

MAINE STATE LEGISLATURE

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**ANNUAL REPORT ON UTILIZATION OF
STATE RESEARCH & DEVELOPMENT APPROPRIATIONS
FOR OPERATIONS
AND
STATE RESEARCH CAPITAL BONDS
FISCAL YEAR ENDING JUNE 30, 2000 (FY2000)**



University of Maine System

Office of Finance and Treasurer

**December 29, 2000
Z63(189)**

UNIVERSITY OF MAINE SYSTEM

INTRODUCTION

The University of Maine System is required to submit in January of each year an annual report on the utilization of state research appropriations for operations and state research capital bonds. This report is to cover the most recently completed fiscal year. The following is the report for fiscal year 2000 (FY2000) that covers the period from July 1, 1999 to June 30, 2000.

Because this report includes only activity for fiscal year 2000, excluded from this annual report is the additional appropriation of \$50,000 for research and development (R&D) that was made available beginning in fiscal year 2001. Also excluded was an appropriation of \$2,500,000 for fiscal year 2001 to be used to pay the debt service on \$25,000,000 of University bonds that were issued on August 15, 2000 for capital improvements to support research and development. Activity on these additional funds will be reported in subsequent annual reports (e.g., the FY2001 report).

EXECUTIVE SUMMARY

I. State Research Appropriations for Operations

The University of Maine System received an appropriation of \$500,000 in FY1998, an additional \$4,000,000 in FY1999, and an additional \$5,550,000 in FY2000, bringing the total available for research in FY2000 to \$10,050,000. The FY2000 appropriation of \$10,050,000 was distributed between the University of Maine (UM - \$8,040,000) and the University of Southern Maine (USM - \$2,010,000).

Of the FY2000 allocation of \$10.1 million and \$0.4 million carried forward from FY1999, UM and USM (1) expended a total of \$5.2 million, (2) matched external grants & contracts with \$3.5 million, and (3) carried forward \$1.8 million in unspent funds to FY2001 for R&D use for a total of \$10.5 million.

These state research dollars resulted in the following:

- 1. In FY2000 UMS attracted \$36.6 million in external grant & contract funding (primarily federal), a ratio of 3.5 to 1. The State's FY2000 \$10.5 million thus resulted in a total of \$47.1 million being made available for research & development.**
- 2. With a two-year total of \$14.6 million in State funds, the University was able to attract a total of \$55.5 million in external grant & contract funding, a ratio of 4 to 1.**

The following is a summary of the utilization of state research appropriation funds during FY2000.

Summary of Utilization of FY2000 State Research Appropriations for Operations

	<u>FY2000 Expenditures¹</u>	<u>Used to Match Grants & Contracts¹</u>	<u>Unused Funds Carried Forward to FY2001²</u>	<u>Total Funds Utilized</u>
<u>E&G Funds Utilized</u>				
UM	\$4,461,497	\$3,292,543	\$708,074	\$8,462,114
USM	<u>718,949</u>	<u>251,595</u>	<u>1,040,026</u>	<u>2,010,570</u>
Total E&G Funds	\$5,180,446	\$3,544,138	\$1,748,100	\$10,472,684
<u>Grants & Contracts Generated</u>				<u>36,650,383</u>
<u>Total Funds</u>				<u>\$47,123,067</u>

¹The research and development funding provided by the State of Maine was used to support (1) salaries of new faculty and staff totaling 432 positions, (2) direct equipment purchases, (3) matching funds for grants and/or contracts, and (4) research in such areas as computer software & engineering, advanced materials engineering, advanced technologies for forestry & agriculture, aquaculture & marine sciences, biotechnology, technology transfer, information technology, and biosciences

²The unused funds have been or will be distributed to research units or principal investigators.

II. State Research Capital Bonds

On November 3, 1998, the voters of Maine approved a \$20.0 million bond issue to improve the Maine economy by supporting innovative research and development. The University of Maine System received \$13.5 million from this bond issue to be used for capital improvements and equipment purchases to support research and development. The bond proceeds were distributed between the University of Maine (\$10,800,000) and the University of Southern Maine (\$2,700,000). Because capital improvements and construction require a great deal of time prior to the commencement of major projects, the amount of funds from this bond issue that were spent in FY2000 was relatively small.

A summary of the utilization of state research capital bonds during FY2000 is shown on the next page.

