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BACKGROUND

Maine Technology Institute (MTI) promotes and supports research and development (R & D) leading to the commercialization of new products and services in the State's seven technology intensive sectors (5MRSA, ch. 407, Appendix A):

- Advanced Technologies for Forestry and Agriculture;
- Aquaculture and Marine Technology;
- Biotechnology;
- Composites Materials Technology;
- Environmental Technology;
- Information Technology;
- Precision Manufacturing Technology.

MTI addresses a specific, critical need in the State's economic development strategy, providing financial support to Maine businesses for very early product or service development, at a time when other sources of financing are difficult to come by.

MTI is a private non-profit 501(c)3 organization, established for public and charitable purposes (By-Laws, Appendix B). A private-sector led Board of Directors governs MTI (Appendix C).

MTI works with each targeted technology sector through volunteer subsidiary boards whose members participate directly in proposal evaluation and program development (Appendix D).

MTI accomplishes its purpose by:

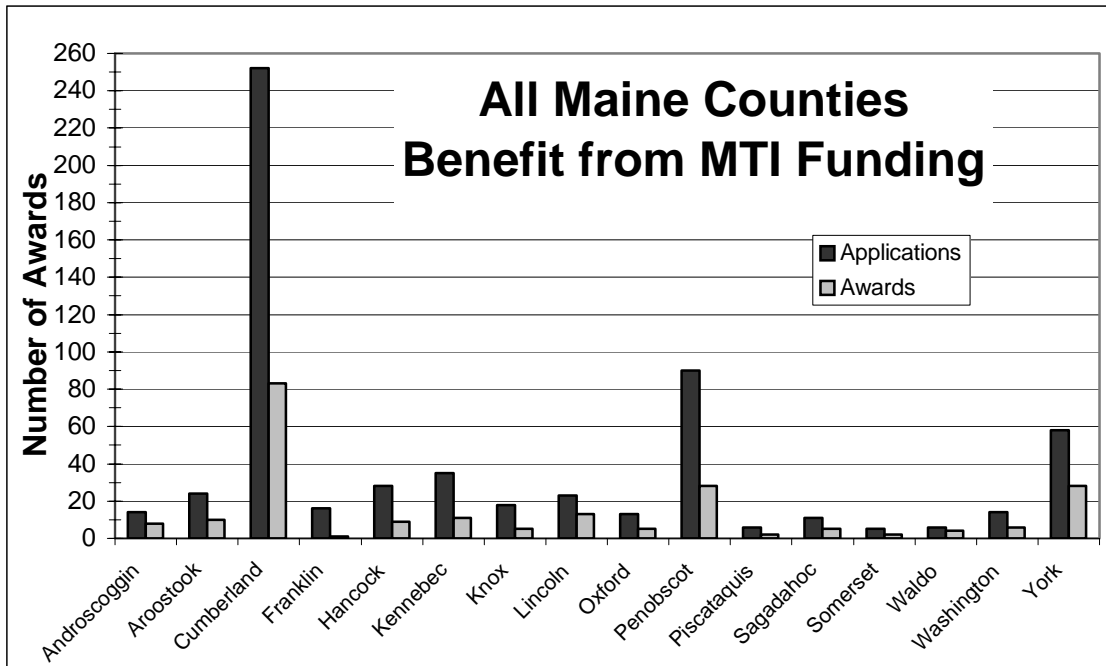
- Making **direct investments** in Maine-based companies, nonprofit laboratories and other business entities for activities that help advance new products and services toward the market;
- Establishing and maintaining a program that provides **technical assistance and information** to increase the amount of funding that Maine companies receive from the federal Small Business Innovation Research (SBIR) Award program;
- **Partnering** with other organizations with shared goals and missions to maximize awareness, effectiveness and statewide presence.

MTI MAKES DIRECT INVESTMENTS

MTI makes direct investments in R&D leading to commercialization through three award programs. Approval for funding is based on critical evaluation of the proposed project’s merit and potential benefit to Maine’s economy. All MTI funded projects require a minimum 1:1 cash match.

In FY02 MTI approved funding for 127 projects totaling nearly \$3,527,993 in funding. Since inception in 1999, 228 projects have been approved for funding by MTI, totaling nearly \$11,000,000. Combined with match invested by the award recipients, MTI is supporting over \$27,000,000 in R&D investments in Maine!

