FY 2012-2013 PLAN AND BUDGET
FOR THE EXPENDITURE OF REVENUES AVAILABLE FROM THE
BOARD OF REGENTS SUPPORT FUND
WITH AN OVERVIEW OF RESULTS OBTAINED

SUBMITTED TO THE
GOVERNOR AND THE LEGISLATURE
IN ACCORDANCE WITH THE CONSTITUTIONAL PROVISIONS OF
ARTICLE VII, SECTION 10.1

ADOPTED
December 7, 2011

BY THE
BOARD OF REGENTS
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OVERVIEW OF RESULTS
Investment of Board of Regents Support Fund Money in Higher Education
1987 - 2011

♦ $1,151,055,084 GENERATED IN EXTERNAL FUNDS
  o $804,555,084 in new external funding (through 6/30/2011) from Federal, private and other non-Support Fund sources
  o $346,500,000 in external contributions for Endowed Chairs, Endowed Professorships, and First-Generation Endowed Undergraduate Scholarships

♦ 2,875 EXTERNAL AWARDS from Federal, private and other non-Support Fund sources

♦ 304 ENDOWED CHAIRS FOR EMINENT SCHOLARS established at 26 campuses
  o Two hundred sixty-four (264) $1 million chairs
  o Forty (40) $2 million chairs
  o Includes ninety-nine (99) chairs funded by special legislative appropriation

♦ 2,332 $100,000 PROFESSORSHIP SLOTS endowed at 39 campuses

♦ 1,429 SUPERIOR GRADUATE FELLOWSHIPS supported at 14 campuses

♦ 1:1.60 RATE OF RETURN for all projects funded since 1987
  o For every Support Fund dollar invested, $1.60 has been returned to the State during the life of the awards

♦ 197 PATENTS ISSUED, 183 PATENT APPLICATIONS PENDING during the life of the awards

♦ 9,805 PUBLICATIONS in peer-reviewed journals, scholarly monographs, and conference proceedings

♦ EXPANDED MULTI-CAMPUS COLLABORATION increases competitiveness for Federal R&D money
PLAN AND BUDGET
FOR THE EXPENDITURE OF REVENUES AVAILABLE FROM
THE BOARD OF REGENTS SUPPORT FUND
FISCAL YEAR 2012-2013

PREFACE

A sound educational system at all levels and in all disciplines which is well-supported on a consistent basis is crucial to achieving the two goals established in the Constitutional amendment which created the Louisiana Education Quality Support Fund (hereinafter referred to as Board of Regents Support Fund): enhancing academic programs and units and promoting economic development. The four programs of the Board of Regents Support Fund (BoRSF) pursue separate but related strategies in the quest to achieve these goals. All disciplines are eligible to compete in the Graduate Fellows, Enhancement, and Endowed Chairs programs, thus reflecting the Board's broad and long-range commitment to building and maintaining strength across all disciplines and, in so doing, to promote economic development through the enhancement of higher education in general. The Research and Development (R&D) Program has primarily supported those science and technology disciplines in which basic and applied research generate near- and long-term economic development and diversification in Louisiana, as well as contribute to fundamental knowledge.

1. INTRODUCTION

According to Article VII, Section 10.1 of the Louisiana Constitution, at least sixty days prior to each regular session of the Legislature the Board of Regents must submit to the Governor and the Legislature a proposed plan and budget for the expenditure, during the coming fiscal year, of money available to higher education from the Board of Regents Support Fund. Higher education's portion of these funds may be spent for “any or all” of the following purposes: (1) endowment of chairs for eminent scholars (hereinafter referred to as the Endowed Chairs Program); (2) recruitment of superior graduate students (the Graduate Fellows Program, including Traditional Graduate Fellows, Graduate Fellowships for Teachers, and the BoR/SREB Doctoral Scholars Program); (3) carefully defined research efforts (the Research and Development Program, including the Research Competitiveness Subprogram [RCS], the Industrial Ties Research Subprogram [ITRS], and the Awards to Louisiana Artists and Scholars [ATLAS] Subprogram); and (4) enhancement of the quality of academic, research, or agricultural departments or units within a university (the Enhancement Program, including Traditional Enhancement, Undergraduate Enhancement, the Enhancement Program for Two-Year Institutions, the Post-Katrina Support Fund Initiative, the Federal Matching Grants Program, the Louisiana Systemic Initiatives Program [LaSIP], the Endowed Professorships Program, and the Endowed Undergraduate Scholarships Program).

1.1 BOARD OF REGENTS SUPPORT FUND REVENUE PROJECTION, FY 2012-13

The base revenue amount used in the FY 2012-13 BoRSF Plan and Budget is $27,500,000. Projections from the State Treasurer and Revenue Estimating Conference, as well as current and historic trends, Board policies and interpretations of the Board’s Finance Section were considered in deriving this base funding level.

1.2 BUDGET RATIONALE AND PREAMBLE

In deliberations about the Board of Regents Support Fund Plan and Budget for FY 2012-13, the Board recognized several issues requiring long-range strategic planning:

- steadily increasing demand for Support Fund resources under all four program components with concomitant increases in proposal quality and outstanding results achieved, including the leveraging during the grant period of $1.60 in non-State money for every Support Fund dollar awarded;
Board of Regents Support Fund
Plan and Budget, FY 2012-13
Page 2

- the State’s expanding emphasis on economic development and diversification, particularly related to 21st-century innovation industries;

- greater emphasis on strategic investment in research through the Fostering Innovation Through Research in Science and Technology for Louisiana (FIRST Louisiana) statewide plan as well as the 2011 Board of Regents Master Plan;

- the need for improved data collection and enhanced evaluation to better inform decision making; and

- attention, especially during a period of continuing budgetary challenges, to constitutional restrictions on supplanting State appropriations with Support Fund dollars.

It is vital that strength be maintained in and across all four interrelated Support Fund components. While the Board lauds the private philanthropy reflected in applications for endowed chairs, professorships, and undergraduate scholarships, it is also mindful that significant cuts in budgets for Enhancement, R&D and Recruitment of Superior Graduate Students would jeopardize the viability of these components and hence impair the overall quality of the Support Fund programs. Endowed chairholders and professors must have basic infrastructural equipment, supportive cutting-edge research across departments and units, and top-quality graduate students in order to achieve the results expected of them, making it imperative to balance matching funds for endowments with monies for competitive grants in the Enhancement, R&D and Graduate Fellows programs.

1.3 ADOPTION OF FY 2012-13 PLAN AND BUDGET

The following Plan and Budget for FY 2012-13 were adopted by the Board of Regents at its meeting of December 7, 2011.

2. LONG-RANGE PLANNING AND EVALUATION

2.1 LONG-RANGE PLANNING

In FY 1987-88 the Board of Regents determined that, in addition to the Constitutionally required annual plan and budget which set forth short-term programmatic goals and fiscal objectives, long-range strategic plans were required to accomplish the interrelated purposes and goals of the Support Fund. Short-term activities outlined in the annual plans and budgets could then be shaped by these long-term goals.

The first long-range plan evolved from a carefully researched white paper prepared by the Louisiana Stimulus for Excellence in Research (LaSER) Committee. Titled Strategic Plan for Higher Education’s Portion of the Louisiana Education Quality Support Fund, it was adopted in 1988. Cognizant of changes in economic conditions which affected academic issues, the Board in 1993 adopted a revised plan: Board of Regents Support Fund Long-Range Strategic Plan for Higher Education. It maintained the central themes and strategies of the earlier plan, adjusted to changing conditions and lessons learned. In 1999 the Board adopted a third revised plan to guide the Support Fund through FY 2005-06. In the wake of Hurricanes Katrina and Rita, the Board extended that Strategic Plan through FY 2006-07, and at its meeting of June 22, 2006 adopted the FY 2007-08 through...
FY 2013-14 Strategic Plan. This current Plan continues the approach of balancing continuity based on effectiveness, with revisions reflecting lessons learned.\(^1\)

### 2.2 LONG-RANGE EVALUATION

From the first Strategic Plan in 1988, strategies have been in place for assessment of the Board of Regents Support Fund to determine its long-range impacts, as well as levels of success attained by individual funded projects and the programs through which funding is awarded. In the early years, program and project success was evaluated annually by the BoRSF Planning Committee, using programmatic assessments provided by external reviewers and annual and/or final reports submitted by project directors. Beginning in FY 1990-91, the Board implemented a systematic evaluation process based on four elements: (1) collection of background information; (2) submission of annual and/or final reports by project directors; (3) submission of additional information one year after project termination; and (4) an evaluation by out-of-state experts of individual projects as well as overall programs. In the spring of 1994 such an evaluation was conducted by a distinguished panel of out-of-state experts. At that time, the panel concluded that the BoRSF was effectively and efficiently administered, was addressing some of the State’s economic development and higher education infrastructure needs, and had been successful in attracting Federal funds to the State.\(^2\)

As Support Fund operations continued in the 1990s, the need for a more comprehensive and regular assessment of programmatic benefits became evident. Accordingly, the Board conducted a thorough revision of the long-range evaluation system, adopting a cyclical process by which Support Fund programs could be assessed. Though the process began during the summer and fall of 1998 with the comprehensive review of the Endowed Chairs Program, the cyclical approach was codified in the 1999 BoRSF Strategic Plan. This first Endowed Chairs review and subsequent programmatic evaluations yielded significant benefits to Support Fund components:

- The 1998 Endowed Chairs review culminated in the March 1999 adoption of the Board of Regents Endowed Chairs Policy, which significantly strengthened a program with already impressive accomplishments.

- The FY 1999-2000 comprehensive review of the Endowed Professorships Program led to the adoption, in December 2000, of the Board of Regents Endowed Professorships Policy, providing for the improvement of that program.

- The FY 2000-01 review of the Recruitment of Superior Graduate Students Program led to the January 2002 adoption of recommendations designed to elevate the program’s accomplishments.

- The FY 2001-02 review of the Research and Development Program yielded a powerful endorsement of the program’s success as well as recommendations for improvement.

In each instance, insights from programmatic reviews led to the adoption of measures that further strengthened these Support Fund components and thus maximized their positive impact on Louisiana higher education.

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2. The panel report is available in the Board’s office.
The evaluation cycle was begun anew during FY 2008-09, as a distinguished team of experts again comprehensively assessed the Endowed Chairs for Eminent Scholars Program. This review resulted in policy and program revisions implemented during the 2009-10 review process, which are already yielding benefits. The R&D Program was comprehensively evaluated during 2011-12 and resulting recommendations are under consideration. Other Support Fund programs, beginning with Graduate Fellows, will be assessed in future years, with all components subject to comprehensive review on a rotating basis.

3. AN OVERVIEW OF RESULTS OBTAINED

Significant benefits are accruing to the State as a result of the Support Fund investment in higher education. The results reported herein are even more impressive when one understands that: (1) realization of the full benefit of investment in higher education is a long-term proposition, and evolving results become manifest only after a period of many years; (2) reported results include only benefits derived during the life of the grants awarded, and do not attempt to measure the many benefits which accrue after the conclusion of relatively brief Support Fund contracts; and (3) no specific benefits beyond the initial private match are claimed as a result of the Endowed Chairs for Eminent Scholars Program, and no specific external grants are attributed to the Recruitment for Superior Graduate Students program. Programmatic evaluations have led the Board to adopt reporting mechanisms that do, however, enable measurement of external funding success across BoRSF components.

Annual and/or final reports have been used since the inception of the BoRSF to monitor the progress of all projects. A few of the most significant achievements are described in the following sections.

3.1 STATEWIDE RESULTS

* **$1,151,055,084 in external funds have been generated** from Federal, private, and industry sources as a result of the Board of Regents Support Fund’s investment in higher education, thereby significantly increasing the total monies available for higher education. This represents a return of **$1.60 for every Support Fund dollar invested** in higher education since the inception of the programs. The figure reflects only external funds generated during the life of the awards--additional revenues are and will continue to be generated after expiration of the awards.

* Increased collaboration and coordination of efforts between the Board of Regents and the Board of Elementary and Secondary Education (BESE), as evidenced by the joint funding of the Louisiana Systemic Initiatives Program (LaSIP) to reform K-12 and undergraduate instruction in science and mathematics and the efforts of the two boards to improve education through the Blue Ribbon Commission on Teacher Quality. (See Attachment I for descriptions of these projects.) Those collaborative efforts also contributed to the funding of Louisiana Gaining Early Awareness and Readiness for Undergraduate Programs (LA GEAR UP) by the U.S. Department of Education for $15 million from 2002 through 2008. LA GEAR UP received a new $18 million award in 2008, which extends through 2014.