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FY2000 SUMMARY OF STATE RESEARCH CAPITAL BONDS BY ACCOUNT/PROJECT

<u>Project Name</u>	<u>Attachment</u>	<u>Referendum Bond Portion</u>	<u>Other Funds</u>	<u>Total Project Budget</u>	<u>Expenditures to Date</u>	<u>Funds Carried Forward To FY2001</u>
<u>UM</u>						
Hitchner Expansion & Renovation and Food Science Building	I - 1 I - 2	\$8,900,000	\$544,220	\$9,444,220	\$573,539	\$8,870,681
Aquaculture Renovation & Expansion	II	700,000	0	700,000	81,701	618,299
Software Eng & Adv Materials Labs	III	1,200,000	0	1,200,000	1,077,687	122,313
		<u>\$10,800,000</u>	<u>\$544,220</u>	<u>\$11,344,220</u>	<u>\$1,732,927</u>	<u>\$9,611,293</u>
<u>USM</u>						
Portland Science Building Lab Renovation	IV	\$2,400,000	\$6,000,000	\$8,400,000	\$134,097	\$8,265,903
Mitchell Center R&D Renovations	V	300,000	200,000	500,000	3,384	496,616
		<u>\$2,700,000</u>	<u>\$6,200,000</u>	<u>\$8,900,000</u>	<u>\$137,481</u>	<u>\$8,762,519</u>
<u>TOTAL</u>		<u>\$13,500,000</u>	<u>\$6,744,220</u>	<u>\$20,244,220</u>	<u>\$1,870,408</u>	<u>\$18,373,812</u>

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**FY2000 NARRATIVE SUMMARY OF STATE RESEARCH CAPITAL
BONDS BY ACCOUNT/PROJECT**

UM

Account Number: 8-7-75163

Project Name: Hitchner Expansion & Renovation

Bond Fund Amount: \$5,650,000

Other Funds: \$0

Construction Start: mid 2000

Construction End: December 2001

Campus Contact: Name Dave Trefethen
Department Facilities Management
Phone/fax/e-mail 581-2675

Purpose of Project/Program(s) Involved:

Renovation to Hitchner Hall and construction of a new wing will address the acute need for new research space on campus. The goal of this project is to provide 8 to 10 new research laboratories and related support space. The addition to Hitchner will include the following: research laboratories of 500 to 1000 sq. ft. of usable space with adequate floor and open wall space for refrigerators, freezers, and incubators; faculty offices located adjacent to laboratory or in close proximity; adequately ventilated and cooled equipment rooms; adequate graduate student, research technician and post-doctoral space; and provision for some "long-term" storage. Needs that will be addressed in the renovation of Hitchner include the following: Addition of emergency back-up power; Adequate electrical input and line conditioning; Installation of adequate fume hoods in laboratories; Air conditioning and temperature control; Upgrade of benches in laboratories; General repair and refurbishing. The construction will improve U Maine's capability and productivity in molecular and cellular research. It will also serve to consolidate researchers using molecular and cellular biology techniques into a common modern facility.

Description of Construction Work:

In design development and construction documents are being prepared.

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**FY2000 NARRATIVE SUMMARY OF STATE RESEARCH CAPITAL
BONDS BY ACCOUNT/PROJECT**

UM

Account Number:	8-7-75163
Project Name:	Food Science Building
Bond Fund Amount:	\$3,250,000
Other Funds:	\$544,220
Construction Start:	mid 2000
Construction End:	mid to late 2001
Campus Contact:	Name Dave Trefethen Department Facilities Management Phone/fax/e-mail 581-2675

Purpose of Project/Program(s) Involved:

The FSN facility will house: food processing pilot plant; chemical food safety laboratory; sensory evaluation facility; research/office space; food microbiology lab; physical properties of food laboratory; conference/seminar room; administrative offices; office space for graduate and post-doctoral students; commercial kitchen for food preparation classes; computer cluster; phlebotomy laboratory; classrooms; teaching laboratories; and controlled temperature and humidity storage. The construction will unite the faculty and research facilities into a single building and allocate that space on the basis of function and efficiency.

Description of Construction Work:

This project has been combined with the Hitchner Expansion Project.

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**FY2000 NARRATIVE SUMMARY OF STATE RESEARCH CAPITAL
BONDS BY ACCOUNT/PROJECT**

UM

Account Number:	8-7-75473
Project Name:	Aquaculture Renovation and Expansion
Bond Fund Amount:	\$700,000
Other Funds:	\$0
Construction Start:	April 2000
Construction End:	September 2000
Campus Contact:	Name Stewart Harvey Department Facilities Management Phone/fax/e-mail 581-2668

Purpose of Project/Program(s) Involved:

The Aquaculture Research Center is the central area on campus for research activities in Aquaculture Sciences. Applied research on a variety of marine species is currently being done and the renovation and addition will improve and expand current capabilities. The following spaces will be renovated: feed mixing lab; ocean engineering lab; lobster lab; environmental lab; bathroom; aquaculture engineering lab; fumace room; live feed production lab; chiller barrel room; wet lab; shellfish lab; dry lab; larval rearing lab; and physiology lab. The following will be added: feed mixing dry lab, walk-in freezer, walk-in cooler, agal production lab, entrance area, general storage, invertebrate dry lab, invertebrate wet lab, juvenile fish rearing lab, incubation room, experimental engineering lab, general use marine holding facility, general use experimental lab, cleaning and processing area, natural sea water holding and treatment area, general use walk-in cooler, and chemical storage and hood area.

