



This publication is the annual report on the Maine Economic Improvement Fund (MEIF) and its benefits to Maine. It is clear that the MEIF continues to be one of Maine's best and most successful investments.

The MEIF contributes significantly to Maine's economy:

- it attracts federal and private-sector grants and contracts, totaling more than \$325 million in the past six years alone (a 4:1 return on Maine's investment)
- it supports more than 600 jobs annually, including researchers, technicians, graduate and undergraduate students, and faculty
- it fosters the development of virtually all of Maine's patents, intellectual property and spin-off businesses coming from the University of Maine System
- it enables Maine to lead the nation with technology and product development in critical areas including renewable energy, bioproducts and biofuels from the forest, and advanced materials and composites for infrastructure and bridges

As required in the 1997 statute which created the Fund, following this letter are the 2011 MEIF financial and informational data.

If you have any questions about our research programs, I encourage you to contact me or our university-based research experts Jake Ward at UMaine and Samantha Langley-Turnbaugh at USM.

Sincerely,

Richard L. Pattenaude  
Chancellor



# 2011 Maine Economic Improvement Fund

## A HISTORY OF LEGISLATIVE ACTIONS ON APPROPRIATING STATE RESEARCH FUNDS

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*The following is a summary of the actions of the 118th–125th Maine Legislatures with regard to appropriating research and development funds to the University of Maine System*

### 118th LEGISLATURE

**March 26, 1997:** Governor signed into law the Economic Improvement Strategy (Chapter 24) that appropriated \$500,000 to UMS for research.

**April 1, 1998:** Governor signed into law the Economic Improvement Strategy (Chapter 643, Part LL, Sec. S-3) that appropriated \$4 million to UMS for research. These funds were allocated from the FY98 year-end State surplus for use in FY99.

### 119th LEGISLATURE

**March 15, 1999:** Governor signed into law the Part I Current Services budget (Chapter 16) that appropriated \$4 million in 1999–2000 and 2000–01 to UMS on a “base budget” basis for research. This extends the one-time FY99 \$4 million research appropriation that was funded from the FY98 year-end state surplus.

**June 4, 1999:** Governor signed into law the Part II Supplemental Appropriation budget (Chapter 401) that appropriated an additional \$5.55 million in 1999–00 and an additional \$50,000 in 2000–01 to UMS on a “base budget” basis for research.

**April 25, 2000:** Governor signed into law the Part II Supplemental Appropriation budget (Chapter 731) that appropriated \$300,000 in 2000–01 to UMS on a “base budget” basis for the Maine Patent Program.

### 120th LEGISLATURE

**June 21, 2001:** Governor signed into law the Part II Supplemental Appropriation budget (Chapter 439) that appropriated an additional \$2 million in 2002–03 to UMS on a “base budget” basis for research.

**March 25, 2002:** Governor signed into law a deappropriation (Chapter 559) that reduced the FY03 \$2 million Supplemental Appropriation by \$1 million.

**July 1, 2002:** Governor signed a Financial Order that curtailed the FY03 \$2 million Supplemental Appropriation by an additional \$1 million. This eliminated the FY03 increase of \$2 million for research, bringing the FY03 research and development appropriation back to the FY02 level of \$10.1 million.

**November 18, 2002:** Governor signed into law a Supplemental Appropriation budget (Chapter 714) that deappropriated the \$1 million curtailment that was signed July 1, 2002.

### 121st LEGISLATURE

**March 27, 2003:** Governor signed into law the Part I Current Services budget (Chapter 20, Part RR) that appropriated \$100,000 in 2003–04 and 2004–05 on a “base budget” basis for research.

**January 30, 2004:** Governor signed into law a Supplemental Appropriation budget (Chapter 513, Part P, Sec. P-2) that includes a provision to transfer to MEIF up to \$2 million of any unbudgeted State revenue remaining at the close of FY04. The full amount was subsequently transferred to UMS. This same Chapter 513, Part P, Sec. P-3 made the \$2 million part of the MEIF FY05 base appropriation.

### 122nd LEGISLATURE

**March 29, 2006:** Governor signed into law a Supplemental Appropriations budget (Chapter 519, Part A, Sec. A-1) that includes providing one-time funding of \$600,000 in FY07 for the commercialization of research and development activity, and for the Gulf of Maine Ocean Observing System.

### 123rd LEGISLATURE

**June 7, 2007:** Governor signed into law a budget (Chapter 240, Part A, Sec. A-68) that provides an increase of \$1.5 million in FY08 and an additional \$1 million in FY09 on a “base budget” basis for research.

### 124th LEGISLATURE

**May 28, 2009:** Governor signed into law a budget (Chapter 213, Part A, Sec. A-67) that maintains the annual funding at the FY09 level of \$14.7 million.