In 2002

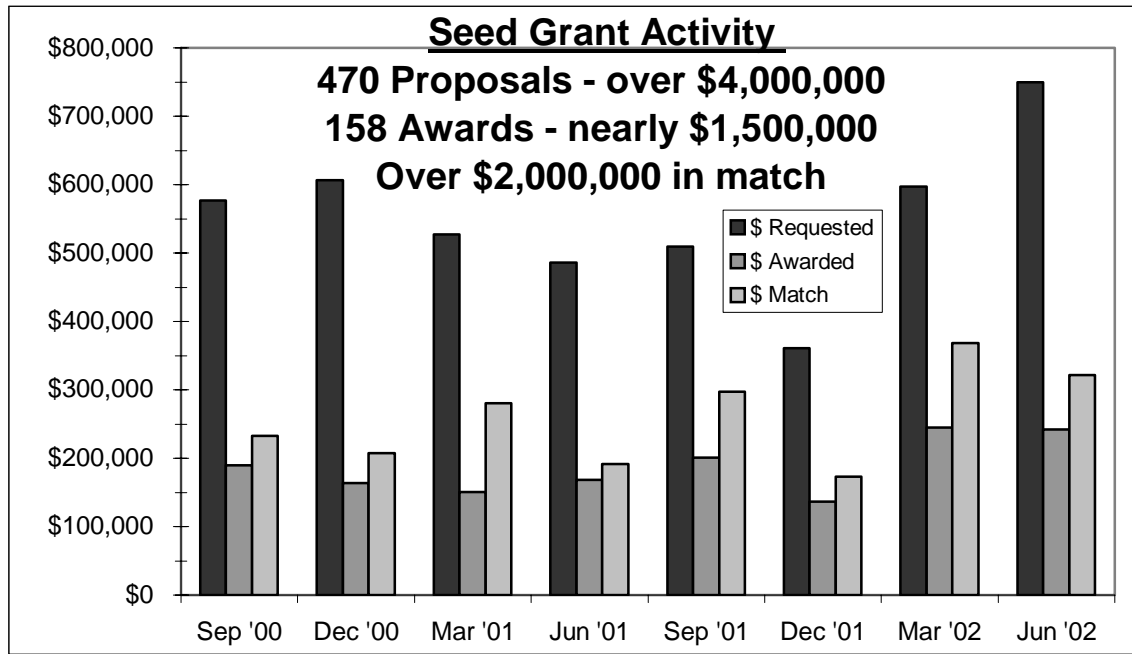


Seed Grant Awards

Seed Grants of up to \$10,000 each help fund small, specific research and development projects leading to commercialization, technical or consulting assistance for commercialization proposal preparation, market analysis, intellectual property work or other activity leading to commercialization (Request For Proposals, and sample agreement, Appendix E). The average number of proposals received has been 52 per round, with an average of 20 grants awarded per round.

In FY02 MTI approved 87 projects totaling \$825,353 and matched by over \$830,000 by the recipients. Since the first round in September 2000, 470 applications have been received, requesting over \$4,400,000. 158 proposals have been funded, totaling over \$1,525,000, which is matched by over \$2,000,000 in additional R&D investment from the funded companies (List of Seed Grant Recipients, Appendix F).

