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GRANTS & CONTRACTS

ANNUAL REPORT

2001/2002



UNIVERSITY OF MAINE SYSTEM
OFFICE OF FINANCE AND TREASURER

January, 2003

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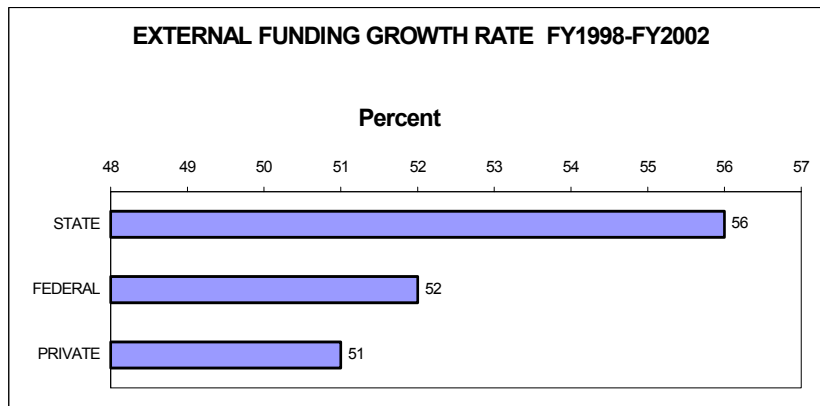
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GRANTS AND CONTRACTS 2001/2002 EXECUTIVE SUMMARY

Grants and contracts are formal agreements between the University of Maine System and outside sponsors. They provide assistance and represent a mutual joining of interests on the part of the grantor and the University in the pursuit of a common objective, or they may be used to provide services for the direct benefit of the sponsor.

- I. GRANTS AND CONTRACTS REVENUE INCREASED BY \$10.0 MILLION TO \$108.0 MILLION IN FY2002.** Details concerning the sources of these increases by funding source and the expenditures by activity are shown in the table below. Grants and contracts support instruction, research, and public service projects that span from archaeological studies to research facility construction as well as extensive programs of the Cooperative Extension and research in agriculture, forestry, rural economic development, and marine studies through the Maine Agricultural & Forest Experiment Station.

REVENUE BY SOURCE (IN MILLIONS)				EXPENDITURES BY ACTIVITY (IN MILLIONS)			
SOURCE	FY2001	FY2002	CHANGE	ACTIVITY	FY2001	FY2002	FY2002 % OF TOTAL
FEDERAL	\$35.9	\$40.8	\$4.9	INSTRUCTION	\$18.6	\$21.7	20
STATE	25.3	26.9	1.6	RESEARCH	51.4	55.6	52
PRIVATE	14.4	16.0	1.6	PUBLIC SERVICE	<u>28.0</u>	<u>30.7</u>	<u>28</u>
UNIVERSITY	<u>22.4</u>	<u>24.3</u>	<u>1.9</u>				
TOTAL	<u>\$98.0</u>	<u>\$108.0</u>	<u>\$10.0</u>	TOTAL	<u>\$98.0</u>	<u>\$108.0</u>	<u>100</u>



State (↑ 56%) Agencies such as the Maine Departments of Human Services, Education, Mental Health and Mental Retardation, and Transportation have increased their funding substantially over the past five years. The Department of Human Services alone has increased its funding to the University by 101%, or \$8.5 million over the past five years, primarily due to the funding of various projects at the Muskie School of Public Service for a series of training and professional and organizational development programs.

EXECUTIVE SUMMARY

Federal (↑ 52%) The National Science Foundation and The Departments of Education and Agriculture accounted for \$10.2 million of the \$14.0 million net increase in federal revenues from FY1998 to FY2002. The Departments of Health & Human Services and Defense continue to be major sponsors as well.

Private (↑ 51%) Private support is comprised of funding from non-profit organizations, other governmental entities, educational institutions and business and industry. The net increase of \$5.5 million from FY1998 to FY2002 is primarily attributed to increased funding from non-profit organizations. Major non-profit contributors in FY2002 were the Robert Wood Johnson Foundation and the Gulf of Maine Ocean Observing System.

II. STATE RESEARCH AND DEVELOPMENT APPROPRIATIONS MADE AN IMPORTANT IMPACT IN FY2002. \$40.1 million in research grants and contracts were generated by employing most of the \$10.2 million of available state appropriation in FY2002. A portion of the generated grants and contracts represent multi-year awards whose expenditures will appear in future grants and contracts reports.

For the 2-year period ended June 30, 2002, \$21.0 million in state funds attracted \$81.3 million in external grants and contracts funding.

\$3.9 million of the state appropriation dollars available in F Y2002 were used for direct cost sharing and \$6.3 million was used for support of faculty and staff, direct equipment purchases, research space, and research in such areas as computer software & engineering, advanced materials engineering, advanced technologies for forestry and agriculture, aquaculture and marine sciences, biotechnology, technology transfer, information technology, and biosciences. The remaining balance was carried over for use in FY2003.

III. THE FY2002 NET INDIRECT COST RECOVERY INCREASED BY 20% FROM \$8.2 MILLION IN FY2001 TO \$9.8 MILLION IN FY2002. Indirect cost recovery is a negotiated rate applied to grant and contract expenditures to reimburse the University for the use of its physical plant and administrative cost associated with grants and contracts.

IV. COST SHARING (THE FUNDS CONTRIBUTED BY THE UNIVERSITY TOWARD PROJECTS) HAS GROWN \$7.3 MILLION SINCE FY1998. However, the cost to generate each dollar of external funding has remained relatively constant over the past five years with the average cost per dollar being 31 cents. While grants and contracts expenditures have grown by 51 % since 1998, the University share of expenditures remain fairly constant at around 23 %.

V. IN 2002, 886 GRANT PROPOSALS WERE SUBMITTED AND 642 WERE APPROVED TOTALING \$94.1 MILLION. This compares with 887 submissions and 664 approvals amounting to \$97.0 million during FY2001. The average award for FY2002 was \$146,000, which was the same amount as in FY2001. Awards cannot be compared to current year expenditures since awards may be spent over a multi-year period.

GRANTS AND CONTRACTS REVENUE

Grants and Contracts revenue is used only to meet expenses and is not a profit-generating item. Total revenue used to meet expenditures for FY2002 was \$108 million, an increase of \$10.1 million over FY2001 and an increase of \$36.4 million (51%) over FY1998. Federal grants and contracts revenue was 52% higher than four years ago, and State grants and contracts revenue (including Federal pass-through funds) was 56% higher. University cost sharing contributions are discussed on Page 6 of this report.

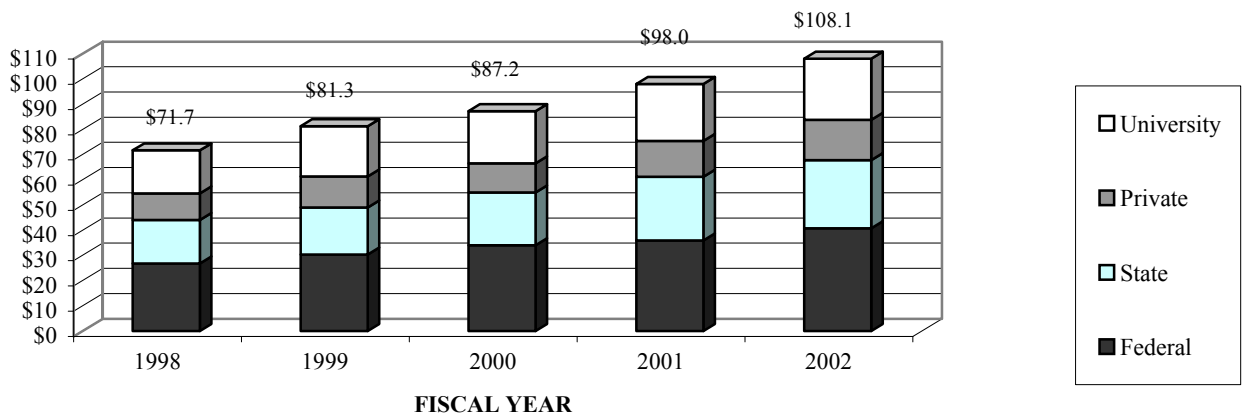
GRANTS AND CONTRACTS REVENUE BY SOURCE OF FUNDS (\$ in thousands)