### 125th LEGISLATURE

**June 15, 2011:** Governor signed into law a budget (Chapter 380) that maintains the annual funding at \$14.7 million.

**A LEGISLATIVE HISTORY OF THE  
MAINE ECONOMIC IMPROVEMENT FUND - NEW APPROPRIATION**

**118<sup>th</sup> LEGISLATURE**

	FY98	FY99	Total 2-Year
UM	\$400,000	\$3,200,000	\$3,600,000
USM	100,000	800,000	900,000
<b>Total</b>	<b>\$500,000</b>	<b>\$4,000,000</b>	<b>\$4,500,000</b>

**119th LEGISLATURE**

	FY00	FY01	Total 2-Year
UM	\$4,440,000	\$40,000	\$4,480,000
USM	1,110,000	10,000	1,120,000
<b>Total</b>	<b>\$5,550,000</b>	<b>\$50,000</b>	<b>\$5,600,000</b>

**120th LEGISLATURE**

	FY02	FY03	Total 2-Year
UM	\$0	\$0	\$0
USM	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**121st LEGISLATURE**

	FY04	FY05	Total 2-Year
UM	\$80,000	\$1,600,000	\$1,680,000
USM	20,000	400,000	420,000
<b>Total</b>	<b>\$100,000</b>	<b>\$2,000,000</b>	<b>\$2,100,000</b>

**122<sup>nd</sup> LEGISLATURE**

	FY06	FY07	Total 2-Year
UM	\$0	\$540,000	\$540,000
USM	0	60,000	60,000
<b>Total</b>	<b>\$0</b>	<b>\$600,000*</b>	<b>\$600,000</b>

\*One-time funding

**123rd LEGISLATURE**

	FY08	FY09	Total 2-Year
UM	\$1,200,000	\$720,000	\$1,920,000
USM	300,000	180,000	480,000
Small Campus Init.	0	100,000	100,000
<b>Total</b>	<b>\$1,500,000</b>	<b>\$1,000,000</b>	<b>\$2,500,000</b>

**124<sup>th</sup> LEGISLATURE**

	FY10	FY11	Total 2-Year
UM	\$0	\$0	\$0
USM	0	0	0
Small Campus Init.	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**Total Yearly Research Appropriation for FY11**

UM	\$11,680,000
USM	2,920,000
UMM	53,000
UMFK	47,000
<b>Total</b>	<b>\$14,700,000</b>

## FY2011 SUMMARY UTILIZATION OF OPERATING RESEARCH APPROPRIATION

	Source of R&D Funds			Utilization of R&D Funds			Balance	
	FY2011 R&D Base Budget	Unused R&D Funds from Prior Years	FY2011 Total R&D Funds Available	FY2011 R&D Actual Expenditures	Transferred To Match Grants & Contracts	Transferred Between R&D Accounts	Total R&D Funds Utilized	Unused Funds Carried Forward To FY2012 <sup>1</sup>
UMAINE	\$ 11,680,000	\$ 565,305	\$ 12,245,305	\$ 12,447,899	\$ 4,603,975	\$ (4,182,247)	\$ 12,869,627	\$ (624,322)
USM	2,920,000	538,342	\$ 3,458,342	2,229,496	168,198	0	2,397,694	1,060,648
UMM	53,000	12,952	\$ 65,952	65,952	0	0	65,952	0
UMFK	47,000	19	\$ 47,019	12,753	0	0	12,753	34,266
UMPI	0	7,441	\$ 7,441	7,170	0	0	7,170	271
<b>Total State Funding</b>	<b>\$ 14,700,000</b>	<b>\$ 1,124,059</b>	<b>\$ 15,824,059</b>	<b>\$ 14,763,270</b>	<b>\$ 4,772,173</b>	<b>\$ (4,182,247)</b>	<b>\$ 15,353,196</b>	<b>\$ 470,863</b>

<sup>1</sup> Include year-end equipment carry-over funds (equipment ordered, not received, and not paid).