* **2,875 grants and/or contracts have been awarded** to Louisiana universities from external funding agencies directly as a result of BoRSF investments.

* An analysis performed by the Louisiana Department of Economic Development concluded that, for all completed Industrial Ties Research Subprogram projects, **48% had either been successfully**
commercialized or were in the process of commercialization. Forty-five percent (45%) of projects that were successfully commercialized are protected by a patent and/or license. Additionally, almost 60% of all completed projects reported moderate to significant industrial interaction.

* Increased institutional collaboration has resulted from Support Fund investments, as evidenced by the multi-million dollar, multi-institutional Federal grants awarded to the Board of Regents on behalf of statewide university consortia for research reform initiatives. Their purpose is to increase research capacity and success, as well as the amount of Federal research and development money awarded to Louisiana scientists and engineers. (See descriptions of awards in Attachment I.)

* 197 patents have been issued, with another 183 applications pending during the life of the awards.

3.2 RESULTS FROM SELECTED PROJECTS

See Attachment II for brief summaries of the achievements of selected recent projects funded across Support Fund components.

3.3 MULTIPLIER EFFECTS

Using the input/output table constructed by the Bureau of Economic Analysis in the U. S. Department of Commerce and housed in the Department of Economics at LSU, one can estimate the multiplier effects of such an infusion of new dollars on the Louisiana economy in terms of new revenues, income, and jobs for its citizens.

Effects of the $1,151,055,084 in external funds generated from Board of Regents Support Fund projects are estimated as follows:3

- Approximately $2.37 billion in new revenues to Louisiana firms and organizations;
- Approximately $960 million in new income for Louisiana citizens; and
- Approximately 41,930 new jobs for Louisianans.

4. LEVERAGING BOARD OF REGENTS SUPPORT FUND MONEY, EXPANDING BOARD OF REGENTS SUPPORT FUND OPPORTUNITIES, AND PROMOTING MULTI-INSTITUTIONAL COOPERATION AND COLLABORATION

The Board began co-sponsoring research projects with the National Science Foundation (NSF) and supporting the development of scientific research and educational infrastructure in Louisiana under NSF’s Experimental Program to Stimulate Competitive Research (EPSCoR) during FY 1988-89. In FY 1991-92 the Board dedicated a portion of Board of Regents Support Fund monies as matching commitments for two statewide, multi-institutional initiatives to be submitted in national competitions for Federal funds in areas that coincided with constitutionally prescribed BoRSF activities. These initiatives were the NSF LaSER Advanced

3 These estimates were determined through application of a formula developed by Dr. Loren Scott of LSU-Baton Rouge, who authored “The Impact on the Louisiana Economy of $66.5 Million in Outside Research Funding at LSU,” January 1990.
Development Proposal (ADP) and the Louisiana Systemic Initiatives Program (LaSIP) in Math and Science Education. The reasons for, and goals of, these matching commitments were fourfold:

- To continue and accelerate the leveraging of Federal money with BoRSF investments, as is consistently accomplished by principal investigators of individually funded Support Fund projects described in Attachment II of this Plan and Budget;

- To expand opportunities available through Support Fund programs;

- To augment the building of infrastructure begun under traditional Support Fund programs, which is necessary to enable Louisiana's universities to compete more successfully for Federal research money; and

- To promote multi-institutional collaboration and cooperation among Louisiana’s colleges, universities, and K-12 schools.

The FY 1991-92 Board of Regents Support Fund Plan and Budget described the dedication of BoRSF money as State matching commitments for these multi-year Federal grant proposals (in preparation during FY 1990-91) under the auspices of the Board. Each proposal required significant State matching money as a condition of funding.

4.1 FUNDED PROPOSALS: JOINT BOARD OF REGENTS SUPPORT FUND/FEDERAL PROGRAMS WITH STATEWIDE IMPACT

The Board was successful in the competitions described above, and these efforts encouraged a continued quest for competitive Federal research and educational dollars from the National Science Foundation (NSF) and a variety of other agencies including the National Aeronautics and Space Administration (NASA), the Department of Defense (DOD), the Department of Energy (DOE), the Department of Commerce, the Environmental Protection Agency (EPA), and the National Institutes of Health (NIH). Support Fund obligations for these Federal grants appear below in Table I. A more detailed description of each grant, including the Federal funds received for each, can be found in Attachment I.

The Board’s decision to leverage the Support Fund by targeting matches for Federal grant opportunities has borne significant fruit. It has enabled the State to progress from receiving minimal support from NSF for research collaborations in the 1980s, to the current environment, in which Louisiana is among the elite of EPSCoR states in successful research-related grants and activities.

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4 Details of these awards are included in Attachment I.
Table I
Federal Matching Grants Program
For Joint State and Federal Projects with Systemic and/or Statewide Impact
By Types of Support Fund Activity, Monetary Commitment, and Duration

<table>
<thead>
<tr>
<th>Federal Grant</th>
<th>Type of Support Fund Activity</th>
<th>Amount of Annual Matching Commitment</th>
<th>Amount of Total Matching Commitment</th>
<th>FYs in which Commitment isApplicable</th>
<th>Total Length of Commitment in Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSF/EPSCoR LaSER Implementation</td>
<td>TR ENH: 30% R&amp;D: 70%</td>
<td>Yr. 1 $685,043</td>
<td>$1,317,036</td>
<td>1988-89 through 1990-91</td>
<td>3 (^1)</td>
</tr>
<tr>
<td>NSF/EPSCoR LaSER</td>
<td>TR ENH: 1/3 GR FEL: 1/3 (^2) ITLS: 1/3</td>
<td>$1.2 Million</td>
<td>$4.8 Million</td>
<td>1991-92 through 1994-95</td>
<td>4</td>
</tr>
<tr>
<td>NASA/ LaSPACE</td>
<td>RCS: 60% GR FEL: 40% (^2)</td>
<td>$100,000</td>
<td>$500,000</td>
<td>1991-92 through 1995-96</td>
<td>5</td>
</tr>
<tr>
<td>NSF/EPSCoR LaCEPT</td>
<td>TR ENH: 100%</td>
<td>$500,000</td>
<td>$2.5 Million</td>
<td>1992-93 through 1996-97</td>
<td>5</td>
</tr>
<tr>
<td>DOE/EPSCoR Implementation</td>
<td>TR ENH: 60% RCS: 40%</td>
<td>$519,795</td>
<td>$1,039,590</td>
<td>1993-94 through 1994-95</td>
<td>2</td>
</tr>
<tr>
<td>DOD/EPSCoR Planning</td>
<td>TR ENH: 100%</td>
<td>$25,000</td>
<td>$25,000</td>
<td>1993-94</td>
<td>1</td>
</tr>
<tr>
<td>NASA/EPSCoR Implementation</td>
<td>TR ENH: 50% RCS: 25% GR FEL: 25% (^2)</td>
<td>$500,000</td>
<td>$1.5 Million</td>
<td>1994-95 through 1996-97</td>
<td>3</td>
</tr>
<tr>
<td>1993 DEPSCoR Implementation</td>
<td>TR ENH: 50% RCS: 25% GR FEL: 25% (^2)</td>
<td>Yr. 1 $166,666</td>
<td>$500,000</td>
<td>1994-95 through 1996-97</td>
<td>3</td>
</tr>
<tr>
<td>NSF/EPSCoR Teaching Scholars</td>
<td>TR ENH: 100%</td>
<td>$ 50,000</td>
<td>$250,000</td>
<td>1994-95 through 1998-99</td>
<td>5</td>
</tr>
<tr>
<td>NSF/EPSCoR LaSER Systemic Initiates</td>
<td>TR ENH: 60% UG ENH: 10% R&amp;D: 20% GR FEL: 10% (^2)</td>
<td>$1 Million</td>
<td>$3 Million</td>
<td>1995-96 through 1997-98</td>
<td>3</td>
</tr>
<tr>
<td>DOE/EPSCoR Implementation Renewal</td>
<td>TR ENH: 10% R&amp;D: 70% GR FEL: 20% (^2)</td>
<td>$800,000</td>
<td>$3.2 Million</td>
<td>1995-96 through 1998-99</td>
<td>4</td>
</tr>
<tr>
<td>NSF/EPSCoR Teaching Scholars</td>
<td>TR ENH: 100%</td>
<td>Yr. 1 $200,000</td>
<td>$2.2 Million</td>
<td>1995-96 through 1999-2000</td>
<td>5</td>
</tr>
</tbody>
</table>

\(^1\) The thirteen research projects that were a part of the first NSF/EPSCoR award received Board of Regents Support Fund money for two years prior to receiving NSF support in January of 1989 (FY 1988-89), for a total of five years and $3,374,355 in Board of Regents Support Fund money. This table reflects only years three through five of Board of Regents Support Fund money (or $1,317,036), since only that period of State support that coincides with Federal Support can be counted as part of the State's matching commitment. (See Section 4.1.)

\(^2\) Because of the nature of the Graduate Fellows Program, money for this component must be committed in the fiscal year prior to expenditure. For this reason, the first year's Graduate Fellows portion of matching funds committed to a particular project was usually actually charged to Enhancement or R&D, or prorated between the two program components.
<table>
<thead>
<tr>
<th>Federal Grant</th>
<th>Type of Support Fund Activity</th>
<th>Amount of Annual Matching Commitment</th>
<th>Amount of Total Matching Commitment</th>
<th>FYs in which Commitment is Applicable</th>
<th>Total Length of Commitment in Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASA LaSPACE Renewal</td>
<td>RCS: 50% GR FEL: 50%</td>
<td>$100,000</td>
<td>$400,000</td>
<td>1996-97 through 1999-2000</td>
<td>4</td>
</tr>
<tr>
<td>1995 DEPSCoR Implementation</td>
<td>TR ENH: 50% R&amp;D: 25% GR FEL: 25%</td>
<td>Yr. 1 $551,439 Yr. 2 311,740 Yr. 3 311,972</td>
<td>$1,175,151</td>
<td>1996-97 through 1998-99</td>
<td>3</td>
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<td>NSF/SI LaSIP Renewal</td>
<td>TR ENH: 100%</td>
<td>$1 Million</td>
<td>$5 Million</td>
<td>1996-97 through 2000-01</td>
<td>5</td>
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<td>NASA/EPSCoR Implementation Renewal</td>
<td>TR ENH: 50% RCS: 25% GR FEL: 25%</td>
<td>$500,000</td>
<td>$1 Million</td>
<td>1997-98 through 1999-99</td>
<td>2</td>
</tr>
<tr>
<td>NSF/SI Delta Rural SI</td>
<td>TR ENH: 100%</td>
<td>$200,000</td>
<td>$1 Million</td>
<td>1997-98 through 2001-02</td>
<td>5</td>
</tr>
<tr>
<td>LaCEPT Supplemental</td>
<td>TR ENH: 100%</td>
<td>$100,000</td>
<td>$300,000</td>
<td>1998-99 through 2000-01</td>
<td>3</td>
</tr>
<tr>
<td>1997 DEPSCoR Implementation</td>
<td>TR ENH: 50% R&amp;D: 25% GR FEL: 25%</td>
<td>$250,000</td>
<td>$750,000</td>
<td>1997-98 through 1999-2000</td>
<td>3</td>
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<tr>
<td>NSF/EPSCoR New Cooperative Agreement</td>
<td>TR ENH: 75% R&amp;D: 25%</td>
<td>$1 Million</td>
<td>$3 Million</td>
<td>1998-99 through 2000-01</td>
<td>3</td>
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<tr>
<td>1999 DEPSCoR Implementation</td>
<td>TR ENH: 100%</td>
<td>Yr. 1 $65,998 Yr. 2 61,900 Yr. 3 61,900</td>
<td>$189,798</td>
<td>1999-2000 through 2001-02</td>
<td>3</td>
</tr>
<tr>
<td>EPSCoT</td>
<td>TR ENH: 100%</td>
<td>$300,000</td>
<td>$300,000</td>
<td>1999-2000</td>
<td>1.5</td>
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<tr>
<td>NASA/EPSCoR Continuation Funding</td>
<td>TR ENH: 100%</td>
<td>$250,000</td>
<td>$250,000</td>
<td>1999-2000</td>
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<tr>
<td>NASA/EPSCoR Preparation Grant</td>
<td>TR ENH: 100%</td>
<td>$100,000</td>
<td>$100,000</td>
<td>1999-2000</td>
<td>1</td>
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<tr>
<td>NASA LaSPACE Continuation</td>
<td>TR ENH: 100%</td>
<td>$200,000</td>
<td>$1 Million</td>
<td>2000-01 through 2004-05</td>
<td>5</td>
</tr>
<tr>
<td>EPA/EPSCoR 2000</td>
<td>TR ENH: 100%</td>
<td>Yr. 1 $255,261 Yr. 2 244,739</td>
<td>$500,000</td>
<td>1999-2000 through 2000-01</td>
<td>2</td>
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4.2 PENDING PROPOSALS

The NASA EPSCoR program annually issues a Cooperative Agreement Notice (CAN) research announcement for university-based research activities which will make significant contributions to the strategic research and development priorities of NASA and to the overall research infrastructure, science and technology capabilities, higher education, and economic development of the State. In the past, the CAN has been issued late in the calendar year. Proposals from Louisiana faculty will be submitted in response to this announcement in spring 2012.