	FY1998		FY1999		FY2000		FY2001		FY2002	
	\$	%	\$	%	\$	%	\$	%	\$	%
Federal	\$ 26,791	37	\$ 30,354	37	\$ 34,096	39	\$ 35,893	36	\$ 40,836	37
State	17,295	24	18,622	23	20,936	24	25,310	26	26,921 **	25
Private	10,549	15	12,424	15	11,574	13	14,345	15	15,958 **	15
University - cost sharing	17,106	24	19,895	25	20,639	24	22,418	23	24,381	23
Total	\$ 71,741	100	\$ 81,295	100	\$ 87,245	100	\$ 97,966	100	\$ 108,096	* 100

* Includes \$24 million for MAFES/UMCE: \$12.7 million for the University of Maine Agricultural and Forest Experiment Station and \$11.3 million for the University of Maine Cooperative Extension. **Agricultural and Forest Experiment Station** revenues for FY2002 were: Federal \$4.9 million, State \$.6 million, Private \$.5 million and University \$6.7 million. **Cooperative Extension** revenues for FY2002 were: Federal \$3.2 million, State \$1.9 million, Private \$.8 million and University \$5.4 million.

** Includes federal pass-through funds (see pages 4 - 5).

GRANTS AND CONTRACTS REVENUE BY SOURCE (In millions)



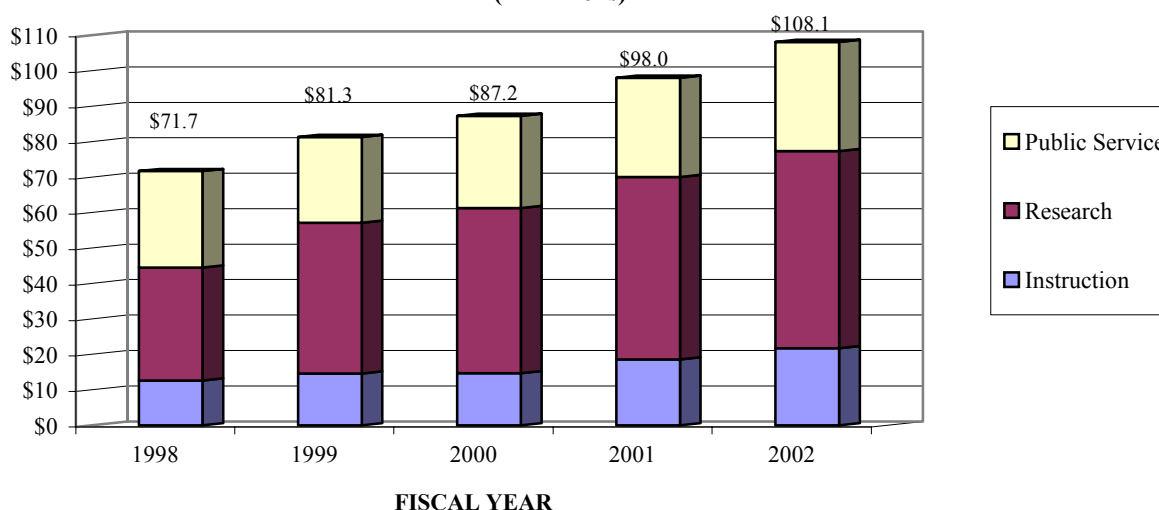
GRANTS AND CONTRACTS EXPENDITURES

During FY2002, 52% of total grants and contracts expenditures were incurred for Research, 28% for Public Service, and 20% for Instruction.

GRANTS AND CONTRACTS EXPENDITURES BY ACTIVITY (\$ in thousands)

	FY1998		FY1999		FY2000		FY2001		FY2002	
	\$	%	\$	%	\$	%	\$	%	\$	%
Instruction	\$ 12,566	17	\$ 14,571	18	\$ 14,731	17	\$ 18,573	19	\$ 21,700	20
Research	31,938	45	42,522	52	46,563	53	51,413	52	55,636	52
Public Service	27,237	38	24,202	30	25,951	30	27,980	29	30,760	28
Total	\$ 71,741	100	\$ 81,295	100	\$ 87,245	100	\$ 97,966	100	\$ 108,096	100

GRANTS AND CONTRACTS EXPENDITURES BY ACTIVITY (In millions)



UNIVERSITY EXPENDITURES BY ACTIVITY FY2002 (\$ in thousands)

	INSTRUCTION		RESEARCH		PUBLIC SERVICE		TOTAL	
	\$	%	\$	%	\$	%	\$	%
University of Maine	\$ 2,413	11	\$ 42,790	78	\$ 17,041	56	\$ 62,244 *	57
University of Maine Augusta	49	-	65	-	2,178	7	2,292	2
University of Maine Farmington	1,231	6	1,311	2	358	1	2,900	3
University of Maine Fort Kent	-	-	2	-	241	1	243	-
University of Maine Machias	9	-	40	-	(1)	-	48	-
University of Southern Maine	16,360	74	11,422	20	9,555	31	37,337	35
University of Maine Presque Isle	120	1	6	-	748	2	874	1
System-Wide Services	1,518	8	-	-	640	2	2,158	2
Total	\$ 21,700	100	\$ 55,636	100	\$ 30,760	100	\$ 108,096	100

* Includes \$24 million for the Maine Agricultural and Forest Experiment Station and Cooperative Extension.

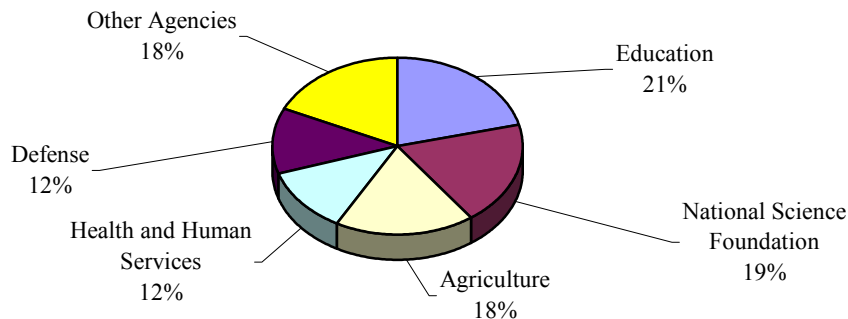
FEDERAL REVENUES

The table and graph below indicate the level of funding received from **Federal** agencies. The Department of Education was the top source of federal monies in FY2002 (an increase of \$1.2 million from FY2001), followed by the National Science Foundation and the Department of Agriculture.