In 2002

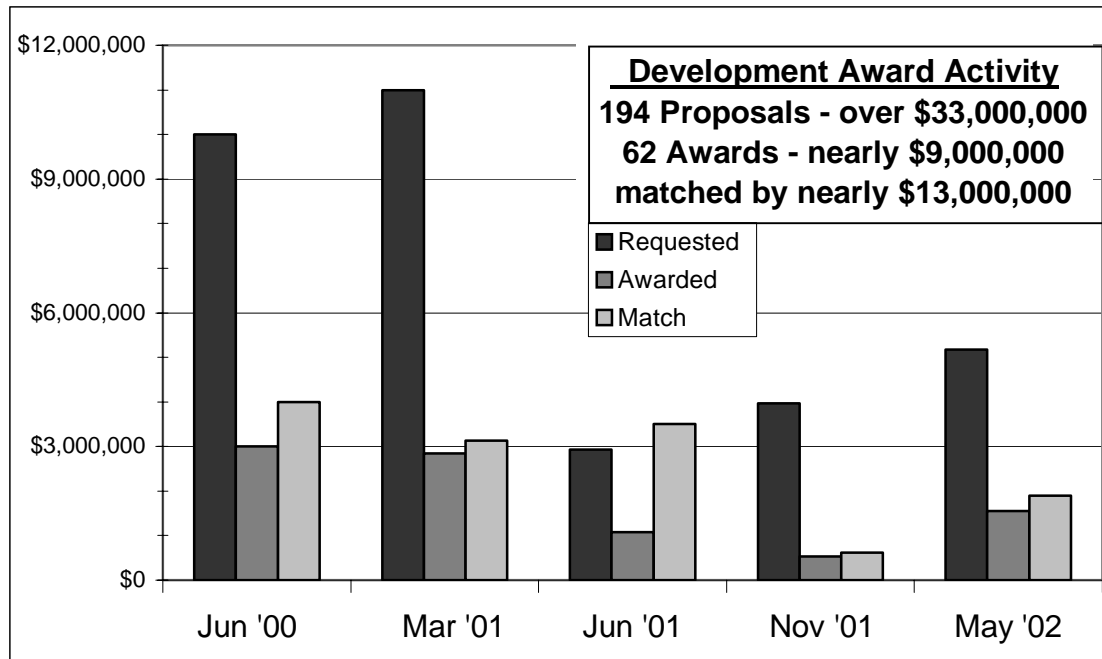


Due to the volume and interest in the Seed Grant program, Seed Grants will be offered six times per year starting in FY03!

Development Awards

Development awards for up to \$500,000 fund comprehensive R&D projects leading to commercialization (Request for Proposals and agreement, Appendix G). Repayment of up to two times the amount of the award is required when the new product or service developed with MTI funding is commercialized. In FY02, one company, Thistle Marine, began its royalty repayment to MTI.

In FY02, 35 projects totaling \$2,082,000 in MTI funding were approved, and are matched by over \$2,500,000 of R & D investment by the recipients. Since inception, MTI has approved 62 projects for funding, out of 194 applications received, under the Development Award and Performance Grant program (Appendix H). This represents a commitment of nearly \$9,000,000, matched by nearly \$13,000,000 in investment from the funded companies!



Cluster Enhancement

These awards are made for collaborative, comprehensive projects that address specific needs within or among the targeted industry sectors. Up to \$500,000 are available for projects that will stimulate and support the formation and growth of technology businesses and their infrastructure. To emphasize the importance of the collaborative nature of these efforts, a 2:1 match is required for every dollar over \$50,000 that is awarded. (Current Request for Proposals and sample grant agreement, Appendix I).

In 2002, five Cluster Enhancement projects, totaling \$620,640, were funded by MTI. In two years, eight projects have been funded (list of recipients, Appendix J) for nearly \$500,000, matched by over \$1,000,000 of investment by the recipients.

INDEPENDENT EVALUATION

As required by 5MRSA §15302 MTI must provide an independent evaluation of its performance. To meet this requirement, MTI entered into contract with the University of Southern Maine (USM), Muskie School of Public Policy and Center for Business and Economic Research, to provide an independent evaluation of the performance of MTI, as required in 5MRSA §15302 (contract, Appendix P). The evaluation will include measures of firm survival, new product development and process innovations, jobs created, and other measures. USM will then report on MTI’s role in stimulating economic growth in Maine’s targeted technology sectors. The report on MTI’s impact on Maine’s economy will be presented to the legislative committee with jurisdiction over MTI every other year, beginning in January 2003.

To provide the data to evaluate the effect of MTI on Maine's economy, USM, in consultation with MTI, developed a survey instrument whereby recipients of MTI funding will be surveyed each year for 5 years following project completion (survey Appendix Q).

The survey was sent to the 69 recipients who had completed their MTI-funded projects through June 2002. Results will be analyzed by USM; an evaluation will be presented in January 2003.

The data collected by USM also will be given, in aggregate form, to the Maine Science and Technology Foundation (MSTF) for use in their evaluation of the State's R&D investments.

MTI PROVIDES TECHNICAL ASSISTANCE AND TRAINING

MTI maintains a technical assistance, information and outreach program supporting the federal SBIR (Small Business Innovation Research) and, the related, STTR (Small Business Technology Transfer) award programs. MTI's efforts will increase the amount of federal funding received by Maine companies for innovative research and development, and increase the successful commercialization of products or services developed with federal and MTI funding.