It is also expected that NASA will announce a new Research Infrastructure Development (RID) competition for FY 2012. The goal of this program is to develop research capacity in Space/Aerospace fields by developing collaborations between NASA scientists and engineers and the Louisiana research community.

The U.S. Department of Energy issues periodic solicitations for research implementation grants that seek to improve academic research infrastructure in key energy-related science and technology areas identified by the State. Issuance of a solicitation for FY 2012 is expected during the first quarter of 2012.

It is anticipated that $875,000 will be required in FY 2012-13 to provide match to successful projects funded through these Federal programs. The funds are included as new awards in the Federal Matching Grants component of the Enhancement Program (see Section 5.5).

4.3 MULTIDISCIPLINARY, MULTI-INSTITUTIONAL PROPOSALS IN SUPPORT FUND PROGRAM COMPONENTS

The Board has long recognized the potential of multidisciplinary and/or multi-institutional projects to enhance academic quality and promote economic development, as well as to make the most prudent use of scarce State resources. Accordingly, the Board has encouraged these kinds of proposals since the inception of the Board of Regents Support Fund, not only as part of the joint Federal/State efforts described in Section 4.1 of this Plan and Budget, but also in proposals submitted under the traditional BoRSF program components. The best known manifestations of the Board’s support of proposals of this type are an $800,000 Enhancement award to provide initial funding to the Louisiana Academic Library Network (LaLINC) project, which has computerized databases and linked academic libraries throughout the State, and an award of $3,500,000 to support the efforts of the Louisiana Optical Network Initiative (LONI).

To further emphasize its belief in the potential of multidisciplinary, multi-institutional efforts to achieve BoRSF goals and promote the best interests of the State, in its most recent solicitation for proposals, as well as in the 1993, 1999 and 2006 revisions of the Strategic Plan, the Board specifically encouraged the submission of collaborative proposals which would yield statewide benefits. Beginning with its FY 2000-01 budget, and continuing in FY 2012-13, the Board has set aside funds each year from the Traditional Enhancement program for the funding of these types of projects. The Board reaffirms the eligibility and encourages the submission of multidisciplinary, multi-institutional proposals in all Support Fund program components for FY 2012-13. Consistent with the growing emphasis placed on interdisciplinary research throughout the academic community and the large numbers of quality proposals submitted each year in the Multidisciplinary Enhancement category of Traditional Enhancement, the Board first increased the funds available for awards in this category to $950,000 in the FY 2004-05 Plan and Budget. The funding level for Multidisciplinary Enhancement has since been calculated as a percentage of the Traditional Enhancement budget (20%). This percentage calculation will continue in the FY 2012-13 Plan and Budget. Any unexpended Multidisciplinary funds will revert to discipline-based Traditional Enhancement (see Section 5.5).
5. BOARD OF REGENTS SUPPORT FUND PROGRAM COMPONENTS

5.1 BUDGETARY CONTINGENCIES

If in FY 2012-13 the income received for the higher education portion of the Louisiana Education Quality Support Fund is greater than the $27,500,000 projected, the additional revenues shall be returned to the Traditional Enhancement Program until its allocation reaches $8,000,000. Any amount thereafter shall be returned to the competitive Enhancement components and Research and Development subprograms on a pro-rata basis. In the event that reductions are necessary, they shall be accommodated through a proportionate reduction in the first-year amounts allocated for proposals in Enhancement and R&D Program components.

5.2 ENDOWED CHAIRS FOR EMINENT SCHOLARS - $3,220,000

The Endowed Chairs for Eminent Scholars Program, introduced in 1987, is designed to enhance the recruitment and retention of distinguished university faculty at institutions throughout Louisiana. Since 1990, the program has been budgeted at an annual level of at least $3.2 million. Legislative supplemental appropriations, beginning in FY 1995-96 and continuing in several subsequent years, have enabled the funding of 99 additional chairs. Through FY 2010-11, 304 chairs are matched at twenty-six institutions, and the program has generated a total endowment (counting private match) of $344 million. Comprehensive reviews conducted in 1993, 1998 and 2009 led to significant strengthening of the program.

The program pairs a 60% private-sector match with a 40% Board of Regents award to endow a chair to be filled by an exemplary scholar. The Board endows chairs in any discipline at three levels: $1 million total endowment ($600,000 match/$400,000 BoRSF); $2 million total endowment ($1.2 million match/$800,000 BoRSF); and $3 million total endowment ($1.8 million match/$1.2 million BoRSF). Forty (40) of the 304 chairs awarded have been at the $2 million level. Beginning in FY 2009-10, chair applications have also been permitted at the $3 million level, though none have yet been received.

“Special Provisions for Public Four-Year Campuses with Fewer than Three Eminent Scholars Chairs,” adopted in 2001, allowed public four-year institutions with fewer than three chairs to invert the 60:40 ratio of private funds/BoRSF, but retained the principle of competition without favor. Through FY 2005-06, when the special provisions expired, nine chairs (three from Northwestern State University, two from Louisiana State University-Shreveport, and one each from Grambling State University, Louisiana State University-Alexandria, Southern University-Baton Rouge, and Southern University at New Orleans) were funded under its aegis. One additional inverse-ratio chair from Southern University at New Orleans was funded under special circumstances in FY 2006-07.

During the first years of the program’s operation, chairs were matched on a “first-come, first-served” basis. This approach was replaced in 1993 by a competitive process to ensure that the highest quality chairs with the greatest potential for impact are funded. The competition established to determine endowment awards is rigorous and highly selective. A panel of out-of-state experts reviews proposals on an annual basis, recommending for funding those most representative of and able to achieve the goals of the program. Stringent rules governing the selection of the faculty recipient are designed to ensure his or her excellence. An endowed chair must be filled through a national search and the committee conducting the search must include at least one individual recognized as an expert in the field of the chair but not affiliated with the institution, the private donor, or the Board of Regents. While a chair recipient may be selected from within the affected campus, this should occur infrequently and only when a national search has documented the national and/or international eminence of the prospective chairholder.
As the national search guarantees the past reputation of the chairholder, periodic peer reviews of the chairholder are intended to assure continued accomplishment. Chairholders are held to standards of performance which require that they maintain highly productive records of scholarly and/or creative endeavors, exceptional teaching, recruitment and mentoring of high-quality students, leadership activities, and enhancement of the State’s economy.

The $3,220,000 budgeted for this category for FY 2012-13 provides eight (8) $400,000 funding “slots” for new endowed chairs, and $20,000 for review of submitted proposals.

5.3 RECRUITMENT OF SUPERIOR GRADUATE STUDENTS - $3,822,000

The Recruitment of Superior Graduate Students component, also called the Graduate Fellows Program, provides resources to select departments to bring top-quality students to their graduate programs. Through FY 2011-12, the Board of Regents has provided 1,429 graduate fellowships to a spectrum of departments at fourteen institutions in Louisiana. About 10% of these fellowships have been awarded to programs specifically targeting in-service K-12 teachers in mathematics and science disciplines pursuing master’s degrees in education. While the full economic and cultural benefits of these fellowships are difficult to quantify, it is clear that the program has contributed highly educated employees to Louisiana business and industry, expert teachers at levels from kindergarten to college, and a community of enthusiastic, energetic, and dedicated students to further the educational and research agendas of colleges and universities across the State.

The Traditional Graduate Fellows (GF) and Graduate Fellowships for Teachers (GFT) subprograms have been part of the Graduate Fellows Program since 1993. The Board became a full participant in the Southern Regional Education Board (SREB) Minority Scholars Program in FY 2007-08 and, as a result, established the Board of Regents/SREB Minority Fellowships to Promote Diversity subprogram (BoR/SREB), adding it to the Graduate Fellows component. The Traditional subprogram primarily supports excellent doctoral-level fellows, but also allows stipends for students at master’s-level programs of distinction. The GFT subprogram offers support to pre- and in-service teachers seeking master’s degrees in science and/or mathematics. To apply for a GFT award, an applicant institution must offer a master’s program that can be completed in one academic year plus an additional summer, to allow teachers to finish within a single academic year’s sabbatical from the classroom. GFT fellowship recipients, further, must pledge to teach in a Louisiana school system for at least one year after completing the master’s degree, to ensure that Louisiana students reap some of the benefits of the State’s support of these teachers. The BoR/SREB subprogram, a continuation of the Perkins Doctoral Fellows Program established in response to the Louisiana Consent Decree, offers successful universities fellowships to build diversity in graduate programs by recruiting and retaining excellent minority doctoral candidates. The Traditional GF, GFT, and BoR/SREB subprograms provide a comprehensive opportunity for departments and universities across the State to receive assistance in the recruitment, training and support of high-quality graduate students.

Implementation of the Traditional GF and GFT subprograms requires the following schedule:

- Year One: Award of the grant by the Board of Regents
- Year Two: Recruitment by awardees of superior graduate candidates
- Year Three: Enrollment of recruited students and initial disbursement of funds committed under the grant
For example, colleges and universities that submit successful proposals during the current fiscal year (FY 2011-12) will have a full year (FY 2012-13) during which to recruit students who, in turn, will enroll in Louisiana universities’ graduate programs and receive the Board of Regents Support Fund fellowship for the first time in the fall of 2013 (FY 2013-14). The SREB subprogram, in contrast, does not require that fellowships be used for recruitment, so makes funds available in the fiscal year immediately following the award announcement (e.g., in FY 2012-13 for awards made in FY 2011-12).

The $3,822,000 budgeted for this category for FY 2012-13, therefore, is almost entirely for previous obligations, including: (a) $849,000 for fourth-year funding of graduate fellows who began their course of study in AY 2009-10; (b) $998,000 for third-year funding of graduate fellows who began their course of study in AY 2010-11; (c) $808,000 for funding of second-year graduate fellows who began their course of study in AY 2011-12; (d) $1,142,000 for funding of graduate fellows who will begin their course of study in AY 2012-13; and (e) $25,000 for review of proposals submitted during FY 2012-13. In addition to outlining prior commitments in the Graduate Fellows program in FY 2012-13, this information also notifies the Governor and the Legislature that an amount of approximately $3.85 million will have been committed from the FY 2013-14 Support Fund budget prior to the submission of the annual plan and budget for that year.

In keeping with the conceptual framework that encourages the use of Support Fund money to enhance all areas of higher education, all disciplines are eligible to compete in the Graduate Fellows Program. Those disciplines accorded a higher priority for Louisiana’s economic development are eligible to compete every year. The eligibility cycle for Graduate Fellows, including disciplines eligible in FY 2012-13, is specified in Schedule I.
## SCHEDULE I: ELIGIBILITY OF DISCIPLINES* IN THE GRADUATE FELLOWS PROGRAM

### GROUP I - ELIGIBLE EVERY YEAR

- Biological Sciences
- Chemistry
- Computer and Information Sciences
- Earth/Environmental Sciences
- Engineering A and B
- Health/Medical Sciences**
- Physics/Astronomy

### GROUP II - ELIGIBLE IN FYs 2012-13, 2014-15, 2016-17

- Agriculture
- Business
- Education, including Literacy
- Mathematics

### GROUP III - ELIGIBLE IN FY 2011-12, 2013-14, 2015-16

- Arts
- Humanities
- Social Sciences

*The listing of those sub-disciplines which are included in these larger groupings is in Attachment III.