Agency	FY1998		FY1999		FY2000		FY2001		FY2002	
	\$	%	\$	%	\$	%	\$	%	\$	%
Education	\$ 4,685	17	\$ 4,933	16	\$ 5,923	17	\$ 7,107	20	\$ 8,290	21
National Science Foundation	2,658	10	3,272	11	3,992	12	5,784	15	8,187	19
Agriculture *	6,354	24	5,925	20	6,844	20	7,061	20	7,385	18
Health & Human Services	3,362	12	3,757	12	4,288	13	4,400	12	4,812	12
Defense	1,527	6	4,367	14	7,353	22	6,021	17	4,760	12
Commerce	4,009	15	4,260	14	1,472	4	733	2	1,460	4
Justice	693	3	369	1	439	1	900	3	1,272	3
Small Business Administration	468	2	561	2	500	1	295	1	814	2
Interior	478	2	605	2	813	2	945	3	804	2
NASA	380	1	417	2	378	2	422	1	772	2
Labor	25	0	56	0	328	1	443	1	769	2
Environmental Protection	759	3	784	3	968	3	792	2	679	2
Corp for Nat'l & Community Svc	244	1	301	1	325	1	438	1	456	1
Veteran's Administration	173	1	180	1	185	1	192	1	179	0
Energy	304	1	223	1	137	0	59	0	98	0
U S Dept of Transportation	0	0	0	0	0	0	230	1	73	0
National Found Arts/ Humanities	141	0	91	0	50	0	37	0	13	0
Other	0	0	41	0	45	0	34	0	11	0
Executive	161	1	99	0	1	0	0	0	2	0
U S Information Agency	370	1	113	0	55	0	0	0	-	0
	<u>\$ 26,791</u>	<u>100</u>	<u>\$ 30,354</u>	<u>100</u>	<u>\$ 34,096</u>	<u>100</u>	<u>\$ 35,893</u>	<u>100</u>	<u>\$ 40,836</u>	<u>100</u>

* FY2002 revenue includes \$4.2 million for MAFES and \$2.5 million for UMCE. Various other agencies listed above also provided funding for MAFES and UMCE, bringing total federal revenues for these projects to \$4.9 million and \$3.2 million, respectively.

FEDERAL REVENUES BY AGENCY FY2002



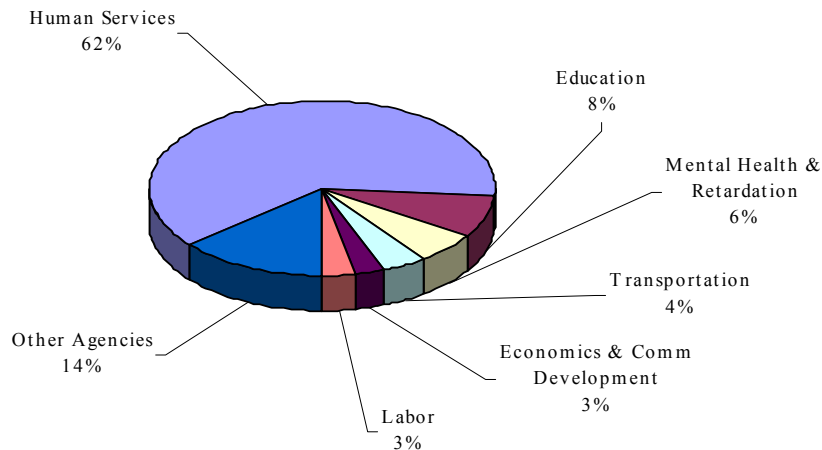
STATE REVENUES

The table and graph below indicate the level of funding received from **State** agencies.

STATE REVENUES BY AGENCY (\$ in thousands)

Agency	FY 1998		FY 1999		FY 2000		FY 2001		FY 2002	
	\$	%	\$	%	\$	%	\$	%	\$	%
Human Services	\$ 8,352	48	\$ 10,411	56	\$ 12,569	60	\$ 15,222	60	\$ 16,829	62
Education	1,974	11	1,909	10	2,219	11	2,320	9	2,238	8
Mental Health & Retardation	1,117	7	1,353	8	1,640	8	1,481	6	1,642	6
Transportation	242	1	250	1	282	1	864	3	1,018	4
Economics & Community Development	899	5	864	5	808	4	437	2	844	3
Labor	733	4	784	4	760	4	752	3	804	3
Environmental Protection	476	3	185	1	128	1	566	2	665	2
Agriculture	624	4	692	4	538	3	645	3	592	2
County UMCE Funds	527	3	527	3	572	3	570	2	578	2
Behavioral & Developmental Svcs	0	0	0	0	0	0	0	0	448	2
Corrections	49	0	101	0	220	1	246	1	200	1
Marine Resources	374	2	658	4	364	2	301	1	185	1
Legislative	88	1	140	1	98	0	166	1	184	1
Small Business Commission	0	1	0	0	0	0	830	3	-	0
Inland Fish & Wildlife	246	1	237	1	228	1	154	1	163	1
Planning	165	1	204	1	236	1	223	1	156	1
Public Safety	51	0	101	0	44	0	45	0	99	0
Executive Department	12	0	13	0	17	0	35	0	78	0
Judicial	1,308	8	144	1	120	0	274	1	21	0
Other	58	0	49	0	93	0	179	1	177	1
	<u>\$ 17,295</u>	<u>100</u>	<u>\$ 18,622</u>	<u>100</u>	<u>\$ 20,936</u>	<u>100</u>	<u>\$ 25,310</u>	<u>100</u>	<u>\$ 26,921</u>	<u>100</u>
Federal Pass-through funds	<u>\$ 7,197</u>	<u>42</u>	<u>\$ 9,069</u>	<u>49</u>	<u>\$ 13,433</u>	<u>64</u>	<u>\$ 18,167</u>	<u>72</u>	<u>\$ 19,558</u>	<u>73</u>

STATE REVENUES BY AGENCY FY 2002



PRIVATE REVENUES

The table and graph below indicate the level of funding received in FY2002 from private sources broken down into four categories. Non-profit organizations and foundations continue to provide the majority of private revenues.

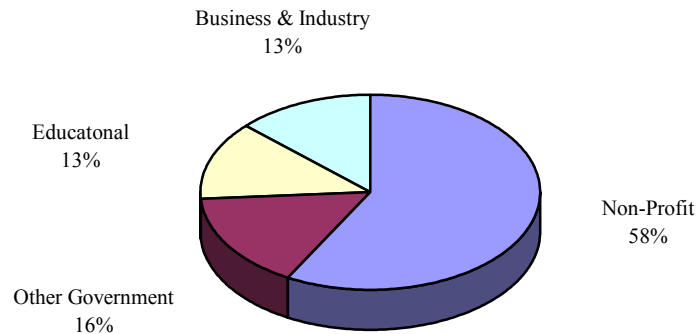
PRIVATE REVENUES BY SOURCE OF FUNDS (\$ in thousands)

	FY 1998		FY 1999		FY 2000		FY 2001		FY 2002	
	\$	%	\$	%	\$	%	\$	%	\$	%
Non-profit Organizations	\$ 5,792	55	\$ 7,332	59	\$ 6,277	54	\$ 8,401	59	\$ 9,229	58
Other Governmental Entities*	2,153	20	2,289	19	1,871	16	2,109	15	2,510	16
Educational Institutions	1,711	16	1,633	13	2,337	20	1,940	14	2,130	13
Business and Industry	893	9	1,170	9	1,089	10	1,895	12	2,089	13
	<u>\$ 10,549</u>	<u>100</u>	<u>\$ 12,424</u>	<u>100</u>	<u>\$ 11,574</u>	<u>100</u>	<u>\$ 14,345</u>	<u>100</u>	<u>\$ 15,958</u>	<u>** 100</u>

* Entities other than the Federal Government and State of Maine Agencies.