Description of Construction Work:

In design.

ATTACHMENT III

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**FY2000 NARRATIVE SUMMARY OF STATE RESEARCH CAPITAL
BONDS BY ACCOUNT/PROJECT**

UM

Account Number: 8-7-75755

Project Name: Software Eng. and Advanced Materials Lab

Bond Fund Amount: \$1,200,000

Other Funds: \$0

Construction Start: January 1999

Construction End: July 2000

Campus Contact: Name Dave Trefethan
Department Facilities Management
Phone/fax/e-mail 581-2675

Purpose of Project/Program(s) Involved:

The money will be used for improvements in the infrastructure of Boardman Hall and Crosby laboratory. In Boardman, approximately \$400k in improvements will be made to facilitate information technology and software engineering research, especially in the area of geographic information systems. \$550k will be used to make improvements in the Crosby laboratory, while the remaining \$250k will be used in the Advanced Engineering Wood Composites building. Improvements will also be made to the Machine Tool Lab and Barrows Hall. Numerous pieces of specialized equipment will be purchased for use in research activities.

Description of Construction Work:

Conceptual design done and waiting approval from the Associate Dean, College of Engineering.

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**FY2000 NARRATIVE SUMMARY OF STATE RESEARCH CAPITAL BONDS
BY ACCOUNT/PROJECT****USM**

Account Number: 8-7-76440

Project Name: Portland Science Building Lab Renovation

Bond Fund Amount: \$2,400,000

Other Funds: \$6,000,000 \$5.0 million from issuance of University bonds and \$1.0 million from carryover of R&D operating funds.

Construction Start: May 2001

Construction End: September 2002

Campus Contact: Name: Dr. Brian Hodgkin
Department: Special Assistant to the Provost for R&D
Phone/fax/e-mail: 780-5582; FAX 780-5129;
hodgkin@usm.maine.edu

Purpose of Project/Program(s) Involved:

To improve facilities for Bioscience Research Institute and Information Technology Institute through addition of research laboratory space to the Portland Campus Science Building and renovation of existing space for Information Technology. Project will include construction of three-floor addition to Portland Science Building to house bioscience research laboratories, animal handling area and other Bioscience Research Institute activities. As of 10/31/2000, \$38,774.07 had been spent for actual construction work on the existing building with bids for the Bioscience Research Institute addition and Information Technology Institute renovations to be received in April of 2001.

Description of Construction Work:

In February of 2000, the architectural firm of Symmes, Maini, McKee Associates (SMMA) was hired as the project designer. Preliminary programming and diligence studies of the existing Science Building facilities built in 1967 and 1974 resulted in the decision to build a new facility for the Biosciences Institute, the more utility intensive of the two Institutes, and to renovate existing space for the Information Sciences Institute. The design of the new facility for the Biosciences Institute has about 8,500 square feet per floor with the current budget allowing for construction of two floors plus the basement. The design will allow a second phase which would add four floors of laboratories and research space, realizing a full building program of six floors plus a basement. As of 10/31/2000, \$192,523.31 had been spent on architect and consultant fees in completion of the schematic design and design development phases of the project. Permitting of the project from State and local agencies is underway with preparation of construction documents scheduled for March, 2001; awarding of construction contract by May, 2001; and actual construction commencing in May, 2001.

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**FY2000 NARRATIVE SUMMARY OF STATE RESEARCH CAPITAL BONDS
BY ACCOUNT/PROJECT****USM**

Account Number: 8-7-76442

Project Name: Mitchell Center R&D Renovations

Bond Fund Amount: \$300,000

Other Funds: \$200,000 Carryover funds from R&D operations

Construction Start: July 2000

Construction End: November 2000

Campus Contact: Name: Dr. Julie Ellis
Department: Director, Information Sciences Institute
Phone/fax/e-mail: 780-5166; FAX 780-5129;
jellis@usm.maine.edu

Purpose of Project/Program(s) Involved:

To improve and expand the research areas in the John Mitchell Technology Center on the Gorham campus of the University of Southern Maine in the targeted Research & Development (R & D) of Information Sciences/Technology. The area will include efforts in computer science which focuses on software, computer engineering which focuses on the design of computers, and information/communication technology.

Description of Construction Work:

The project involved gutting an area of the Mitchell Center with the construction of eight new offices and three new laboratories. One of the labs is a large open area where researchers/faculty are able to share special equipment with other labs including robotics and computer technology. In order to provide an area conducive to year round operation, temperature control equipment was installed. As of 10/31/2000, \$20,709.08 had been spent on architect and design consultant fees and \$251,634.07 had been paid toward the actual construction cost of \$350,000. The project has been completed, and as indicated in the attached announcement, an open house will be held on November 17, 2000 to celebrate the completion.