**Effective with the Board action of June 22, 1995, the LSU Health Sciences Centers in New Orleans and Shreveport and the Tulane University Health Sciences Center are permitted to submit a maximum of three proposals each when Health and Medical Sciences is an eligible category. Health and Medical Sciences was made eligible each year in the 1999 and 2007 Strategic Plans.

### 5.4 CAREFULLY DEFINED RESEARCH EFFORTS - $5,235,000

A total of approximately $2,850,000 will be required during FY 2012-13 to honor prior commitments for multi-year projects in the Board of Regents Support Fund Research and Development (R&D) Program. Since most research projects are multi-year endeavors, the Board has historically been conservative in recommending an increase in funds dedicated for new research projects in the R&D Program. Allocations for new awards in the R&D Program peaked at approximately $2,800,000 in FY 1990-91. The budget for new R&D projects was reduced in FY 1991-92, in part because of a slight drop in total Support Fund monies available, but primarily as a result of the matching commitments required for Federal grants.

The Research Competitiveness Subprogram (RCS) has been consistently successful since its inception in FY 1986-87. Accordingly, the Board has made every effort to fund this subprogram at the highest possible level. The amount devoted to this subprogram for first-year awards was increased to $1,500,000 in FY 1999-2000 and has been maintained since except in those years in which low economic forecasts mandated mid-year
budget cuts. Beginning in FY 2006-07 and continuing through the FY 2009-10 Plan and Budget, the amount for first-year awards was reduced to $1,350,000 to facilitate funding of the Post-Katrina Support Fund Initiative. This level was restored in FY 2010-11 to $1,500,000. Due to reductions in revenue over the past three years in combination with lower projected income in the BoRSF, in FY 2011-12 the funding level was again reduced to $1,350,000. This funding level will be maintained in FY 2012-13.

The Industrial Ties Research Subprogram, though it has resulted in a number of projects with significant economic benefits (see Attachment II), has also presented some challenges. Louisiana’s relatively undiversified industrial economy and dearth of large industrial-based corporations (only one Fortune 500 company and relatively few industries with substantial capacity for R&D spending) have made it difficult for university faculty to foster meaningful partnerships with State-based industries. The Board significantly reduced the funding level for the Industrial Ties Research Subprogram to reflect this reality; the amount available for first-year funding of this component was set at $650,000 for several years. To make funds available for the Post-Katrina Support Fund Initiative, the amount was further reduced by 10%, to a first-year level of $585,000, for FY 2006-07 through FY 2009-10. The funding level was restored to $650,000 in FY 2010-11. In FY 2011-12, the funding level was again reduced by 10%, to $585,000, to accommodate lower projected income in the BoRSF. This funding level will be maintained in FY 2012-13.

While the R&D Program historically has been focused almost exclusively on the sciences, mathematics, and engineering, the Board remains cognizant of its responsibility, elucidated in each strategic plan since 1988, to improve the quality of education “at all levels in all disciplines.” The comprehensive review of the R&D Program during FY 2001-02 documented the need for a subprogram with emphasis on the arts, social sciences, and humanities. This subprogram, modeled after the internationally famous John Simon Guggenheim Memorial Foundation Fellowships, was inaugurated at a funding level of $500,000 in FY 2004-05. The funding level for this subprogram, now named the Awards to Louisiana Artists and Scholars (ATLAS) subprogram, remained at $500,000 for FY 2005-06, but was reduced to $450,000 in FY 2006-07 and subsequent years in order to make funds available for the Post-Katrina Support Fund Initiative. The funding level was restored to $500,000 in FY 2010-11. In FY 2011-12, given lower projected income in the BoRSF, the funding level was again reduced by 10%, to $450,000. This lower funding level will be maintained in FY 2012-13.

5.4.1 Research Competitiveness Subprogram (RCS)

RCS is a stimulus program directed only toward those researchers who are at the threshold of becoming competitive in the Federal R&D marketplace. It is designed to assist these researchers to overcome the barriers that have prevented them from competing successfully at the national level for R&D funds. RCS is also directed only to those researchers who clearly show strong potential for enhancing their competitive status within the time span of a Board of Regents Support Fund grant. In every year since the subprogram’s inception, far more Louisiana university researchers who fit this funding profile have submitted quality research proposals to RCS than the Board has been able to support and encourage with funding. Disciplines eligible to compete for research funds in the RCS are restricted to the sciences and engineering (as defined by the National Science Foundation), agriculture, and health and medical sciences. Most disciplines are eligible on a staggered, two-years-on, two-years-off cycle; however, three disciplines accorded the highest priority for economic development (biological, computer/information, and earth/environmental sciences) are targeted for funding annually. The eligibility cycle for RCS, including disciplines eligible in FY 2012-13, is specified in Schedule II.
SCHEDULE II: ELIGIBILITY OF DISCIPLINES* IN THE RESEARCH COMPETITIVENESS SUBPROGRAM

GROUP I - ELIGIBLE EVERY YEAR

Biological Sciences  
Computer and Information Sciences  
Earth/Environmental Sciences

GROUP II - ELIGIBLE IN FYs 2010-11, 2011-12, 2014-15

Agricultural Sciences  
Engineering A (Chemical, Civil, Electrical, etc.)  
Mathematics  
Physics/Astronomy  
Social Sciences

GROUP III - ELIGIBLE IN FYs 2009-10, 2012-13, 2013-14

Chemistry  
Engineering B (Industrial, Materials, Mechanical, etc.)  
Health and Medical Sciences

*The listing of those sub-disciplines which are included in these larger groupings is in Attachment III.

5.4.2 Industrial Ties Research Subprogram (ITRS)

The principal goal of ITRS is to fund research proposals that have significant near-term potential for contributing to the development and diversification of the Louisiana economy. Accordingly, all proposals and funded projects must demonstrate strong interest from and continued involvement by the private sector and/or non-State public agencies. Because ITRS also functions as a stimulus subprogram, funded projects should either (a) bring about significant near-term Federal or private-sector funding of research with commercial applications, or (b) enhance or establish a Louisiana business or industry that will attract significant external revenues to the State.

To ensure that no opportunities with the potential to promote economic development and diversification are overlooked, the Board has, since 1993, opened competition in ITRS to proposals from all research areas. Further, the Board has attempted to encourage university/industry initiatives through cooperation with the Governor’s Economic Development Cabinet and with related entities such as the Louisiana Department of Economic Development and the Louisiana Innovation Council.
5.4.3 Awards to Louisiana Artists and Scholars (ATLAS) Subprogram

The ATLAS Subprogram provides support for major scholarly and artistic productions with potential to have a broad impact on a regional and/or national level. ATLAS awards facilitate the completion of manuscripts for publication and/or the mounting of creative productions including recordings, performances, and gallery shows. The subprogram allows the State to profit from its rich cultural traditions and makes Louisiana faculty’s expertise and creativity in these disciplines well known both nationally and internationally.

5.4.4 Summary of FY 2012-13 Research and Development Expenditures

Prior Commitments (RCS and ITRS only): $2,850,000

New Awards:
- RCS $1,350,000
- ITRS $585,000
- ATLAS $450,000

R&D PROGRAM TOTAL $5,235,000

5.5 ENHANCEMENT OF THE QUALITY OF DEPARTMENTS OR UNITS - $14,269,505

NOTE: Matching commitments for all Federal Matching Grants Program proposals for which Federal approval has not been received as of the date of submission of the affected Plan and Budget will be accommodated from the Enhancement Program. The Board has elected to operate in this manner due to (a) the uncertainty of a proposal's potential success in the national competition for Federal funds; (b) the Board's policy that any unexpended money in the Chairs, Graduate Fellows, and/or R&D program components annually revert to Traditional Enhancement for new awards in that component; (c) the difficulty and uncertainty surrounding moving Board of Regents Support Fund money from one BoRSF program budget to another, once budgeted in the prior year's appropriation process; and (d) the fact that all projects of this nature contain elements, in varying degrees, that enhance academic departments and units at colleges and universities.

After weighing interrelations among the four components of the Support Fund, the Board has concluded that enhancement of the instructional and research infrastructure of departments and units remains a fundamental need, essential to accomplishing goals of the other three BoRSF components. For this reason, the Board shall dedicate $14,269,505 to the Enhancement Program in FY 2012-13. Thus, approximately 53% of the total funds available for awards in FY 2012-13 has been dedicated to this component. This reflects the Board's strong commitment to the program, which provides competitive opportunities to all Support Fund-eligible colleges and universities in the State.

Approximately $3,300,000 of the $14,269,505 budgeted for Enhancement awards in FY 2012-13 will be required to honor prior commitments for multi-year projects. Of this amount, $300,000 has been budgeted for potential second-year commitments for two-year proposals to be approved in FY 2011-12 under the Traditional and/or Undergraduate Enhancement programs. Traditional and Undergraduate Enhancement proposals submitted in this fiscal year are currently undergoing competitive external review and the Board will make funding decisions in April or May of 2012. A total of $3,000,000 has been pledged as the State's matching commitment under four current jointly funded Board of Regents Support Fund/Federal Matching Grants, including: (a) $250,000 for the third year of the NASA LaSPACE project; (b) $500,000 for the third year of the...
LAMP Phase IV project; (c) $250,000 for the second year of the NASA EPSCoR project; and (d) $2,000,000 for the fourth year of the NSF EPSCoR RII.

After deducting these projected commitments for multi-year enhancement projects and the prior and projected obligations for Federal matching opportunities, $10,969,505 will be available for new Enhancement projects submitted for funding consideration in FY 2012-13. Maintenance of the highest possible budgetary allocations to the Enhancement programs is particularly important because: (a) Enhancement programs build the infrastructure at universities which is critical to the success of the other three Support Fund programs; and (b) all universities are eligible to compete and the majority of campuses most successfully compete in Enhancement programs. Significantly, 66% of the total funds available for new awards will be dedicated to Enhancement programs. (See Table II, “An Overview of Board of Regents Support Fund Budgetary Allocations by Program Component, FY 2012-13” in Section 6 of this Plan and Budget.)

5.5.1 Undergraduate Enhancement Program

Some colleges and universities without sizeable graduate programs are not as successful competing against larger universities with greater resources and as a result have been less aggressive in submitting Enhancement proposals. To continue to affirm the principle that improvement of infrastructure is essential at all academic levels, the Board shall dedicate $1,620,000 to improve education at primarily undergraduate institutions.

Prerequisites for participation in the Undergraduate Enhancement Program are as follows: (1) to be eligible, the applying campus may not offer more than two doctoral programs, and (2) the applying department may not offer a doctoral degree. It should be noted that the maximum number of doctoral programs a campus may offer and still be eligible to participate in the Undergraduate Enhancement Program was lowered from ten in FY 1991-92 to two in FY 1992-93 and beyond. The Board took this action to promote maximum participation in this program by primarily undergraduate campuses.

Participation in Undergraduate Enhancement does not preclude campuses from competing for other Enhancement funds, and quality considerations continue to form the basis for all funding decisions. The same rotation of disciplines (Schedule III) and types of projects eligible under the Traditional Enhancement Program, as well as the same regulations for proposal submission, also apply in Undergraduate Enhancement. Funds not awarded in Undergraduate Enhancement will be transferred to the Traditional Enhancement Program.

5.5.2 Endowed Professorships Program

This program was created by the Board and incorporated into the Enhancement component in FY 1990-91. Funds were first allocated to endow professorships in FY 1991-92. The funding of an endowed professorship requires the college or university to raise at least $60,000 from external sources, to be matched by $40,000 from the Support Fund, thus establishing an endowed professorship valued at a minimum of $100,000.