Maine's SBIR/STTR network operates with state and federal funding. MTI and the Market Development Center (MDC) partner to provide comprehensive support and assistance for the SBIR and STTR programs. MDC utilizes a \$50,000 Rural Outreach Program (ROP) matching grant from the US Small Business Administration (SBA) to promote SBIR/STTR awareness in Maine's rural communities. MTI invests approximately \$100,000 per year to provide technical assistance and outreach for the SBIR/STTR programs (SBIR contracts, Appendix K). Additionally, MTI received a \$150,000 Federal and State Technology Partnership (FAST) matching grant from the SBA to stimulate technology commercialization by small businesses (FAST proposal and contract, Appendix L).

Technical Assistance and Training are beginning to pay off:

- Training/Promotion: 16 workshops, attended by over 250 Maine businesses or individuals.
- Awareness: over 280 small businesses statewide were contacted and informed about the SBIR program.
- Technical Assistance: over 100 Maine companies were provided in-depth guidance and assistance at no cost for preparation of SBIR proposals, or other proposals for federal funding of R&D.

- Financial Assistance: MTI estimates that approximately 25%, about 40, of its Seed Grants were used to help Maine businesses pay for expert SBIR proposal assistance.
- Maine companies received 13 SBIR awards totaling over \$3,000,000 in FY02! This represents a 375% increase over the \$1.2 million annual average received by Maine companies for the previous 5 years.

The FAST grant allows MTI to expand these activities and provide intensive training to increase the likelihood of commercialization success by MTI- and SBIR- funded companies. Through its federal grant, MTI hired a program manager who has worked with the FAST team to develop the 10-module, 10-week workshop focused on commercialization of innovation. Workshops will be open to invited companies selected by the FAST program partners, and will have had some success in R&D, such as winning an MTI or SBIR award. Work also has begun to establish the Maine Tech Tracker network--one-on-one mentors for each workshop participant. All FAST program partners are recruiting experienced business professionals for the Tech Tracker network (FAST program semi-annual report, Appendix M). Workshops will commence in the fall of 2002.

MTI has applied for a second FAST grant from the SBA (FAST proposal, Appendix N) to continue its commercialization workshops and further develop the Maine Tech Tracker network. Announcement of winners is expected in fall 2002.

MTI ACTIVELY ENGAGES IN OUTREACH AND PUBLIC RELATIONS

It is important that all MTI programs be available and accessible to all entrepreneurs and businesses throughout the State of Maine. In the past year, MTI has promoted its programs in a variety of ways, including:

- MTI prepares **statewide press releases** about MTI and its programs, as well as articles highlighting companies who have received MTI funding. MTI sends statewide press releases after each round of awards. (See Appendix O for a sampling of articles about MTI).
- MTI established **e-mail distribution list** of over 1,200 individuals, companies, and organizations. Sent to our database about every three weeks, the “MTI News” includes special updates, upcoming award deadlines, announcements of award recipients, upcoming workshops and seminars, and other pertinent announcements.
- A quarterly **printed newsletter** was sent to Maine’s legislators, economic service providers, the Governor’s office, and various trade associations around the state.

- **Open houses** take place quarterly. Approximately 25-40 persons attend each open house, and include MTI staff, economic development service providers, future applicants, technology board members, and past awardees.
- **Proposal preparation workshops** were presented by MTI at no cost and open to the general public. These workshops, publicized in the press and through the economic development district organizations, are held each spring and fall. In October 2001, workshops were held in South Portland, Augusta, Bangor, and Limestone. A total of 100 persons attended these four sessions. Four additional workshops (held in Fairfield, Lewiston, Machias, and Wells) were presented in April 2002, and had over 120 participants.
- The Second Annual **MTI Mixer** was held on June 10th at the Augusta Civic Center. All MTI awardees, applicants, MTI Board members, committee members of the legislature, and other interested parties were invited to attend this celebratory event, featuring two years of MTI awards. The response again this year was overwhelmingly positive, with over 190 people attending. The Mixer featured 12 presentations from Development Awardees reporting their progress on MTI-funded projects. MTI Seed Grant recipients also displayed information about their MTI-funded projects at the Mixer.
- Information regarding MTI is available on our **Web site**, <http://www.mainetechnology.org/>. The site continues to feature a “Directory of Professionals”, where businesses that provide services to the business community (grant writers, consultants, marketing/PR firms, etc.) can post a listing at no charge. Most importantly, the MTI web site contains all of the information necessary to apply for funding (the request for proposals, necessary forms, deadline dates, etc.)
- In the past year, MTI has attended, sponsored, or presented at the following **sector-related events**: Maine Wood Products Association Annual Meeting, the Governor’s Economic Development Conference, Maine International Trade Day, Northeastern Forest Products Equipment Exposition, Maine Space Grant Consortium Biotech/Nanotech workshop, SBIR Focus Session, Composites Fabricators Conference, the E2 Technology Expo, New England E-Business Conference, the Old Port Technology Center Annual Celebration and Show, the Maine Agricultural Trade Show, the MESDA Annual Meeting, CEI Annual Meeting, local CapitalVenue events and a variety of other shows and workshops.