** Includes Federal Pass-Through funds of \$8.4 million.

PRIVATE REVENUES BY SOURCE OF FUNDS FY2002



COST SHARING

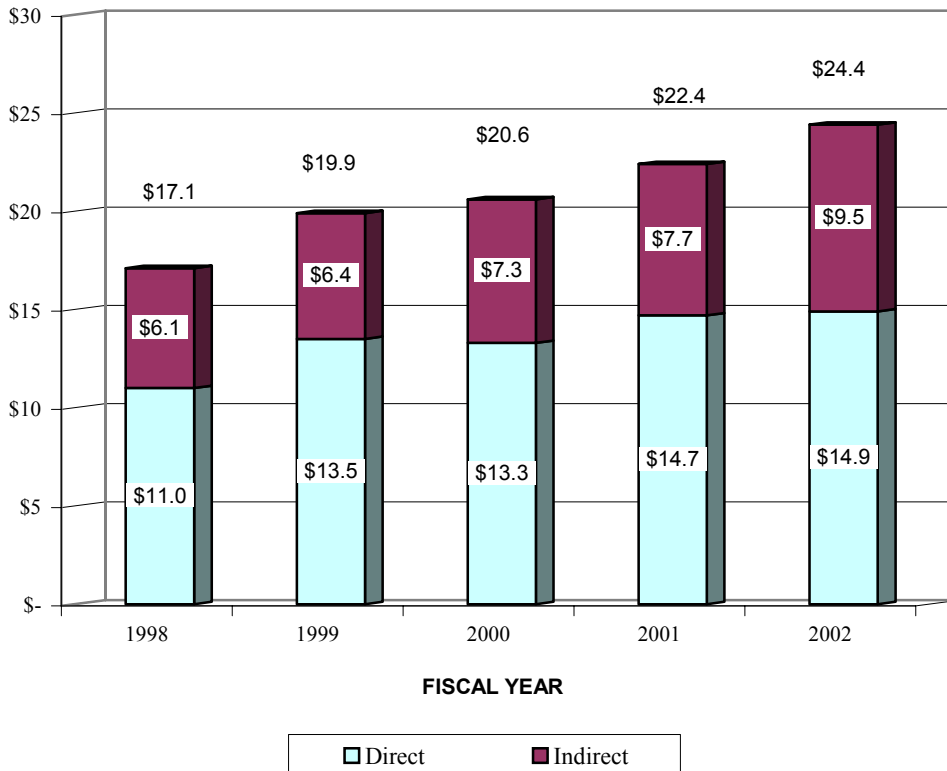
Cost sharing (matching) is University resources contributed to the support of a grant or contract. Many sponsoring agencies, both governmental and private, require recipients to share in the costs of a grant or contract.

Direct cost sharing occurs when University funds are used to fulfill a matching requirement. In FY2002, \$14.9 million was used to support grants and contracts. Educational & General matching funds for the Maine Agricultural and Forest Experiment Station and the Cooperative Extension Service accounted for \$10.4 million or 70% of the direct cost sharing in FY2002.

Indirect cost sharing, which totaled \$9.5 million in FY2002, occurs when the allowable indirect costs are not recovered in full. These indirect costs are used by the University to meet the sponsor's matching requirements for grants and contracts.

Since FY1998, total cost sharing as a percentage of total grants and contracts expenditures has changed very little, ranging from 23% to 25%. In FY2002 it was 23%.

UNIVERSITY COST SHARING
(In millions)



DIRECT COST SHARING BY SOURCE/ACTIVITY
(\$ in thousands)

SOURCE	ACTIVITY	FY1998		FY1999		FY2000		FY2001		FY2002	
		\$	%	\$	%	\$	%	\$	%	\$	%
Federal:	Instruction	\$ 328	3	\$ 129	-	\$ 367	3	\$ 372	3	\$ 361	3
	Research	4,559	49	6,774	63	6,904	61	7,580	62	8,326	63
	Public Service	4,464	48	3,943	37	4,048	36	4,328	35	4,565	34
		<u>\$ 9,351</u>	<u>100</u>	<u>\$10,846</u>	<u>100</u>	<u>\$11,319</u>	<u>100</u>	<u>\$12,280</u>	<u>100</u>	<u>\$ 13,252</u>	<u>100</u>
State:	Instruction	\$ 133	17	\$ 101	12	\$ 88	15	\$ 57	6	\$ 64	7
	Research	146	18	136	16	134	22	135	14	137	15
	Public Service	520	65	616	72	372	63	786	80	706	78
		<u>\$ 799</u>	<u>100</u>	<u>\$ 853</u>	<u>100</u>	<u>\$ 594</u>	<u>100</u>	<u>\$ 978</u>	<u>100</u>	<u>\$ 907</u>	<u>100</u>
Private:	Instruction	\$ 131	15	\$ 161	9	\$ 83	6	\$ 21	1	\$ 51	7
	Research	701	80	1,404	80	1,267	90	1,324	93	592	79
	Public Service	41	5	192	11	52	4	74	5	104	14
		<u>\$ 873</u>	<u>100</u>	<u>\$ 1,757</u>	<u>100</u>	<u>\$ 1,402</u>	<u>100</u>	<u>\$ 1,419</u>	<u>100</u>	<u>\$ 747</u>	<u>100</u>
Totals:	Instruction	\$ 592	5	\$ 391	3	\$ 538	4	\$ 450	3	\$ 476	3
	Research	5,406	49	8,314	62	8,305	62	9,039	62	9,055	61
	Public Service	5,025	46	4,751	35	4,472	34	5,188	35	5,375	36
		<u>\$11,023</u>	<u>100</u>	<u>\$13,456</u>	<u>100</u>	<u>\$13,315</u>	<u>100</u>	<u>\$14,677</u>	<u>100</u>	<u>\$ 14,906</u>	<u>100</u>

INDIRECT COST SHARING BY SOURCE/ACTIVITY
(\$ in thousands)

SOURCE	ACTIVITY	FY1998		FY1999		FY2000		FY2001		FY2002	
		\$	%	\$	%	\$	%	\$	%	\$	%
Federal:	Instruction	\$ 252	17	\$ 162	13	\$ 245	19	\$ 363	24	\$ 661	29
	Research	798	55	823	68	912	72	1,021	67	1,385	60
	Public Service	407	28	227	19	116	9	146	9	284	11
		<u>\$ 1,457</u>	<u>100</u>	<u>\$ 1,212</u>	<u>100</u>	<u>\$ 1,273</u>	<u>100</u>	<u>\$ 1,530</u>	<u>100</u>	<u>\$ 2,330</u>	<u>100</u>
State:	Instruction	\$ 1,374	39	\$ 2,200	58	\$ 2,341	57	\$ 2,778	56	\$ 3,315	57
	Research	890	26	1,099	29	1,190	29	1,373	28	1,722	29
	Public Service	1,233	35	493	13	567	14	837	16	894	14
		<u>\$ 3,497</u>	<u>100</u>	<u>\$ 3,792</u>	<u>100</u>	<u>\$ 4,098</u>	<u>100</u>	<u>\$ 4,988</u>	<u>100</u>	<u>\$ 5,931</u>	<u>100</u>
Private:	Instruction	\$ 220	19	\$ 229	16	\$ 341	18	\$ 408	34	\$ 457	39
	Research	832	74	1,032	72	1,356	69	645	53	497	41
	Public Service	77	7	174	12	256	13	170	13	260	20
		<u>\$ 1,129</u>	<u>100</u>	<u>\$ 1,435</u>	<u>100</u>	<u>\$ 1,953</u>	<u>100</u>	<u>\$ 1,223</u>	<u>100</u>	<u>\$ 1,214</u>	<u>100</u>
Totals:	Instruction	\$ 1,846	30	\$ 2,591	40	\$ 2,927	40	\$ 3,549	46	\$ 4,433	47
	Research	2,520	42	2,954	46	3,458	47	3,039	39	3,604	38
	Public Service	1,717	28	894	14	939	13	1,153	15	1,438	15
		<u>\$ 6,083</u>	<u>100</u>	<u>\$ 6,439</u>	<u>100</u>	<u>\$ 7,324</u>	<u>100</u>	<u>\$ 7,741</u>	<u>100</u>	<u>\$ 9,475</u>	<u>100</u>
Total Cost Sharing		\$17,106		\$19,895		\$20,639		\$22,418		\$ 24,381	
% of Total Grants/Contracts		24%		25%		24%		23%		23%	

INDIRECT COST RECOVERY RATES

The University is required to negotiate several rates with the Federal government to assure that the institution is reimbursed for the use of its physical plant and administrative cost associated with grants and contracts. These rates are negotiated on a system-wide basis using past and estimated future costs.