Since the program’s inception the Board has been concerned that too many eligible campuses do not reap its benefits. One manifestation of this concern appeared in the FY 1995-96 Plan and Budget, when the Board first allowed campuses to use Federal funds as the matching source for one endowed professorship per year. The Board has also encouraged campuses to maximize efforts to attain matching funds for endowments from private philanthropic sources.
This year, as in previous years, the Board searched to identify money in the Support Fund to support this program at traditional levels. Measured against pressing financial needs throughout higher education, every component of the Support Fund is severely underfunded. Consequently, each dollar used to fund endowments means that fewer dollars are available for critical, immediate needs elsewhere. In FY 2010-11, the Board continued to fund the Endowed Professorships Program at a level of $2,680,000. This level of funding, traditional for the program, gave each four-year campus the opportunity to endow two professorships and each two-year campus to endow one professorship provided matching funds were secured. In several years campuses were able to receive more than two Professorships when slots were unclaimed. In addition, in FY 1995-96 and several subsequent years, the Legislature approved special appropriations to fund unmatched Professorships. Given recent changes in the market which have led to limited returns on these smaller endowments, as well as the urgent needs throughout the higher education community, the Board reduced funding for the Endowed Professorships Program during FY 2011-12 to the level of $1,560,000, to guarantee only one slot per eligible campus. The guarantee of one $40,000 match per four-year and two-year campus, assuming that private matching monies are secured and program requirements are met, will be retained in FY 2012-13, though the funding level will increase to $1,600,000 to accommodate the addition of Northshore Technical Community College as a Support-Fund eligible institution.

5.5.3 Enhancement Program for Two-Year Institutions

The Board’s commitment to improvement of educational quality at all academic levels and in all disciplines drove the establishment, in FY 2002-03, of the Enhancement Program for Two-Year Institutions. The absence in FY 2002-03 of Federal calls for grants requiring a state match enabled the Board to use funds normally made available for matching opportunities to “jump-start” the two-year institutions, particularly those which had recently joined the Louisiana higher education system.

Twelve campuses are eligible for participation in this program: Baton Rouge Community College, Bossier Parish Community College, Delgado Community College, L. E. Fletcher Technical Community College, Louisiana Delta Community College, LSU-Eunice, Northshore Technical Community College, Nunez Community College, River Parishes Community College, South Louisiana Community College, Southern University-Shreveport, and Sowela Technical Community College. Eligible campuses and the Louisiana Community and Technical College System (LCTCS) participated during the spring of 2002 in the development of rigorous criteria which parallel, to the degree feasible, the criteria used in other BoRSF Enhancement components. A competitive peer-review process is used to assess and prioritize proposals for funding.

The Board has concluded that proceeding in this manner will provide not only an opportunity for the two-year institutions to participate meaningfully in the BoRSF, but also an invaluable training experience in the grant writing and capacity building that all institutions of higher education should and must undertake. Cognizant that all or most of the BoRSF monies dedicated to this subprogram in FY 2002-03 were likely to revert to the Federal Matching Grants Program in future years, the Board provided a financial foundation for the continuance of the subprogram by modifying its policy for the disbursal of funds for endowed professorships (described in Section 5.5.2 above). By guaranteeing two-year campuses only one Endowed Professorship per year, the Board ensured that at least $440,000 per year would be available to sustain this program. Additional funds were taken from the Traditional Enhancement Program. In FY 2003-04, $1,000,000 was allotted to the Enhancement Program for Two-Year Institutions, and its FY 2004-05 allocation was raised to $1,200,000. The $1,200,000 level was maintained for FY 2005-06. The FY 2006-07 level of $1,080,000 reflected a reduction of 10% to provide funds for the Post-Katrina Support Fund Initiative, and was sustained in subsequent years. In the FY 2010-11 Plan and Budget, the $1,200,000 funding level was restored. Given lower income projections
for the BoRSF, the first-year funding level of $1,080,000 was reinstated for FY 2011-12 and will be retained in FY 2012-13. Any unawarded funds will revert to the Traditional Enhancement Program.

5.5.4 **The Louisiana Systemic Initiatives Program (LaSIP)**

The Louisiana Systemic Initiatives Program (LaSIP) first competed successfully for National Science Foundation (NSF) funding in 1991. At that time it received $10 million from NSF, matched by $5 million each from the Board of Regents and the Board of Elementary and Secondary Education (BESE). The project supports K-12 reforms which require leadership from colleges and universities, as well as revisions in teacher education programs. LaSIP was one of only two statewide initiatives (the other was in Connecticut) which received a five-year renewal in 1996. From the beginning, NSF emphasized that Federal money would only be used to seed the project, with the major continuing financial commitment to emanate from state and/or private sources. Although direct NSF support ended in FY 2000-01, LaSIP has been awarded approximately $70 million in competitive Federal grants to further school reforms in Louisiana.

During its ten years of Federal support, LaSIP was repeatedly cited by NSF as a model program. The project’s exemplary performance was a major contributing factor in the 1996 renewal. During and since Federal funding, LaSIP has achieved significant results statewide in the improvement of student scores on both criterion-referenced and norm-referenced tests. It has been and continues to be a major resource for school districts throughout the State in achieving accountability goals.

Mindful that Federal funding for this project was drawing to a close, the Board determined that the educational reform impulse at once spearheaded and buttressed by LaSIP should continue. Accordingly, the Board committed $500,000 per year for five years, beginning in FY 2001-02, to continue LaSIP activities. The money came from the BoRSF Reserve Fund, and was contingent upon the provision of a like sum annually from BESE and supplemental funding from the Legislature. Both the Board of Regents and BESE approved five-year renewals of LaSIP at $500,000 each per year at their meetings in January 2006. Since FY 2006-07, the Board’s contribution to this program has come from the BoRSF Plan and Budget. Upon expiration of the most recent five-year agreement and the elimination of legislative funding for LaSIP, the Board of Regents individually continued its support on an annual basis. Given the uncertainty of continued federal funding and pressing needs elsewhere, no Support Fund monies are committed for FY 2012-13.

5.5.5 **Endowed Undergraduate Scholarship Program for First-Generation College Students**

The State faces a well-documented crisis in terms of educating its future workforce. According to statistics provided by the National Center for Higher Education Management Systems (NCHEMS), for every 100 students entering the ninth grade this fall only about 58 will graduate from high school four years hence. Only 38 will enter college immediately after graduation, and a meager 11 of these will earn a degree or certificate within 150% of the standard time to completion. Research indicates that this massive “pipeline leakage” is due primarily to socioeconomic factors. Many worthy Louisiana students are now effectively denied the opportunity for a postsecondary education either because the assistance provided under the TOPS program is not sufficient to make college affordable for them or because they approach but fall short of satisfying all of the requirements necessary to qualify for the TOPS program.

In FY 2007-08, the Board implemented a merit- and needs-based program to help address this situation. To be eligible, students must be Louisiana residents who are “first-generation” college students (i.e., neither parent has earned a baccalaureate degree), have been awarded the Federal Pell grant, and have been admitted to the institution awarding the scholarship. Each four-year institution is guaranteed one (1) $40,000 endowed
scholarship fund challenge grant annually to match a private/institutional contribution of $60,000. Each two-year institution is guaranteed one (1) $20,000 endowed scholarship fund challenge grant annually to match a private/institutional contribution of $30,000. Proceeds will be used to establish/enhance a permanent endowed scholarship fund. Interest earnings from the fund(s) are awarded at the discretion of the institution to eligible students and may be divided among multiple recipients, provided that each student receives at least $1,000 per year in program funds. In addition to scholarship proceeds, institutions must provide student recipients with structured support through active and engaged advising, as well as meaningful campus employment of at least ten (10) hours per week over and above the scholarship. The program will be funded at a level of $1,000,000 during FY 2012-13.

5.5.6 Traditional Enhancement Program

Based on its continuing review of academic programs, coupled with evaluation of BoRSF projects and the rapid advancement of technology across all disciplines and levels of postsecondary education, the Board anticipates that the acquisition of instructional and research equipment will remain indefinitely as the area of greatest need in the Enhancement Program. During the first three years in which the BoRSF operated, instrumentation was the only type of request allowed in the Enhancement Program. Beginning in FY 1989-90, the Board invited the submission of other types of enhancement requests, due primarily to the eligibility for the first time of selected non-scientific and non-engineering disciplines. Types of non-instrumentation enhancement requests include curriculum revision projects, student success initiatives, service learning projects, and colloquia presented by outstanding out-of-state scholars.

In an attempt to limit the obligation of future BoRSF money, in FY 1989-90 the Board further decided that equipment may only be purchased in the initial year of a project and that, for projects which envision multi-year funding, the following stipulations apply: (1) no project may be of more than two years’ duration; (2) no project may request more than $50,000 in the second year; and (3) the total of all second-year commitments in the Traditional Enhancement Program may not exceed $1 million. This year, the Board will continue to allow the submission of multi-year Enhancement requests, with the same stipulations as adopted previously.

After deducting all previous and projected commitments for other components of the Enhancement Program, $4,794,505 remains for new projects submitted in the Traditional Enhancement Program, including the Multidisciplinary component (see Section 4.3) during FY 2012-13. This amount may increase from the Plan and Budget as submitted if allocated money is not fully expended in one of the other Enhancement Program components. In addition, as indicated in section 5.1, all income in excess of $27,500,000 shall be placed in the Traditional Enhancement category until a funding level of $8,000,000 is reached. Further, the Board will use money from the BoRSF Reserve Fund if possible to preserve the integrity of this vital component.

In keeping with the conceptual framework of using Support Fund money to enhance all areas of higher education, all disciplines are eligible to compete in the Traditional and Undergraduate Enhancement Programs on a rotating basis as set forth in the Support Fund strategic plans. Schedule III indicates the discipline eligibility cycle, including those disciplines eligible in FY 2012-13.
SCHEDULE III: ELIGIBILITY OF DISCIPLINES* IN THE TRADITIONAL AND UNDERGRADUATE ENHANCEMENT PROGRAMS

GROUP I - ELIGIBLE IN FYs 2009-10, 2012-13, 2015-16

Agricultural Sciences  
Arts  
Earth/Environmental Sciences  
Engineering A (Chemical, Civil, Electrical, etc.)  
Health and Medical Sciences

GROUP II - ELIGIBLE IN FYs 2010-11, 2013-14, 2016-17

Business  
Chemistry  
Education  
Mathematics  
Physics/Astronomy

GROUP III - ELIGIBLE IN FYs 2011-12, 2014-15, 2017-18

Biological Sciences  
Computer and Information Sciences  
Engineering B (Industrial, Materials, Mechanical, etc.)  
Humanities  
Social Sciences

* Attachment III provides a listing of those sub-disciplines which are included in these larger groupings.

5.5.7 Post-Katrina Support Fund Initiative (P-KSFI)

The storms of August and September 2005 devastated Louisiana and other states across the Gulf Coast. In addition to and in part because of the dispersal of a large percentage of its population, the State’s economy, infrastructure, tax base, and research capacity, both basic and applied, have suffered. The affected region encompasses coastal areas unmatched in natural and cultural resources. While the catastrophic dimensions of the storms would be difficult to overstate, the resulting situation did present an unprecedented opportunity for faculty and students to participate in the recovery and rebuilding of both urban and rural areas.

To help address post-Katrina research and educational priorities, at its December 8, 2005 meeting the Board established a five-year program to be funded through an annual allocation of approximately $5 million from the Support Fund. This new program, the Post-Katrina Support Fund Initiative, required redirection of substantial funds from established BoRSF programs. Utilizing budget adjustments in established programs as well as monies unspent in the FY 2005-06 competitions, the Board was able to fund long-term projects with strong potential to contribute to economic development, research capacity, and educational quality.
Subsequent to the submission of the FY 2006-07 Plan and Budget, the Board’s staff conducted several meetings with campus representatives, ultimately resulting in a call for White Papers from the campuses to indicate priority needs as well as their thoughts relative to the development of the Initiative. The Board’s staff engaged a panel of experts selected under the auspices of the American Academy for the Advancement of Sciences (AAAS) to review these White Papers, interview stakeholders from throughout the State, and make recommendations to the Board related to the structure, purpose, and goals of the Initiative. AAAS issued final reports in November 2006 which recommended the following: (1) that the P-KSFI be subdivided into Primarily Research and Primarily Education subprograms, and (2) that the disciplines eligible for funding be limited to biological sciences, material sciences, and information technology. After responses to the report were received from the campuses in December 2006, the Board approved the requests for proposals (RFPs) for the Initiative at its meeting of January 25, 2007.