MTI IS ABOUT PARTNERSHIPS

MTI manages with a lean program staff. We, therefore, capitalize on strategic partnerships that complement and expand MTI’s efforts. The value of these partnerships was recognized by the SBA when the MTI FAST grant proposal, prepared and supported with match by MTI and all of our partners, was one of the highest ranking proposals for the first year of the FAST program. Only by working effectively with our partners will MTI realize its full potential by reaching companies across all of Maine. MTI also recognizes that providing companies with early stage R&D funding is a critical

component for technology-based economic development. Funding alone is not enough to realize the potential economic benefits through the growth and success of the companies and funded technologies. By partnering with organizations throughout the State, MTI funds are leveraged with other State support to provide a full range of business services, and increase the likelihood for success for each company that will ultimately translate into economic benefit for Maine.

Applied Technology Development Centers (ATDC): MTI entered into a memorandum of understanding (MOU) with the ATDC's, to formalize our intent to cooperate and collaborate (ATDC MOU, Appendix R).

Maine Manufacturing Extension Partnership (MEP): MTI continued its effective partnership with MEP (MEP agreement, Appendix S). By serving as MTI's fiscal agent, MTI-funded companies receive award payments usually within 24 hours of authorization by MTI. Additionally, MEP employs two full-time staff that works only with MTI-funded (or potentially funded) companies. In FY02, 53% of MTI-funded companies were engaged with MEP field managers; 95% of this service provided at no cost to the company. MTI funds match MEP federal funding, so that MEP received nearly \$2,000,000 in federal funding due to our partnership. MEP reports detail the support that MEP provides to MTI and MTI-funded companies (MEP report, Appendix T).

Maine Patent Program (MPP): MTI entered an MOU with MPP whereby MTI and MPP work together closely to ensure that efforts and support are not duplicated (MPP MOU, Appendix U). While intellectual property work continues to be eligible for MTI funding through its competitive award programs, no funds for legal services are released until the recipient has met with the MPP and MPP assures MTI that the projected costs and activities are justified. Through this process, MTI refers all requests for legal assistance to MPP and MPP helps new entrepreneurs understand the legal process so their legal fees are appropriate. To date, MPP has recorded more than 25 MTI-funded companies as MPP clients.

Market Development Center (MDC): As discussed above, MTI and MDC work together to provide information, outreach and technical assistance for the federal SBIR program.

Small Business Development Centers (SBDC): In addition to working informally with SBDC counselors throughout the State to ensure that they and, therefore their clients, are informed about MTI, MTI entered into a contractual partnership with SBDC (SBDC contract, Appendix V). Starting FY03, MTI and SBDC will cost-share an SBDC counselor focusing on technology-based businesses.

Small Enterprise Growth Board (SEGB): While no formal agreement exists between SEGB and MTI, the MTI Director serves on SEGB, as the Commissioner of DECD's designee. This direct interaction of Maine's two early-stage funding organizations ensures that there is no duplication of service, and that MTI is knowledgeable and informed of SEGB activities so that MTI-funded companies are referred for follow-on

funding to SEGB when venture capital funding is appropriate. Additionally, the SEGB fund manager, provides financial evaluation services for MTI Development Award review at no cost. To date, four MTI-funded companies have received equity investments from SEGB.

University of Maine System (UMaine): It is important to recognize that MTI funding focuses on the D of R&D. Therefore, it makes sense that University-led academic research projects are not funded by MTI. However, the State's University system is an integral part of a successful, productive R&D infrastructure. UMaine's Director of the Department for Industrial Cooperation has been an active participant on the MTI Board of Director's, as the Chancellor's designee. Four University-led projects have been approved for funding when strong support for private sector commercialization was included with the proposal. Additionally, UMaine has direct interaction with 90 of the MTI awards, or about 40% of all funded projects, including nearly all of the Cluster Enhancement Awards (UMaine involvement, Appendix W). These relationships include direct technical assistance, informal advising, commercialization of University technologies, graduate student support and assistance with proposal preparation.