FEDERAL INDIRECT COST RATES

<u>INDIRECT COST RATE</u>	<u>FY2002*</u>
Research	
On-Campus	47.0%
Off-Campus	26.0%
Instruction	
On-Campus	56.7%
Off-Campus	26.0%
Public Service	
On-Campus	27.9%
Off-Campus	21.8%

* All indirect cost rates are effective through FY2003.

FEDERAL EMPLOYEE BENEFIT RATES

Applied to All Non-Student Salaries and Wages

<u>FY1995-FY1998</u>	<u>FY1999</u>	<u>FY2000</u>	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>
30.5%	31.5%	33.0%*	33.4%*	33.0%*	34.6%*

* Effective 7/1/99 a second fringe benefit rate of 8.4% was established for temporary non-faculty employees. In FY2002, this rate was 8.1%. In FY2003, this rate will be 8.5%.

INDIRECT COST RECOVERIES

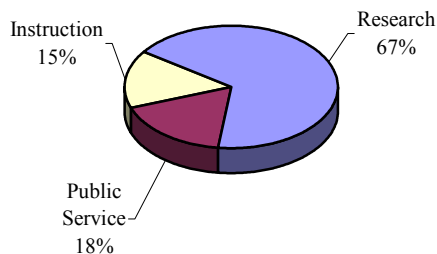
The amount of allowable indirect facilities and administration costs is calculated on each grant or contract using the appropriate negotiated rate as described above. The rate is applied to the total direct costs of an individual grant or contract to arrive at the total allowable indirect costs. The total calculated indirect costs for FY2002 amounted to \$19.3 million.

Indirect cost sharing, as described on page 6, occurs when recovery of indirect costs is forgone to satisfy cost sharing requirements. This type of cost sharing amounted to \$9.5 million in FY2002, resulting in \$9.8 million of indirect cost recoveries actually being received from grants and contracts activity.

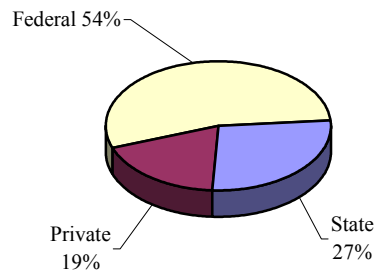
The Federal government is the University's major source of indirect cost recovery revenue, providing more than 50% of such revenues since FY1998. Research activities have provided over 60% of total indirect cost recoveries since FY1998.

		FY1998		FY1999		FY2000		FY2001		FY2002	
		\$	%	\$	%	\$	%	\$	%	\$	%
Federal:	Instruction	\$ 84	3	\$ 111	4	\$ 210	5	\$ 225	5	\$ 223	4
	Research	2,033	74	2,420	78	3,409	81	3,449	80	4,158	79
	Public Service	632	23	550	18	597	14	643	15	910	17
		<u>\$ 2,749</u>	<u>100</u>	<u>\$ 3,081</u>	<u>100</u>	<u>\$ 4,216</u>	<u>100</u>	<u>\$ 4,317</u>	<u>100</u>	<u>\$ 5,291</u>	<u>100</u>
State:	Instruction	\$ 418	32	\$ 685	46	\$ 747	44	\$ 994	42	\$ 1,097	41
	Research	369	28	469	32	418	25	772	32	946	35
	Public Service	520	40	321	22	541	31	626	26	631	24
		<u>\$ 1,307</u>	<u>100</u>	<u>\$ 1,475</u>	<u>100</u>	<u>\$ 1,706</u>	<u>100</u>	<u>\$ 2,392</u>	<u>100</u>	<u>\$ 2,674</u>	<u>100</u>
Private:	Instruction	\$ 88	8	\$ 327	23	\$ (115)	(9)	\$ 105	7	\$ 171	9
	Research	889	76	970	68	1,219	96	1,274	83	1,468	80
	Public Service	192	16	129	9	167	13	132	10	177	11
		<u>\$ 1,169</u>	<u>100</u>	<u>\$ 1,426</u>	<u>100</u>	<u>\$ 1,271</u>	<u>100</u>	<u>\$ 1,511</u>	<u>100</u>	<u>\$ 1,816</u>	<u>100</u>
Totals:	Instruction	\$ 590	11	\$ 1,123	19	\$ 842	12	\$ 1,324	16	\$ 1,491	15
	Research	3,291	63	3,859	64	5,046	70	5,495	67	6,572	67
	Public Service	1,344	26	1,000	17	1,305	18	1,401	17	1,718	18
		<u>\$ 5,225</u>	<u>100</u>	<u>\$ 5,982</u>	<u>100</u>	<u>\$ 7,193</u>	<u>100</u>	<u>\$ 8,220</u>	<u>100</u>	<u>\$ 9,781</u>	<u>100</u>

**NET INDIRECT COST RECOVERY
BY ACTIVITY
FY2002**



**NET INDIRECT COST RECOVERY
BY SOURCE
FY2002**



RESEARCH EXPENDITURES

The University's research activities include not only grants and contracts research, but also institutes and research centers and project research funded by E&G monies. The total cost of all research activity for FY2002 was \$65.4 million, a growth of \$31.3 million since FY1998.

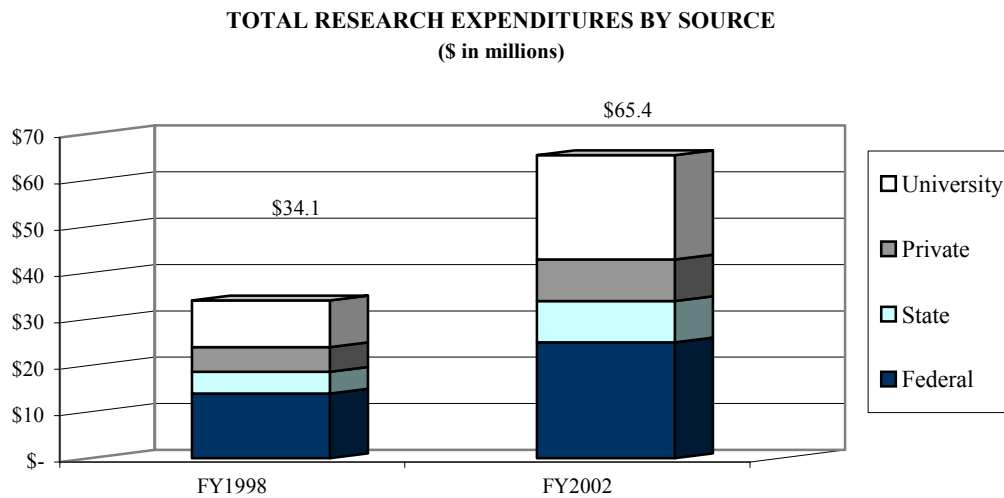
The following table shows total research expenditures funded by grants and contracts and E&G monies from FY1998 to FY2002. Research expenditures related to grants and contracts are broken down by source of funds: Federal, State, Private, and University, which includes direct and indirect cost sharing and E&G funding for MAFES.

	(\$ in Thousands)				
	<u>FY1998</u>	<u>FY1999</u>	<u>FY2000</u>	<u>FY2001</u>	<u>FY2002</u>
Federal	\$ 14,031	\$ 18,276	\$ 22,311	\$ 22,970	\$ 25,092
State	4,642	6,347	5,474	7,367	8,897
Private	5,340	6,633	7,015	8,996	8,987
University*					
Direct Cost Sharing	1,448	3,190	2,753	3,122	2,952
Indirect Cost Sharing	2,520	2,953	3,458	3,039	3,604
MAFES Match	3,957	5,123	5,552	5,919	6,104
	<u>7,925</u>	<u>11,266</u>	<u>11,763</u>	<u>12,080</u>	<u>12,660</u>
Total Grants and Contracts	<u>\$ 31,938</u>	<u>\$ 42,522</u>	<u>\$ 46,563</u>	<u>\$ 51,413</u>	<u>\$ 55,636</u>
<hr/>					
Total E&G*	<u>\$ 2,204</u>	<u>\$ 4,013</u>	<u>\$ 5,953</u>	<u>\$ 11,453</u>	<u>\$ 9,819</u>
Total Research Expenditures	<u>\$ 34,142</u>	<u>\$ 46,535</u>	<u>\$ 52,516</u>	<u>\$ 62,866</u>	<u>\$ 65,455</u> **

* Includes expenditures funded by the annual State of Maine research and development appropriation. Such expenditures totaled \$10.2 million in FY2002, an increase of \$9.7 million over FY1998.