Forty-one proposals were submitted in response to the RFPs. An intensely competitive peer-review process, multi-stage for primarily research proposals and single-stage for primarily education proposals, culminated in the awarding of $25,231,210 over a period of five years to eleven projects involving fifteen institutions of higher education. In FY 2012-13, the projects will have concluded their contract period, though several have received no-cost extensions to complete project work. Funds were committed from FY 2006-07 through FY 2010-11, so no monies are allocated from the FY 2012-13 BoRSF budget for the P-KSFI.

A comprehensive mid-course assessment took place during November 2010, to evaluate both the success of the program as a whole and individual projects’ progress toward meeting established goals. Two teams of experts assessed the subprograms and submitted detailed reports to the Board of Regents. Both teams found that the subprograms had yielded strong results and the projects had been highly successful through their first three years. Of particular note, the evaluations revealed that P-KSFI projects had already significantly leveraged BoRSF funds to attain Federal and private monies. In the Primarily Research Subprogram, a Support Fund investment of $12.4 million over the first three years generated $105 million in external monies. Thus, the return on investment, even at the midpoint of these five-year awards, was approximately $8.50 for every BoRSF dollar spent. The performance of these projects will continue to be carefully monitored and evaluated by the Board until receipt and satisfactory review of the final reports.

5.5.8 Summary of FY 2012-13 Enhancement Expenditures

| Prior Commitments: | Traditional and Undergraduate Enhancement | $300,000 |
|                   | Federal Matching Grants                   | $3,000,000 |
| New Awards:       | Federal Matching Grants                   | $875,000  |
|                   | Undergraduate                              | $1,620,000 |
|                   | Endowed Professorships                     | $1,600,000 |
|                   | Two-Year Institutions                      | $1,080,000 |
|                   | Endowed Undergraduate Scholarships         | $1,000,000 |
|                   | Traditional                                | $4,794,505  |
| ENHANCEMENT PROGRAM TOTAL |                                       | $14,269,505 |
5.6 ADMINISTRATIVE EXPENSES - $953,495

Act 675 of 1989 established the following restrictions with respect to the amount of Support Fund money that may be used to administer BoRSF programs:

No more than 3% of the annual total amount appropriated to each board or eight hundred thousand dollars, whichever is smaller, shall be appropriated for such purposes to each board, subject to a thorough review with the goal of limiting such costs to those necessary and proper…

This legislation was modified by Act 698 of 2001, which specifies:

Costs attributable to the Board of Regents for use of external peer-review consultants for purposes of review, evaluation, and assessment of program proposals are recognized as costs appropriately borne by the respective Support Fund programs and shall be paid from the category of expenditure related to the program for which the review, evaluation, and assessment applies.

Act 703 of 2006 further allows the Board of Regents Support Fund administrative budget to be determined by formula:

No more than three percent of the average annual amount of actual expenditures…for the most recent three previous fiscal years for which actual expenditures are available shall be appropriated for such [administrative] purposes.

This formula yields an actual amount of $953,495 to be expended in this category during FY 2012-13.

Each program component whose expenditures are itemized in sections 5.2 through 5.5 of this Plan and Budget will incur expenditures for professional services of out-of-state consultants, estimated as follows:

<table>
<thead>
<tr>
<th>Program Component</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endowed Chairs for Eminent Scholars</td>
<td>$ 20,000</td>
</tr>
<tr>
<td>Recruitment of Superior Graduate Students</td>
<td>$ 25,000</td>
</tr>
<tr>
<td>Research and Development</td>
<td>$150,000</td>
</tr>
<tr>
<td>Enhancement</td>
<td>$ 95,000</td>
</tr>
</tbody>
</table>

The amounts estimated above will be deducted from the total amounts available for expenditure in respective program components. Estimated consultant costs for the Endowed Chairs for Eminent Scholars Program are added to the regular allocation to preserve the $400,000 units necessary for the endowments. Estimated costs for the review of Graduate Fellows subprograms are also added to the regular allocation since all funding for FY 2012-13 exists as prior commitments.
6. OVERVIEW OF FY 2012-13 BUDGETARY ALLOCATIONS BY PROGRAM COMPONENT

Table II provides an overview of FY 2012-13 Board of Regents Support Fund budgetary allocations for new projects and previous commitments.

<table>
<thead>
<tr>
<th></th>
<th>TOTAL SUPPORT FUND ALLOCATION</th>
<th>ALLOCATION FOR NEW PROJECTS</th>
<th>ALLOCATION FOR PREVIOUS COMMITMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENDOWED CHAIRS</td>
<td>$ 3,220,000</td>
<td>$ 3,220,000</td>
<td>$ 0</td>
</tr>
<tr>
<td>GRADUATE FELLOWS</td>
<td>$ 3,822,000</td>
<td>$ 1,150,000*</td>
<td>$ 3,822,000</td>
</tr>
<tr>
<td>RESEARCH &amp; DEVELOPMENT</td>
<td>$ 5,235,000</td>
<td>$ 2,385,000</td>
<td>$ 2,850,000</td>
</tr>
<tr>
<td>ENHANCEMENT**</td>
<td>$14,269,505</td>
<td>$10,969,505</td>
<td>$ 3,300,000</td>
</tr>
<tr>
<td>SUBTOTALS</td>
<td>$26,546,505</td>
<td>$16,574,505</td>
<td>$ 9,972,000</td>
</tr>
<tr>
<td>ADMIN. COSTS</td>
<td>$ 953,495</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRAND TOTAL</td>
<td>$27,500,000</td>
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</tr>
</tbody>
</table>

*Because allocations for the Graduate Fellows Program must be determined two years in advance of when students first arrive on campus, the FY 2012-13 allocation for new graduate fellowships was determined in FY 2010-11 and set forth for the first time in the FY 2011-12 Plan and Budget. Thus, this allocation for new projects must come from the FY 2013-14 budget and has not been included in the subtotal and grand total figures in this table. See Section 5.3 for a detailed explanation of the timing of the allocation process for this Board of Regents Support Fund component.

**Enhancement figures also include funds used for Federal Matching Grants opportunities.
ATTACHMENT I
<table>
<thead>
<tr>
<th>Title</th>
<th>Fiscal Years</th>
<th>Federal Award Number</th>
<th>Federal Agency</th>
<th>Duration</th>
<th>Federal Award Amt.</th>
<th>Support Fund Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSF/LaSER: The Louisiana EPSCoR Program</td>
<td>FY1989-90 – FY1992-93</td>
<td>STI-8820219</td>
<td>NSF</td>
<td>3 years</td>
<td>$1,945,312</td>
<td>$3,374,355</td>
</tr>
<tr>
<td><strong>Participating Institutions:</strong> A significant number statewide; grant funds awarded on a competitive basis.</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Description/Purpose:</strong> 1) To increase the competitiveness of Louisiana scientists and engineers in the Federal R &amp; D marketplace, 2) to effect permanent improvements in the quality of science and engineering in Louisiana, 3) to develop human resources in Louisiana in the sciences and in engineering, and 4) to ensure that improvements achieved continue with State and/or private support beyond the end of the grant period.</td>
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</tr>
</tbody>
</table>

| NSF LaSER Advanced Development Proposal (ADP)                         | FY1991-92 – FY1994-95    | EHR-9108765          | NSF            | 3 years  | $3,700,000        | $4,800,000         |
| **Participating Institutions:** A significant number statewide, organized into research clusters; grant funds awarded on a competitive basis. |
| **Description/Purpose:** 1) To increase the competitiveness of Louisiana scientists and engineers in the Federal R & D marketplace, 2) to effect permanent improvements in the quality of science and engineering in Louisiana, 3) to develop human resources in Louisiana in the sciences and in engineering, and 4) to ensure that improvements achieved continue with State and/or private support beyond the end of the grant period. |

| Louisiana Systemic Initiatives Program (LaSIP) in Math and Science Education | FY1991-92 – FY1995-96    | TPE-9150043          | NSF            | 5 years  | $10,000,000       | $10,000,000        | ($5 million each from Regents and BESE) |
| **Participating Institutions:** A significant number statewide; grant funds awarded on a competitive basis. |
| **Description/Purpose:** To reform statewide – from kindergarten through college – methods of instruction and learning in mathematics, science, and engineering education. |

| NASA Training Grant (LaSPACE)                                        | FY1991-92 – FY1995-96    | NGT-40039            | NASA           | 4 years  | $600,000          | $500,000           | (NASA and BOR portions awarded directly to LSU) |
| **Participating Institutions:** A consortium of sixteen campuses; grant funds awarded on a competitive basis. |
| **Description/Purpose:** To develop the infrastructure for aerospace research to competitive levels, while improving the quality of aerospace research and education. |

| Louisiana Collaborative for Excellence in the Preparation of Teachers (LaCEPT) Program | FY1992-93 – FY1996-97    | DUE-9255761          | NSF            | 5 years  | $4,000,000        | $2,500,000         |
| **Participating Institutions:** Centenary, Grambling, LSU-BR, LSU-S, LA Tech, Loyola, McNeese, Nicholls, ULM, NSU, SLU, SUBR, SUNO, ULL, UNO, Xavier |
| **Description/Purpose:** To improve the quality of undergraduate teacher preparation programs in mathematics and science and to increase substantially the number of mathematics and science educators. |

| U.S. Department of Energy/EPSCoR Program                             | FY1993-94 – FY1994-95    | DE-FC02-91ER75669    | DOE            | 2 years  | $1,039,590        | $1,039,590         |
| **Participating Institutions:** Grambling LA Tech, LSU-BR, Loyola, McNeese, SUBR, Tulane, ULL, ULM, UNO, Xavier |
| **Description/Purpose:** To develop the infrastructure for energy and energy-related research in Louisiana, while improving the quality of energy research and education in the State and encouraging human resource development in this area. This proposal was the result of a one-year $99,454 planning grant awarded to the Board by DOE. |
### Defense Experimental Program to Stimulate Competitive Research (DEPSCoR) Planning Program

**Title:** Defense Experimental Program to Stimulate Competitive Research (DEPSCoR) Planning Program  
**Fiscal Years:** FY1993-94  
**Federal Award Number:** DAAH04-93-G-0466  
**Federal Agency:** DOD  
**Duration:** 1 year  
**Federal Award Amt.:** $50,000  
**Support Fund Match:** $25,000

**Participating Institutions:** A significant number statewide  
**Description/Purpose:** To prepare a statewide plan for increasing the State’s capacity to perform defense-related research and technology transfer.

### 1993 DEPSCoR Implementation Program

**Title:** 1993 DEPSCoR Implementation Program  
**Fiscal Years:** FY1994-95 – FY1996-97  
**Grant Numbers:** vary  
**Federal Agency:** DOD  
**Duration:** 3 years  
**Federal Award Amt.:** $2,400,000  
**Support Fund Match:** $500,000

**Participating Institutions:** Dillard, Grambling, LSU-BR, LSUHSC-NO, SUBR, SUNO, Tulane, ULM, UNO, Xavier  
**Description/Purpose:** To conduct research and educate scientists and engineers in Louisiana in areas important to national defense.

### NASA EPSCoR Program

**Title:** NASA EPSCoR Program  
**Fiscal Years:** FY1994-95 – FY1996-97  
**Federal Award Number:** NCCW-0059  
**Federal Agency:** NASA  
**Duration:** 3 years  
**Federal Award Amt.:** $1,500,000  
**Support Fund Match:** $1,500,000

**Participating Institutions:** Dillard, LA Tech, LSU-BR, LSU Ag, LUMCON, McNeese, SUBR, Tulane, UNO, Xavier  
**Description/Purpose:** 1) To improve the infrastructure for aerospace-related research and education in Louisiana, and increase the State’s capability to perform federally-funded aerospace research; and 2) to support three multi-institutional research cluster projects.

### NSF Teaching Scholars Program

**Title:** NSF Teaching Scholars Program  
**Fiscal Years:** FY1994-95 – FY1998-99 (Supplement)  
**Federal Award Number:** DUE-9255761  
**Federal Agency:** NSF  
**Duration:** 5 years  
**Federal Award Amt.:** $500,000  
**Support Fund Match:** $250,000

**Participating Institutions:** Centenary, LA Tech, Loyola, Nicholls, SLU, SUBR, SUNO, ULL, ULM, UNO, Xavier  
**Description/Purpose:** To increase the number of minority teachers by providing a financial supplement to the Teaching Scholars program for Historically Black Colleges and Universities (HBCUs).