## UTILIZATION OF FY2011 OPERATING RESEARCH APPROPRIATION

UMAINE Targeted Research Area	Source of R&D Funds			Utilization of R&D Funds				Balance
	FY2011 R&D Base Budget	Unused R&D Funds from Prior Years	FY2011 Total R&D Funds Available	FY2011 R&D Actual Expenditures	Transferred To Match Grants & Contracts	Transferred Between R&D Accounts	Total R&D Funds Utilized	Unused Funds Carried Forward To FY2012 <sup>1</sup>
Adv. Technology Forestry & Agriculture	\$1,762,150	\$372,588	\$2,134,738	\$2,301,709	\$187,189	(\$673,663)	\$1,815,235	\$319,503
Aquaculture & Marine Science	1,369,271	(1,268,066)	101,205	1,580,168	1,050,685	(688,802)	\$1,942,051	(\$1,840,846)
Biotechnology	864,177	737,236	1,601,413	851,186	116,736	(221,742)	\$746,180	\$855,233
Composites	3,160,745	30,691	3,191,436	2,149,228	1,541,093	(794,123)	\$2,896,198	\$295,238
Environmental	1,336,090	661,740	1,997,830	1,229,832	914,908	(451,871)	\$1,692,869	\$304,961
Information Technology	1,544,630	(14,335)	1,530,295	2,119,304	739,514	(705,413)	\$2,153,405	(\$623,110)
Precision Manufacturing	1,442,323	(1,668)	1,440,655	1,849,058	46,546	(591,112)	\$1,304,492	\$136,163
Cross Sector	200,614	47,119	247,733	367,414	7,304	(55,521)	\$319,197	(\$71,464)
Total State Funding	<u>\$11,680,000</u>	<u>\$565,305</u>	<u>\$12,245,305</u>	<u>\$12,447,899</u>	<u>\$4,603,975</u>	<u>(\$4,182,247)</u>	<u>\$12,869,627</u>	<u>(\$624,322)</u>
UM Cost Sharing Funding <sup>2</sup>	4,181,712	535	4,182,247	0	0	4,182,247	4,182,247	0
<b>TOTAL FUNDING</b>	<u><u>\$15,861,712</u></u>	<u><u>\$565,840</u></u>	<u><u>\$16,427,552</u></u>	<u><u>\$12,447,899</u></u>	<u><u>\$4,603,975</u></u>	<u><u>\$0</u></u>	<u><u>\$17,051,874</u></u>	<u><u>(\$624,322)</u></u>

<sup>1</sup>Include year-end equipment carry-over funds (equipment ordered, not received, and not paid).

<sup>2</sup>Salary and benefits from University.

USM Targeted Research Area	Source of R&D Funds			Utilization of R&D Funds				Balance
	FY2011 R&D Base Budget	Unused R&D Funds from Prior Years <sup>2</sup>	FY2011 Total R&D Funds Available	FY2011 R&D Actual Expenditures	Transferred To Match Grants & Contracts	Transferred Between R&D Accounts	Total R&D Funds Utilized	Unused Funds Carried Forward To FY2012 <sup>1</sup>
Aquatic Systems	\$40,805	0	\$40,805	\$21,267	\$0	\$0	\$21,267	\$ 19,538
Biotechnology	2,509,747	539,451	\$3,049,198	1,967,431	153,729	74,600	2,195,760	853,438
Information Technology	169,448	(1,109)	\$168,339	154,569	0	(25,000)	129,569	38,770
Precision Manufacturing	200,000	0	\$200,000	86,229	14,469	(49,600)	51,098	148,902
Total State Funding	<u>\$2,920,000</u>	<u>\$538,342</u>	<u>\$3,458,342</u>	<u>\$2,229,496</u>	<u>\$168,198</u>	<u>\$0</u>	<u>\$2,397,694</u>	<u>\$ 1,060,648</u>

<sup>1</sup>Include year-end equipment carry-over funds (equipment ordered, not received, and not paid).

<sup>2</sup>Includes net zero adjustments between target areas.

# 2011 Maine Economic Improvement Fund

## UMS STATE-FUNDED RESEARCH TIMELINE

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*Following is a timeline of the MEIF and other state-funded research at the University of Maine System.*

*Note: Bond funds are used for facility upgrades, construction and equipment purchases in accordance with State bonding requirements*

### **November 3, 1998:**

Maine voters approved a \$20 million bond issue to improve the Maine economy by supporting innovative research and development. UMS received \$13.5 million from this bond for capital improvements and equipment purchases to support research and development. The bond proceeds were distributed between UMaine (\$10.8 million) and USM (\$2.7 million).

### **June 4, 1999:**

Governor signed into law the Part II Supplemental Appropriation budget (Chapter 401) that appropriated \$2.5 million in 2000–01 to UMS on a “base budget” basis to pay the debt service on a \$25 million university R&D revenue bond. The university issued the revenue bond August 15, 2000. It provides \$20 million for the UMaine Engineering Science Research Building and \$5 million for the USM Portland Science Building Lab Renovation.

### **April 25, 2000:**

Governor signed into law a one-time supplemental appropriation (Chapter 731) that appropriated \$9 million for the renovation of teaching laboratories and classrooms in Aubert Hall at UMaine.

### **June 11, 2002:**

Maine voters approved a \$35 million bond issue to be used in part to stimulate job growth. UMS received \$9 million, with the bond proceeds distributed to UMaine (\$5 million) for the Advanced Manufacturing Center and to USM (\$4 million) for the Mitchell Center.

### **June 10, 2003:**

Maine voters approved a \$60 million bond issue to be used to stimulate job creation and economic growth. UMaine and USM received a combined \$15 million to support their research efforts, \$3.6 million of which was matching funds for MEIF R&D projects.