** As noted at the top of this page, the University's research activities include not only grants and contracts research (see page 2 of this report), but also research funded by E&G monies. This total represents the costs of all research activities.

The graph below shows a comparison of total research expenditures for FY1998 and FY2002.



When compared with the other New England Land Grant institutions, Maine ranks lowest in total research expenditures. FY2001 and FY2002 are summarized below.

**TOTAL RESEARCH EXPENDITURES AT
NEW ENGLAND LAND GRANT UNIVERSITIES***
(\$ in Thousands)

	FY2001	FY2002
University of Massachusetts - Amherst	\$ 73,843	\$ 80,862
University of Connecticut	\$ 62,087	**
University of New Hampshire	\$ 72,765	\$ 75,724
University of Rhode Island	\$ 51,413	\$ 53,282
University of Vermont	\$ 54,790	\$ 66,282
University of Maine	\$ 45,555	\$ 49,520

* Excludes indirect cost recovery and plant fund expenditures for consistency at all institutions.

** Information not available at this time.

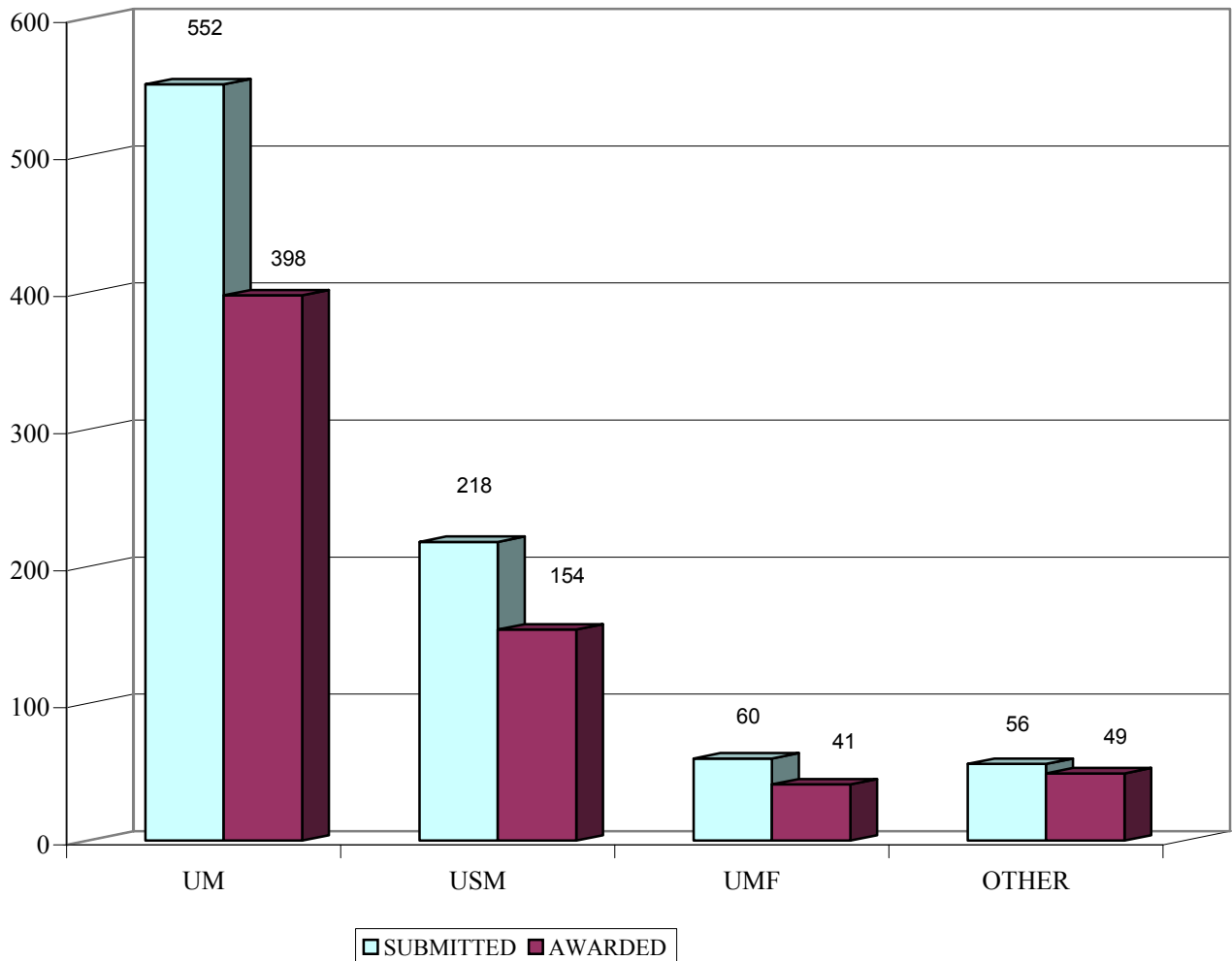
PROPOSALS SUBMITTED AND AWARDED

Grant proposals are submitted to outside agencies for specific programs. Proposals for contracts are negotiated with agencies and companies to provide specific services.

During FY2002, Sponsored Program Departments throughout the University of Maine System submitted 886 proposals to agencies for funding of a wide range of grants and contracts. Proposals awarded during FY2002 amounted to \$94.0 million. All proposals submitted are not awarded and those which are awarded, are not funded until the year the services are provided. Thus, the dollar amount of proposals awarded during the current year cannot be compared to current year expenditures since expenditures may occur over a multi-year period.

Significant proposal activity is indicated on the following graph and table.

**NUMBER OF PROPOSALS SUBMITTED & AWARDS RECEIVED
FY2002**



PROPOSAL STATUS REPORT FY2002
(\$ in thousands)

Proposals approved during FY2002 may include prior year submissions, and some FY2002 submissions may be included in future year approvals.

	SUBMITTED DURING FY2002	APPROVED DURING FY2002	
	#	#	\$
UNIVERSITY OF MAINE			
Academic Affairs	2	2	\$ 421
College of Business, Public Policy, and Health	14	12	1,278
College of Education and Human Development	32	29	4,533
College of Engineering	84	42	10,658
College of Liberal Arts and Sciences	72	46	4,629
College of Natural Sciences, Forestry, & Agriculture	230	173	16,634
Cooperative Extension	26	22	3,227
Cultural Affairs and Libraries	8	7	161
Division of Lifelong Learning	8	3	181
President's Office	0	1	6
Research	68	54	12,197
Cutler Health Center	6	4	79
Chief Financial Officer	1	2	409
Student Services	1	1	12
Total	<u>552</u>	<u>398</u>	<u>\$ 54,425</u>
UNIVERSITY OF SOUTHERN MAINE			
College of Arts & Sciences	60	18	\$ 1,257
College of Education & HD	16	21	2,356
Muskie Institute for Public Affairs	88	79	27,066
School of Applied Sciences	13	4	372
School of Business	7	8	1,605
School of Law	5	10	584
College of Nursing	14	5	152
Lewiston-Auburn College	8	2	47
Other University Programs	7	7	170
Total	<u>218</u>	<u>154</u>	<u>\$ 33,609</u>
UNIVERSITY OF MAINE AT AUGUSTA	20	17	\$ 1,673
UNIVERSITY OF MAINE AT FARMINGTON	60	41	\$ 2,786
UNIVERSITY OF MAINE AT FORT KENT	3	3	\$ 287
UNIVERSITY OF MAINE AT MACHIAS	6	5	\$ 144
UNIVERSITY OF MAINE AT PRESQUE ISLE	25	23	\$ 934
SYSTEM WIDE SERVICES	<u>2</u>	<u>1</u>	<u>\$ 207</u>
SYSTEM TOTALS FOR FY2002	<u><u>886</u></u>	<u><u>642</u></u>	<u><u>\$ 94,065</u></u>
SYSTEM TOTALS FOR FY2001	<u><u>887</u></u>	<u><u>664</u></u>	<u><u>\$ 96,977</u></u>