### NSF/EPSCoR LaSER Systemic Improvement Program (SI)

**Title:** NSF/EPSCoR LaSER Systemic Improvement Program (SI)  
**Fiscal Years:** FY1995-96 – FY1997-98  
**Federal Award Number:** OSR-9550481  
**Federal Agency:** NSF  
**Duration:** 3 years  
**Federal Award Amt.:** $4,400,000  
**Support Fund Match:** $3,000,000

**Participating Institutions:** Grambling LA Tech, LSUHSC-S, LSU-BR, Loyola, SUBR, SUNO, Tulane, ULL, UNO, Xavier  
**Description/Purpose:** 1) To stimulate systemic and sustainable improvements in the science and technology enterprise by creating centers of research excellence in the State, improving the infrastructure for scientific and engineering research and education in Louisiana, and enhancing human resources development in the sciences and engineering, thereby increasing the State's capability to perform federally-funded research of economic importance to Louisiana; and 2) to create real and meaningful research linkages between the State's Historically Black and Majority White Campuses and Universities through Joint Faculty Appointments. This proposal continued the efforts begun under the EPSCoR ADP award described above.
<table>
<thead>
<tr>
<th>Title</th>
<th>Fiscal Years</th>
<th>Federal Award Number</th>
<th>Federal Agency</th>
<th>Duration</th>
<th>Federal Award Amt.</th>
<th>Support Fund Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participating Institutions: LA Tech, LSU-BR, LSU Ag, LSUHSC-NO, NSU, SLU, SUBR, Tulane, ULL, ULM, UNO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description/Purpose: To promote research partnerships by establishing an inter-institutional audio/video (A/V) research communications network across Louisiana. The A/V network will enhance collaborative exchanges within and among the State’s EPSCoR and EPSCoR associated schools and to promote new research partnerships by eliminating geographical (distance/separation) barriers.</td>
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<td></td>
</tr>
<tr>
<td>LaSERnet II Backbone for Institutions of Higher Education in Louisiana</td>
<td>FY1997-98 – FY1999-00</td>
<td>EPS-9720147</td>
<td>NSF</td>
<td>2 years</td>
<td>$552,893</td>
<td>$0</td>
</tr>
<tr>
<td>Participating Institutions: LA Tech, LSU-BR, LSUHSC-S, LSUHSC-NO, SLU, SUBR, Tulane, ULL, ULM, UNO</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Description/Purpose: To provide researchers in the State with a high-speed intra-state backbone for sharing resources and access to broad-band (Internet II) service and direct vBNS (very Broadband Network Service) connectivity.</td>
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<tr>
<td>Participating Institutions: Grambling LA Tech, LSU-BR, Loyola, McNeese, SUBR, Tulane, ULL, ULM, UNO, Xavier</td>
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<tr>
<td>Description/Purpose: 1) To increase research competitiveness and capabilities of Louisiana scientists and engineers in areas of importance to the State and the U.S. Department of Energy; 2) to educate and recruit individuals, especially minorities and women, to work in these areas in Louisiana; 3) to provide new technologies that lead to economic development in the State; and 4) to support three multi-institutional research cluster projects.</td>
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<tr>
<td>Louis Stokes Louisiana Alliance for Minority Participation (LS-LAMP) Program</td>
<td>FY1995-96 – FY1999-00</td>
<td>HRD-9550765</td>
<td>NSF</td>
<td>5 years</td>
<td>$5,944,914</td>
<td>$2,249,280</td>
</tr>
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<td>Participating Institutions: Dillard, Grambling, LUMCON, LSU-BR, McNeese, Nunez, SUBR, SUNO, SUSBO, Tulane, ULL, UNO</td>
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<tr>
<td>Description/Purpose: To increase the number of underrepresented minorities receiving B.S. degrees in science, engineering, and mathematics in Louisiana from the baseline rate of 610 annually to an annual rate of 1,110.</td>
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<td>NASA LaSPACE Renewal Program</td>
<td>FY1996-97 – FY1999-00</td>
<td>NGT-40039</td>
<td>NASA</td>
<td>4 years</td>
<td>$600,000</td>
<td>$400,000 (NASA and BOR portions awarded directly to LSU)</td>
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<td>Participating Institutions: A consortium of sixteen campuses; grant funds awarded on a competitive basis</td>
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<tr>
<td>Description/Purpose: To continue the development of the infrastructure for aerospace research to competitive levels, while improving the quality of aerospace research and education.</td>
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## FUNDED PROPOSALS: JOINT FEDERAL/STATE PROGRAMS WITH STATEWIDE IMPACT

### Page 4 of 10

<table>
<thead>
<tr>
<th>Title</th>
<th>Fiscal Years</th>
<th>Federal Award Number</th>
<th>Federal Agency</th>
<th>Duration</th>
<th>Federal Award Amt.</th>
<th>Support Fund Match</th>
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<tr>
<td><strong>Louisiana Systemic Initiatives Program (LaSIP) Renewal in Math and Science Education</strong></td>
<td>FY1996-97 – FY2000-01</td>
<td>ESR-9634088</td>
<td>NSF</td>
<td>5 years</td>
<td>$7,000,000</td>
<td>$10,000,000 ($5 million each from Regents and BESE)</td>
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<td><strong>Participating Institutions:</strong> A significant number statewide; grant funds awarded on a competitive basis.</td>
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<tr>
<td><strong>Description/Purpose:</strong> To continue the education reform efforts begun under the original LaSIP program.</td>
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<td><strong>1995 DEPSCoR Implementation Program</strong></td>
<td>FY1996-97 – FY1998-99</td>
<td>Grant Numbers vary</td>
<td>DOD</td>
<td>3 years</td>
<td>$2,350,303</td>
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<td><strong>Participating Institutions:</strong> LSU-BR, LSUHSC-NO, SLU, Tulane</td>
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</tr>
<tr>
<td><strong>Description/Purpose:</strong> To continue previous efforts to conduct research and educate scientists and engineers in Louisiana in areas important to national defense, thus improving the State’s research infrastructure.</td>
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<tr>
<td><strong>NASA EPSCoR Program Renewal (2 years)</strong></td>
<td>FY1997-98 – FY1999-99</td>
<td>NCC5-167</td>
<td>NASA</td>
<td>2 years</td>
<td>$1,000,000</td>
<td>$1,000,000</td>
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<td><strong>Participating Institutions:</strong> Dillard, LA Tech, LSU-BR, LSU Ag, LUMCON, McNeese, SUBR, Tulane, UNO, Xavier</td>
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<tr>
<td><strong>Description/Purpose:</strong> A renewal program to 1) continue to improve the infrastructure for aerospace-related research and education in Louisiana, and increase the State’s capability to perform federally-funded aerospace research; and 2) to continue the support of three multi-institutional research cluster projects.</td>
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<tr>
<td><strong>Delta Rural Systemic Initiative in Science, Mathematics, and Technology</strong></td>
<td>FY1997-98 – FY2001-02</td>
<td>ESR-9700041</td>
<td>NSF</td>
<td>5 years</td>
<td>$10,000,000</td>
<td>$2,000,000 (divided equally between BOR and BESE)</td>
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<td><strong>Participating Institutions:</strong> A significant number; all campuses are eligible to compete.</td>
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<tr>
<td><strong>Description/Purpose:</strong> To complement and supplement current statewide math and science education reform initiatives such as LaSIP and LaCEPT. A tri-state effort involving Louisiana, Mississippi, and Arkansas, it concentrates on professional development programs for teachers, pre-service enhancement programs for educators, leadership institutes for administrators, and acquisition of supportive hardware and software in an effort to impact 64 counties and/or parishes (22 school districts in 21 parishes within Louisiana) that are rural and have major economic problems.</td>
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<td><strong>Louisiana Collaborative for Excellence in the Preparation of Teachers (LaCEPT) Program Supplemental Award</strong></td>
<td>FY1998-99 – FY2000-01</td>
<td>DUE-9816194</td>
<td>NSF</td>
<td>3 years</td>
<td>$600,000</td>
<td>$300,000</td>
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<td><strong>Participating Institutions:</strong> Grambling, LSU-BR, LSU-S, LA Tech, Loyola, Nicholls, NSU, SLCC, SLU, SUBR, SUNO, ULL ULM, UNO, Xavier</td>
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<tr>
<td><strong>Description/Purpose:</strong> To improve the quality of undergraduate teacher preparation programs in mathematics and science and to increase substantially the number of mathematics and science educators; to evaluate the effectiveness of the initial five-year award (FYs 1993-98).</td>
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<tr>
<td>Title</td>
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<td>Federal Award Number</td>
<td>Federal Agency</td>
<td>Duration</td>
<td>Federal Award Amt.</td>
<td>Support Fund Match</td>
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<td>1997 DEPSCoR Implementation Program</td>
<td>FY1997-98 – FY1999-00</td>
<td>Grant numbers vary</td>
<td>DOD</td>
<td>3 years</td>
<td>$1,770,504</td>
<td>$750,000</td>
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<td>Participating Institutions: LSU-BR, Tulane, ULL</td>
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<tr>
<td>Description/Purpose: To continue previous efforts to conduct research and educate scientists and engineers in Louisiana in areas important to national defense, thus improving the State's research infrastructure.</td>
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<td>NSF/EPSCoR New Cooperative Agreement (NCA)s</td>
<td>FY1998-99 – FY2000-01</td>
<td>EPS-9720652</td>
<td>NSF</td>
<td>3 years</td>
<td>$3,000,000</td>
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<td>Participating Institutions: A significant number statewide; grant funds awarded on a competitive basis.</td>
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<tr>
<td>Description/Purpose: 1) To enhance the competitiveness of science and engineering (S&amp;E) faculty of the State’s higher education institutions by making them more competitive in gaining national research and development support, engaging them in science and technology transfer activities with business and industry, and helping them educate effectively large numbers of S&amp;E students at both graduate and undergraduate levels; 2) to create real and meaningful linkages between the State’s HBCUs and MWCUs through the Joint Faculty Appointments Program; and 3) to foster economic development in the state by facilitating, through various initiatives, interaction between business &amp; industry, universities, and state government. This proposal continued the efforts begun under the EPSCoR ADP and SI awards previously described.</td>
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<td>1999 DEPSCoR Implementation Program</td>
<td>FY1999-00 – FY2001-02</td>
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<td>3 years</td>
<td>$1,459,473</td>
<td>$189,798</td>
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<td>Participating Institutions: LSU-BR, LA Tech, UNO</td>
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<tr>
<td>Description/Purpose: As in past DEPSCoR awards, the individual research projects funded through this award enhance the statewide research infrastructure improvement efforts.</td>
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<td>Experimental Program to Stimulate Competitive Technology (EPSCoT)</td>
<td>FY1999-00 – FY2000-01</td>
<td>60NANB9D0005</td>
<td>Dept. of Commerce</td>
<td>2 years</td>
<td>$250,000</td>
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<td>Participating Institutions: A significant number statewide</td>
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<tr>
<td>Description/Purpose: To develop and implement regional and statewide strategies to accelerate commercialization of university-based technologies, thus contributing to the economic development of the State.</td>
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<tr>
<td>NASA EPSCoR Program Continuation Funding</td>
<td>FY1999-00</td>
<td>NCC5-167</td>
<td>NASA</td>
<td>1 year</td>
<td>$400,000</td>
<td>$250,000</td>
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<tr>
<td>Participating Institutions: Dillard, LA Tech, LSU-BR, LSU Ag, LUMCON, McNeese, SUBR, Tulane, UNO, Xavier</td>
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<tr>
<td>Description/Purpose: A renewal program to 1) continue to improve the infrastructure for aerospace-related research and education in Louisiana, and increase the State's capability to perform federally funded aerospace research; and 2) to continue the support of three multi-institutional research cluster projects. This award is the sixth-year continuation of the NASA EPSCoR Program and NASA EPSCoR Program Renewal previously described.</td>
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<tr>
<td>Title</td>
<td>Fiscal Years</td>
<td>Federal Award Number</td>
<td>Federal Agency</td>
<td>Duration</td>
<td>Federal Award Amt.</td>
<td>Support Fund Match</td>
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<tr>
<td>NASA EPSCoR Preparation Grant Program</td>
<td>FY1999-00 – FY2000-01</td>
<td>NCC5-393</td>
<td>NASA</td>
<td>1 year</td>
<td>$225,000</td>
<td>$100,000</td>
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<tr>
<td>Participating Institutions: A significant number statewide. Funds are competitively awarded.</td>
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<tr>
<td>Description/Purpose: To allow Louisiana researchers to initiate contacts and promote collaborative research programs with NASA Centers and Enterprises, and begin research activities in areas of strategic importance to NASA in preparation for submission of a statewide proposal to NASA EPSCoR in 2001.</td>
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<td>NASA LaSPACE Continuation</td>
<td>FY2000-01 – FY2004-05</td>
<td>NGT5-40115</td>
<td>NASA</td>
<td>5 years</td>
<td>$1,281,250</td>
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<td>Participating Institutions: A consortium composed of sixteen campuses; grant funds are awarded on a competitive basis.</td>
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<tr>
<td>Description/Purpose: This award continues the efforts begun under the original LaSPACE program and the LaSPACE renewal described previously.</td>
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<td>EPA EPSCoR 2000 Program –Coastal Monitoring</td>
<td>FY1999-00 – FY2000-01</td>
<td>R-82778501-0</td>
<td>EPA</td>
<td>2 years</td>
<td>$483,939</td>
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<td>Participating Institutions: LUMCON, Tulane (all data obtained will be made available to scientists and students throughout the state)</td>
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<tr>
<td>Description/Purpose: To establish and maintain a series of instrument platforms by which university scientists can monitor environmental variables in coastal Louisiana for research and educational needs, thus increasing the State’s capability to compete for and perform federally-funded environmental research.</td>
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<tr>
<td>Louis Stokes Louisiana Alliance for Minority Participation (LS-LAMP) Phase II</td>
<td>FY2000-01 – FY2005-06</td>
<td>HRD-000272</td>
<td>NSF</td>
<td>5 years</td>
<td>$5,000,000</td>
<td>$2,500,000</td>
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<td>Participating Institutions: Dillard, Grambling, LUMCON, LSU-BR, McNeese, Nunez, SUBR, SUNO, SUSBO, Tulane, ULL, UNO</td>
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<tr>
<td>Description/Purpose: To continue to increase the number of underrepresented minorities in Louisiana receiving B.S. degrees in science, engineering, and mathematics.</td>
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<tr>
<td>NASA EPSCoR Preparation Grant Program Renewal</td>
<td>FY2000-01</td>
<td>NCC5-393</td>
<td>NASA</td>
<td>1 year</td>
<td>$225,000</td>
<td>$0</td>
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<td>Participating Institutions: A significant number statewide. Funds are competitively awarded.</td>
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<tr>
<td>Description/Purpose: To continue the efforts described above for the NASA EPSCoR Preparation Grant.</td>
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<td>NASA EPSCoR Program Continuation Funding (year seven)</td>
<td>FY2000-01</td>
<td>NCC5-167</td>
<td>NASA</td>
<td>1 year</td>
<td>$400,000</td>
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<td>Participating Institutions: Dillard, LA Tech, LSU-BR, LSU Ag, LUMCON, McNeese, SUBR, Tulane, UNO, Xavier</td>
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<tr>
<td>Description/Purpose: This award is the seventh-year continuation of the NASA EPSCoR Program previously described.</td>
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<td>Title</td>
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<td>Federal Agency</td>
<td>Duration</td>
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<tr>
<td>Video to the Desktop: A Louisiana Model</td>
<td>FY2000-01 – FY2001-02</td>
<td>EPS-0083089</td>
<td>NSF</td>
<td>2 years</td>
<td>$494,450</td>
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<td>Participating Institutions: LA Tech, LSU-BR, LSU Ag, LSUHSC-NO, LSUHSC-S, NSU, SLU, SUBR, Tulane, ULL, ULM, UNO</td>
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<tr>
<td>Description/Purpose: To promote research partnerships by establishing an inter-institutional H.323 research communications (videoconferencing) network, which will operate over existing Internet lines instead of over telephone lines, and allow desktop-to-desktop multimedia communications.</td>
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<tr>
<td>Louisiana EPScoR Research Infrastructure Improvement (RII)</td>
<td>FY2001-02 – FY2003-04</td>
<td>EPS-0092001</td>
<td>NSF</td>
<td>3 years</td>
<td>$9,000,000</td>
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<td>Participating Institutions: A significant number statewide, including LA Tech, LSUHSC-NO, UNO, Grambling, LSU-BR, SUBR, Tulane, Xavier, NSU, ULM. A portion of the grant funds will be awarded on a continuing, competitive basis.</td>
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<tr>
<td>Description/Purpose: This award funds the “Micro/Nano Technologies for Advanced Physical, Chemical, and Biological Sensors” research consortium in addition to a variety of initiatives to enhance the competitiveness of science and engineering (S&amp;E) faculty of the State’s higher education institutions. This proposal continues the efforts begun under the EPScoR ADP, SI, and NCA awards previously described.</td>
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<td>NASA EPScoR 2000</td>
<td>FY2001-02 – FY2003-04</td>
<td>NCC5-573</td>
<td>NASA</td>
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<td>Participating Institutions: LSU-BR, LUMCON, Tulane, Dillard, ULL, UNO, Xavier. A portion of the grant funds will be awarded on a continuing, competitive basis.</td>
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<tr>
<td>Description/Purpose: 1) To develop and strengthen long-term academic research enterprises that will make significant contributions to the strategic research and technology priorities of NASA and, in turn, to contribute to the overall research infrastructure, science and technology capabilities, higher education, and economic development of the State; and 2) to support three multi-institutional research projects.</td>
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<td>EPA EPScoR 2001 Program – Climate Change</td>
<td>FY2002-03 – FY2003-04</td>
<td>R-82642001-0</td>
<td>EPA</td>
<td>2 years</td>
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<td>Participating Institutions: LUMCON, ULL, LSU-BR</td>
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<tr>
<td>Description/Purpose: To enhance Louisiana's capability for understanding and predicting the effects of climate change on the state's coastal ecosystems, thus increasing the State’s capability to compete for and perform federally-funded environmental research.</td>
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<td>Louisiana's Strategic Infrastructure Improvement (LSII)</td>
<td>FY2003-04 – FY2005-06</td>
<td>EPS-0346411</td>
<td>NSF</td>
<td>3 years</td>
<td>$9,000,000</td>
<td>$3,000,000</td>
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<td>Participating Institutions: A significant number statewide, including LSU-BR, LSUHSC-NO, SUBR, Tulane, ULL, ULM, UNO, Xavier. A portion of the grant funds will be awarded on a continuing, competitive basis.</td>
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<tr>
<td>Description/Purpose: This award funds the “Center for Bio-Modular Multi-Scale Systems” in addition to a variety of initiatives to enhance the competitiveness of science and engineering (S&amp;E) faculty of the State’s higher education institutions. This proposal continues the efforts begun under the EPScoR ADP, SI, NCA, and RII awards previously described.</td>
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### FUNDED PROPOSALS: JOINT FEDERAL/STATE PROGRAMS WITH STATEWIDE IMPACT