### **November 8, 2005:**

Maine voters approved a \$20 million bond issue to be used to stimulate economic growth and job creation. UMaine received \$3 million for the development of the Laboratory for Surface Science and Technology, and renovations associated with the Graduate School of Biomedical Sciences. Maine voters also approved an \$8.9 million bond related to agriculture and the environment. UMaine received \$800,000 for improvements to the Witter Teaching and Research Farm.

### **November 6, 2007:**

Maine voters approved a \$50 million research, development and commercialization bond for facilities and equipment to support the sectors of Maine's economy designated by the Maine Legislature in MEIF legislation. The 2007 bond created the Maine Technology Asset Fund (MTAF), with awards going to Maine companies, universities and non-profit organizations following a peer-reviewed competitive process administered by the Maine Technology Institute. Through the first two rounds of the MTAF program (2008 and 2009), UMaine was awarded nine grants totaling \$19.9 million to further support Maine research, development and commercialization efforts. The University of Maine at Presque Isle received a \$96,800 grant to implement an information mapping and analysis facility.

### **June 8, 2010:**

Maine voters approved an \$11 million bond to create jobs through investment in the Maine off-shore wind energy research and development project, specifically a demonstration site and related advanced composites manufacturing to advance Maine's energy independence. The 2010 bond will leverage \$24.5 million in federal funds. Note: for financial reporting purposes, the actual award took place in Fiscal Year 2011.

### **October 12, 2010:**

The Maine Technology Institute completed the third round of the Maine Technology Asset Fund (MTAF) competition, UMaine successfully competed for awards for five projects totaling \$3.54 million. The largest of these projects, at \$1.66 million, will fund construction of a grass pellet demonstration facility in Aroostook County to convert bioenergy crops into solid biomass fuel products for commercial and residential heating applications. Note: for financial reporting purposes, the actual award took place in Fiscal Year 2011.

**FY2011 SUMMARY OF STATE FUNDING FOR RESEARCH CAPITAL PROJECTS  
UMAINE/USM COMBINED**

	Referendum Bond Portion	Other Funds	Total Project Budget	Expenditures to Date
<b>FY1999 State Bond Issue (approved by voters 11/3/1998)</b>				
UM	\$ 10,800,000	\$ 1,168,622	\$ 11,968,622	\$ 11,968,622
USM	2,700,000	155,100	2,855,100	2,855,100
<b>TOTAL</b>	<b>\$ 13,500,000</b>	<b>\$ 1,323,722</b>	<b>\$ 14,823,722</b>	<b>\$ 14,823,722</b>
<b>FY2001 Univ R&amp;D Rev Bonds (Debt Svc Pd by \$2,500,000 State Approp - Issued 8/15/00)</b>				
UM	\$ 20,000,000	\$ 1,203,296	\$ 21,203,296	\$ 21,203,297
USM	5,000,219	4,730,426	9,730,645	9,730,645
<b>TOTAL</b>	<b>\$ 25,000,219</b>	<b>\$ 5,933,722</b>	<b>\$ 30,933,941</b>	<b>\$ 30,933,942</b>
<b>FY2001 One-Time State Appropriation (signed by Governor 4/25/2000)</b>				
UM	\$ 9,000,000	\$ 3,446,439	\$ 12,446,439	\$ 12,446,439
<b>FY2002 State Bond Issue (approved by voters 6/11/2002)</b>				
UM	\$ 5,000,000	0	\$ 5,000,000	\$ 5,000,000
USM	4,000,000	45,029	4,045,029	4,045,029
<b>TOTAL</b>	<b>\$ 9,000,000</b>	<b>\$ 45,029</b>	<b>\$ 9,045,029</b>	<b>\$ 9,045,029</b>
<b>FY2003 State Bond Issue (approved by voters 6/10/2003)</b>				
UM	\$ 7,000,000	\$ 799,189	\$ 7,799,189	\$ 7,799,188
USM	4,400,000	0	4,400,000	4,400,000
<b>TOTAL</b>	<b>\$ 11,400,000</b>	<b>\$ 799,189</b>	<b>\$ 12,199,189</b>	<b>\$ 12,199,188</b>
<b>FY2005 State Bond Issue (approved by voters 11/08/2005)</b>				
UM	\$ 3,800,000	\$ 302,105	\$ 4,102,105	\$ 4,102,105
<b>FY2007 MTI Grants (approved by voters 11/06/2007)</b>				
UM	\$ 6,868,726	\$ 12,420,000	\$ 19,288,726	\$ 16,196,735
<b>FY2010 Maine Marine Wind Energy Demonstration Site Fund (approved by voters 06/08/2010)</b>				
UM	\$ 11,000,000	\$ 831,478	\$ 11,831,478	\$ 1,108,108