MTI STAFF

MTI continues to retain and recruit highly qualified individuals from the private sector who are committed to MTI's purpose, and have the experience to help ensure MTI's success. (Abbreviated biographies, Appendix X) MTI staff function to implement the policies and procedures developed by the Board (Job Descriptions, Appendix Y).

MTI AND FREEDOM OF ACCESS LAWS

In 2002, the Maine State Legislature adopted, "An Act to Clarify the Application of the Freedom of Access Laws to Certain Proceedings and Records of the Maine Technology Institute." This law will take effect in July 2002, following the end of the regular session (Chapter 562, L.D. 1914, Appendix Z).

Balancing the need and right for public access to publically funded activities with the sensitive and confidential nature of business operations and plans, this bill modifies MTI's enabling legislation to clarify that MTI is subject to Maine's Freedom of Access (FOA) laws, with certain, substantial exemptions. While the proceedings of the Board and records of MTI are public for the purposes of FOA, MTI legally designates many documents as confidential, including:

- Award applications or proposals;
- Review analyses;
- Proprietary, trade secret or commercial information;
- Financial information;
- Credit history information.

Being subject to FOA ensures that the public has access to:

- Names and addresses of recipients or applicants;
- Amounts and type of awards;
- General descriptions of projects;
- Economic impacts;
- MTI policies, operations and procedures.

To ensure State accountability for MTI programs and expenditures, this bill also requires that MTI include audited financial reports each year, as part of its Annual Report (as has been our practice).

FINANCIAL INFORMATION

MTI's appropriation fell to \$5,313,000 in FY02, due to a \$1,000,000 deappropriation to the General Fund to help make up the budget shortfall. MTI earned approximately \$200,000 in interest. Major expenses included approximately \$4,700,000 in competitive awards and special programs and approximately \$420,000 in administration expense. Audited financial statements are attached as Appendix AA.

OTHER R&D FUNDING PROGRAMS

MAINE BIOMEDICAL RESEARCH PROGRAM

In 2002, MTI became the administrator for the Maine Biomedical Research Program (MBRP) and Maine Marine Research Fund (MMRF) (Authorization & Grant Agreement, Appendix BB). The MBRP was established to promote economic development and jobs in the State by making state investments in nonprofit biomedical research organizations with successful results in attracting biomedical research funds from specified grant sources, and to provide incentives for small eligible institutions to grow, as described in 5 MRSA §13103 (See Appendix CC). The MBRP Board was established to administer the MBRP fund, established to provide funding for infrastructure and capital equipment at Maine's nonprofit biomedical research institutions. In FY02, the MBRP was funded with a \$4,000,000 bond issue and \$5,000,000 from the General Fund.

MTI entered into a contract with the MBRP Board to provide assistance in fulfilling the MBRP Board's duties as the Board may require, pursuant to 5 §15303(6-B). The contract requires that MTI establish and maintain a MBRP bank account, authorize and administer grant payments for approved purposes, and hire a grants administrator to carry out its purposes (Contract, Appendix DD).

It is anticipated that the MBRP Board will develop the Request for Proposals, accept and oversee the review of proposals, and make final grant awards of up to \$9,000,000 early in FY03. The MTI and its grants administrator will assist in this process as required.

MAINE MARINE RESEARCH FUND

In 2002, the State of Maine approved a \$1,000,000 bond issue for funding the Maine Marine Research Fund (MMRF). The MMRF was created to support marine research, and create jobs in Maine, by eligible Maine private non-profit institutions, state government and quasi-governmental agencies and academic institutions, excluding the University of Maine System, engaged in marine research.

As required by statute, MTI established a grant program for the award of MMRF grants for non-profit laboratories doing marine research in Maine. MTI entered into agreement with the State's Research Capacity Committee (RCC) to establish and implement a Request for Proposals and review process for the MMRF (MMRF Request for Proposal, Appendix EE). Following the recommendation and past experience of the RCC, MTI entered into a service contract with the American Association for the Advancement of Science (AAAS) to provide expert critical review of proposals submitted for funding under the MMRF (Service Contract, Appendix FF). The RCC will further review the proposals for benefit to the state of Maine, and a final funding recommendation will be brought to the MTI Board of Directors for approval. It is anticipated that the MMRF program will be completed early in FY03.