UNIVERSITY HIGHLIGHTS

UNIVERSITY OF MAINE

- ***Development & Commercialization of Wood-based Composites in Maine*** – Researchers at the UM's Advanced Engineered Wood Composites Center (AEWC) are developing partnerships that will help commercialize Composite Reinforced Wood (CRW) technologies and revolutionize wood construction. Recent research has shown that CRW, which combines natural wood materials with synthetic resins and fiber reinforcements, offers superior properties to wood at reduced costs. UM studies demonstrated that 2% reinforcement can increase the strength of wood beams by over 50%, and can increase nail-holding capacity in Oriented Strand Board (OSB) sheathing panels by nearly 50%. This important innovation may help mitigate the cost of hurricane and earthquake-related disasters, which amount to \$50 billion annually in the U.S. alone.
- ***Marine Sediments and Seabed Mines*** – With a \$717,000 grant from the Navy, Larry Mayer and Peter Jumars at the UM's Darling Marine Center are currently studying the mixing of sediments (bioturbation) by animals that dwell on the sea bottom. This mixing is important to the Navy because it can bury or expose mines on the seabed, and change the acoustic properties that allow the Navy to find them. The project tests the idea that mixing is limited by the amount of food available to the animals. The results of this project will not only provide a test of the food quality hypothesis, but also a series of valuable new data on feeding styles of bottom-dwelling animals, how temperature affects a variety of the animals, and how the animals' feeding affects ocean acoustics.
- ***New England Climate Modeling*** – Obtaining highly detailed and lengthy records of past climatic variability at the regional level is particularly important to better inform society about the range of climatic change. This is of importance to Maine because the New England region—especially Maine, may not respond to future climatic change in the same manner as other parts of the country. It is equally important to develop records of past climatic conditions to evaluate how the number and magnitude of severe climatic events have changed with time. It is these extreme events that can greatly alter one's lifestyle. This study, funded by the National Science Foundation, will develop daily weather conditions for New England over the past 300+ years by compiling and analyzing written records of climate history.
- ***State-of-the-Art Software for Testing Child Vocabulary*** – Tracking language development in very young (8 to 30 month-old) children is often done by surveying parents about words their children use and understand. A widely used standard paper and pencil test is known as the MacArthur Communicative Development Inventory (CDI). With a \$350,000 three-year grant from the National Institutes of Child Health and Human Development through a subcontract from the Trefoil Corp. of Orono, Alan Cobo-Lewis, assistant research professor of psychology at the UM, is developing a computerized approach to the CDI. The goal is to make the test more useful in assessing language development.

UNIVERSITY HIGHLIGHTS

(Continued)

- ***Next Generation Geospatial Information Management*** – With a \$1,500,000 award from the National Science Foundation, a research team led by scientists in UM's Department of Spatial Information Science and Engineering is developing GeoGrid, an environment for the intelligent management of geospatial information. UM scientists are collaborating with faculty members at Iowa State University and the Supercomputer Center at University of California-San Diego to develop concepts, algorithms, and system architectures to enable expert and non-expert users anywhere to query, analyze, and contribute to complex geospatial information. The objective is to extend the concept of the computational grid to make it easier for users to access and interact with next generation geospatial information. This project aims to enable the integration and use of large collections of disperse information of varying quality and accuracy, with example potential applications in geographic information systems, mobile computing, and bioinformatics.
- ***Supercluster Distributed Memory Technology Theater Missile Defense Solutions*** – This \$1.7 million, Department of Defense-funded project has established a Supercluster Distributed Memory Technology (SDMT) computing facility in Orono. UM and its private sector partner, Applied Thermal Science, Inc. (ATS) of Sanford, Maine, are operating the facility under the supervision of the U.S. Army. The U.S Army is developing Theater Missile Defense systems that are required to counter the potential threat of weapons of mass destruction. In an effort to meet this challenge, advanced technologies are called upon to achieve the technical requirements, minimize cost and demonstrate deterrence before threats become apparent. Design of these defensive missile systems requires sophisticated computer simulations that accurately predict the control forces exerted on a missile over its entire flight trajectory.
- ***New England Wood Utilization*** – The overall objectives of this research project are to increase our knowledge of the properties of timber species located in the Northeastern U.S.—with special emphasis on Northern New England, improve the efficiencies and environmental compatibility of existing industries, and develop new products which could generate expansion of the forest products industrial base. This grant is a multi-project program that addresses wood resource and utilization issues of specific interest to Maine. Program activities include improvement of the environmental compatibility of wood pulping and bleaching, the use of low-value wood residues (sawdust) in extruded wood/plastic composites for residential markets, and the development of a stock glue-laminate material from hardwood resources.
- ***Re-Integrating Crop and Livestock Enterprises in Three Northern States*** – The goal of this \$2,000,000 project funded by the USDA is to identify, promote, and assist farmers in adopting integrated crop and livestock farming systems that reduce costs, increase market opportunities and increase profits for small and mid-size family farms. Working with 60 cooperating farms, the project uses a holistic systems approach that incorporates research, education, and extension activities and that evaluates six inter-related outcome elements: economic impact, marketing opportunities, community impact, ecosystem impact, farmer adoption, and information transfer. The project spans four years and involves the collaboration of ten institutions across three states with participants from ten different

UNIVERSITY HIGHLIGHTS

(Continued)

disciplines. The three states represent the Northeast, the Mid-West and the Great Lakes regions of the country; thus knowledge and farmer adoption experience gained from this project will be applicable to a significant portion of the U.S. agricultural sector.

- ***Latest Technology in Wireless Communications*** – Expanding commercial and military applications crowd the wireless communications frequency band, creating a critical need to expand the band to higher frequencies. With a prestigious five-year CAREER award from the National Science Foundation, Mauricio Pereira da Cunha of the Department of Electrical and Computer Engineering will study a newly discovered acoustic wave phenomenon that will help address that need.
- ***A Biosensor Platform for Detection of Fish Pathogens*** – Conventional approaches for direct microbial sampling of marine organisms are typically slow and labor-intensive. There is a need for alternative rapid pathogen detection methods that avoid the pitfalls of the current techniques and provide cheaper, simpler, and user-friendly approaches to pathogen detection. The overall goal of this project is to combine proven molecular and solid state electronic technologies to create an inexpensive hybrid biosensor that can be used by individuals without specialized training to perform rapid, accurate, and reliable detection of microbial pathogens in marine finfish and shellfish.
- Total grants and contracts awarded in FY2002 were \$54.4 million.
- Total grants and contracts expenditures for FY2002 were \$62.2 million.

