or received by Business Associate from or on behalf of Covered Entity.

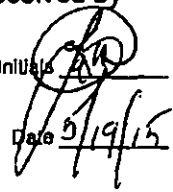
Handwritten signature and date: 5/19/15



Exhibit I

- i. "Required by Law" shall have the same meaning as the term "required by law" in 45 CFR Section 164.103.
- 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, 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.
- 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) Business Associate 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, Business Associate, including but not limited to all its directors, officers, employees and agents, shall 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 HIPAA Privacy, Security, and Breach Notification Rules 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

[Handwritten Signature]
Date *6/9/15*



Exhibit I

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. The Business Associate shall notify the Covered Entity's Privacy Officer immediately after the Business Associate becomes aware of any use or disclosure of protected health information not provided for by the Agreement including breaches of unsecured protected health information and/or any security incident that may have an impact on the protected health information of the Covered Entity.
- b. The Business Associate shall immediately perform a risk assessment when it becomes aware of any of the above situations. The risk assessment shall include, but not be limited to:
 - o The nature and extent of the protected health information involved, including the types of identifiers and the likelihood of re-identification;
 - o The unauthorized person used the protected health information or to whom the disclosure was made;
 - o Whether the protected health information was actually acquired or viewed
 - o The extent to which the risk to the protected health information has been mitigated.

The Business Associate shall complete the risk assessment within 48 hours of the breach and immediately report the findings of the risk assessment in writing to the Covered Entity.

- c. The Business Associate shall comply with all sections of the Privacy, Security, and Breach Notification Rule.
- d. 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.
- e. 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 (I). 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

[Handwritten Signature]
Date 5/19/15



Exhibit I

pursuant to this Agreement, with rights of enforcement and indemnification from such business associates who shall be governed by standard Paragraph #13 of the standard contract provisions (P-37) of this Agreement for the purpose of use and disclosure of protected health information.

- f. 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.
- g. 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.
- h. 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.
- i. 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.
- j. 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.
- k. 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.
- l. 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

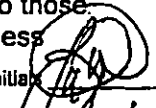

Date 5/19/15



Exhibit I

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 Paragraph 10 of the standard terms and conditions (P-37) 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, 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.

3/2014

Contractor Initials *[Signature]*

Date *5/19/15*



Exhibit I

- 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) l, the defense and indemnification provisions of section (3) e and Paragraph 13 of the standard terms and conditions (P-37), shall survive the termination of the Agreement.

IN WITNESS WHEREOF, the parties hereto have duly executed this Exhibit I.

Department of Health and Human Services

University of Massachusetts

The State

Name of the Contractor

Brook Dupee
Signature of Authorized Representative

Joyce A. Murphy
Signature of Authorized Representative

Brook Dupee

Joyce A. Murphy
Name of Authorized Representative

Name of Authorized Representative

Bureau Chief

Executive Vice Chancellor, CWM
Title of Authorized Representative

Title of Authorized Representative

5/12/15
Date

5/19/15
Date

Contractor Initials JA
Date 5/19/15