UNIVERSITY OF MAINE AT AUGUSTA

- The UMA'S Maine Community Policing was awarded a grant from the Office of Community Oriented Policing (COPS). The PITI Ethics Grant for \$400,000 insures that Maine Law Enforcement Officers will be provided training on issues of ethics and integrity over the next few years.
- The Maine Centers for Women, Work and Community at UMA received an organizational grant from Maine Community Foundation for \$55,000. This three year project will help strengthen financial sustainability, improve data management systems and implement measures of performance relevant to the organization's goals.
- The Maine Centers for Women, Work and Community also received a \$24,000 grant from the Maine Womens Economic Security Agenda. The funding is to coordinate the creation of the Maine Womens Economic Security Agenda and to present the agenda at community forums and to each county in the state. The Agenda will be used to inform legislators and policy makers about the issues and concerns of women throughout the State of Maine.
- Total grants and contracts awarded in FY2002 were \$1.7 million.
- Total grants and contracts expenditures for FY2002 were \$2.3 million.

UNIVERSITY HIGHLIGHTS

(Continued)

UNIVERSITY OF MAINE AT FARMINGTON

- UMF was awarded state contracts totaling \$769,426 to conduct medical services related research.
- UMF was awarded a multi-year federal grant (first year = \$194,427) entitled the Electronic Guild Network Project. The project will transform teacher education at UMF and serve as a model for preparing teachers who can use technology to enrich teaching and learning, particularly for children and schools in poor, rural communities.
- UMF is partnering in a multi-grant NSF program (FY01 = \$216,839) entitled University of Maine System Math Science Teacher Excellence Program. UMF will improve existing mathematics courses and complete the development and implementation of new science courses for all UMF K-12 pre-service teachers, more effectively integrate mathematics content and pedagogy, revise science laboratory courses to support students with disabilities and improve the preparation of pre-service science teachers.
- UMF was awarded a \$120,000 state grant to provide early childhood education course work to child care providers in Maine.
- Total grants and contracts awarded in FY2002 amounted to \$2.8 million.
- Total grants and contracts expenditures for FY2002 were \$2.9 million.

UNIVERSITY OF MAINE AT FORT KENT

- U.S. Department of Education Grant for Student Support Services was renewed.
- Professor of Biology & Environmental Studies, Steven B. Selva, continued to work on a grant from Parks Canada to inventory the epiphytic lichens in mature boreal forest stands in northern Cape Breton Island and analyze their implications for the biological continuity, or successional age, in Cape Breton Highlands National Park and other protected areas in northern Cape Breton.
- Professor of Psychology and Education, James A. Killarney and Assistant Professor of Anthropology and Sociology, Mariella Squire continued work on a grant from Maine Campus Compact to assist Behavioral Sciences in the development and institutionalization of Service-Learning as a pedagogy at UMFK, and as a way to assist the local communities in problem solving.
- Total grants and contracts awarded in FY2002 amounted to \$287 thousand.
- Total grants and contracts expenditures for FY2002 were \$243 thousand.

UNIVERSITY HIGHLIGHTS

(Continued)

UNIVERSITY OF MAINE AT MACHIAS

- Professor of Maine Ecology, Brian Beal, was awarded a grant by the State of New Hampshire to conduct a juvenile clam mortality study in Hampton Harbor.
- Associate Professor of Mathematics, Bill Weigle, was awarded a National Science Foundation grant for developing an integrated undergraduate GIScience curriculum for five universities of the University of Maine System.
- Assistant Professors of Biology, Ellen Hostert and Gerry Zegers, contracted with National Marine Fisheries for Atlantic Salmon adult stocking related genetic testing in the Machias, Dennys, and St. Croix rivers.
- The Department of Education awarded a three year CCAMPIS program grant to support the participation of low-income parents in postsecondary education through the provision of campus-based childcare services at UMM's Early Education and Childcare Center.
- Total grants and contracts awarded in FY2002 were \$144 thousand.
- Total grants and contracts expenditures for FY2002 were \$48 thousand.

UNIVERSITY OF SOUTHERN MAINE

- With funding from the Robert Noyce Foundation and the Arthur Vining Davis Foundation, the College of Education & Human Development is helping six Maine schools develop locally-based accountability systems that measure student achievement of the Maine Learning Results and assess and improve classroom instruction.
- The College of Nursing and Health Professions received funding from the National Youth Sports Program, the USDA Summer Food Service Program, and the Stephen and Tabitha King Foundation to conduct a summer program for economically disadvantaged children, emphasizing lifetime sport activities and education on nutrition and the dangers of substance abuse.
- Funded by the U.S Environmental Protection Agency, the New England Environmental Finance Center at the Muskie Center at the Muskie School of Public Service is one of a group of nine university-based centers working to find financially successful approaches to environmental improvements and to promote innovative solutions to land conservation and development issues.
- With funding from the Small Business Administration and the State of Maine, the School of Business provides guidance and training to small businesses, assists entrepreneurs with business start-up and expansion, and works to increase economic development and technological advancement.

UNIVERSITY HIGHLIGHTS

(Continued)

- The American Occupational Therapy Foundation chose Lewiston-Auburn College as one of five sites for a mentorship program designed to evaluate curriculum and to develop a community of scholars involved in course review and the improvement of graduate-level education.
- Through an Act of Congress, the U.S. Department of Education provided funding for the School of Law to host a mock congressional hearing as part of a program promoting civic competence and involvement among elementary, middle and high school students.
- In the College of Arts & Sciences, the National Institutes of Health funded research on the metamorphosis of the insect nervous system and its role as a model to understand how hormones control animal development, especially in the formation of large, compound eyes and the associated optic sensory regions of the brain.
- With funding from the Maine Space Grant Consortium, the School of Applied Science, Engineering & Technology is developing a capacity planning tool consisting of simulation and analytic models designed to assess the performance and dependability of applications running on parallel computing systems.
- Women's Studies received funding from the National Center on Adult Learning to study the relationship between higher education and economic self-sufficiency and to provide financial assistance to women moving from welfare to post-secondary education and then to the workplace.
- Total grants and contracts awarded in FY2002 amounted to \$33.6 million.
- Total grants and contracts expenditures for FY2002 were \$37.3 million

UNIVERSITY OF MAINE AT PRESQUE ISLE

- Science and Science Education faculty received \$87,374 in Eisenhower Funds from the Maine Math Science Alliance for "Earth and Beyond," a summer academy for teachers.
- Two TRIO program grants for Student Support Services and Upward Bound received a total of \$608,966 from the U.S. Department of Education to support higher education opportunities for students of low-income and first-time college-goers.
- Theodore Shields, Professor of Science Education, received \$43,120 from the Maine Math Science Consortium for a recruitment and teacher excellence program for math and science teachers.
- UMPI, as a member of the Central Aroostook Council on Education, a consortium of seven public school districts in northern Maine, received \$98,561 in grants for in-service and pre-service teachers.

UNIVERSITY HIGHLIGHTS

(Continued)

- As a member of a Bachelor of Social Work education consortium, the UMPI BSW program received \$20,358 for a second year of funding through the Department of Health and Human Services/Administration on Children, Youth and Families.
- Total grants and contracts awarded in FY2002 amounted to \$934 thousand.
- Total grants and contracts expenditures for FY2002 were \$874 thousand.

SYSTEM-WIDE SERVICES

- University College, part of the University of Maine System, received a grant from the Department of Education for continued implementation of Maine's statewide assistive project, MaineCITE (Consumer Information and Technology Training Exchange). This federally funded effort, authorized under the Assistive Technology Act of 1998 and funded by the National Institute on Disability and Rehabilitation Research is an on going collaborative initiative between the University and the Department to make assistive and universally designed technologies more available to children and adults who have disabilities.
- MainePOINT is funded by the Maine Department of Education and the Rochester Institute of Technology (RIT). The Maine Department of Education funds deliver American Sign Language (ASL) over the University Network to Maine high school students. In FY2002, MainePOINT served ten participating schools in the project. MainePOINT staff conducted technology training for staff at school sites and provided workshops to coordinators to improve services to people with disabilities. The focus of the work under the RIT grant is to improve services for deaf and hard of hearing students at the postsecondary level.
- Total grants and contracts awarded in FY2002 amounted to \$207 thousand.
- Total grants and contracts expenditures for FY2002 were \$2.2 million.