#### Title: NASA EPSCoR 2000 Renewal

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<th>Federal Award Number</th>
<th>Federal Agency</th>
<th>Duration</th>
<th>Federal Award Amt.</th>
<th>Support Fund Match</th>
</tr>
</thead>
</table>

**Participating Institutions:** LSU-BR, LUMCON, Tulane, Dillard, ULL, UNO, Xavier. A portion of the grant funds will be awarded on a continuing, competitive basis.

**Description/Purpose:** A two-year renewal of the NASA EPSCoR 2000 Program to 1) To develop and strengthen long-term academic research enterprises that will make significant contributions to the strategic research and technology priorities of NASA and, in turn, to contribute to the overall research infrastructure, science and technology capabilities, higher education, and economic development of the State; and 2) to support multi-institutional research projects.

### Title: DOE EPSCoR Implementation 2004

<table>
<thead>
<tr>
<th>Fiscal Years</th>
<th>Federal Award Number</th>
<th>Federal Agency</th>
<th>Duration</th>
<th>Federal Award Amt.</th>
<th>Support Fund Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2004-05 – FY2006-07</td>
<td>DE-FG02-04ER46136</td>
<td>DOE</td>
<td>3 years</td>
<td>$1,200,000</td>
<td>$1,200,000</td>
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</tbody>
</table>

**Participating Institutions:** ULL, LSU-BR, SUBR

**Description/Purpose:** To develop the infrastructure for energy and energy-related research in Louisiana, while improving the quality of energy research and education in the State and encouraging human resource development in this area. This award funds the multi-institutional, multidisciplinary research project entitled “Ubiquitous Computing and Monitoring System (UCoMS) for Discovery and Management of Energy Resources.”

### Title: LAMP Phase III

<table>
<thead>
<tr>
<th>Fiscal Years</th>
<th>Federal Award Number</th>
<th>Federal Agency</th>
<th>Duration</th>
<th>Federal Award Amt.</th>
<th>Support Fund Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2005-06 – FY2009-10</td>
<td>HRD-0503362</td>
<td>NSF</td>
<td>5 years</td>
<td>$2,500,000</td>
<td>$2,500,000</td>
</tr>
</tbody>
</table>

**Participating Institutions:** Dillard, Grambling, LUMCON, LSU-BR, McNeese, Nunez, SUBR, SUNO, SUS, Tulane, ULL, UNO

**Description/Purpose:** To continue to increase the number of underrepresented minorities in Louisiana receiving B.S. degrees in science, engineering, and mathematics, and to transition at least 30% of these graduates to graduate school by 2010.

### Title: NASA LaSPACE Continuation II

<table>
<thead>
<tr>
<th>Fiscal Years</th>
<th>Federal Award Number</th>
<th>Federal Agency</th>
<th>Duration</th>
<th>Federal Award Amt.</th>
<th>Support Fund Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2005-06 – FY2009-10</td>
<td>NNG05GH22H</td>
<td>NASA</td>
<td>5 years</td>
<td>At least $1,280,000</td>
<td>$1,000,000</td>
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</tbody>
</table>

**Participating Institutions:** A consortium composed of sixteen campuses; grant funds are awarded on a competitive basis.

**Description/Purpose:** This award continues the efforts begun under the original LaSPACE program and the LaSPACE renewals described previously.

### Title: NASA EPSCoR Phase 3

<table>
<thead>
<tr>
<th>Fiscal Years</th>
<th>Federal Award Number</th>
<th>Federal Agency</th>
<th>Duration</th>
<th>Federal Award Amt.</th>
<th>Support Fund Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2006-07 – FY2011-12</td>
<td>NNX07AL03A, NNX07AT62A, NNX07AT67A</td>
<td>NASA</td>
<td>6 years</td>
<td>$2,175,000</td>
<td>$2,125,000</td>
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</tbody>
</table>

**Participating Institutions:** LSU-BR, SUBR. A portion of the grant funds will be awarded to these and other institutions on a continuing, competitive basis.

**Description/Purpose:** 1) To develop and strengthen long-term academic research enterprises that will make significant contributions to the strategic research and technology priorities of NASA and, in turn, to contribute to the overall research infrastructure, science and technology capabilities, higher education, and economic development of the State; and 2) to support two research projects of particular interest to NASA, one studying adhesively bonded joints in composite structures and one focusing on high-energy astrophysics.
### FUNDED PROPOSALS: JOINT FEDERAL/STATE PROGRAMS WITH STATEWIDE IMPACT

**Page 9 of 10**

<table>
<thead>
<tr>
<th>Title</th>
<th>Fiscal Years</th>
<th>Federal Award Number</th>
<th>Federal Agency</th>
<th>Duration</th>
<th>Federal Award Amt.</th>
<th>Support Fund Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>Louisiana EPSCoR Research Infrastructure Improvement (CyberRII)</td>
<td>FY2006-07 – FY2008-09</td>
<td>EPS-0701491</td>
<td>NSF</td>
<td>3 years</td>
<td>$9,000,000</td>
<td>$3,000,000</td>
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</table>

**Participating Institutions:** A significant number statewide, including LSU-BR, LSHSC-NO, LA Tech, SUBR, Tulane, Tulane Health Sciences Center, Xavier, ULL, UNO. A portion of the grant funds will be awarded to these and other institutions on a continuing, competitive basis.

**Description/Purpose:** The focus of this project is the development of multi-functional cyberinfrastructure (CyberTools) that will broadly enable significant advances in modern science and engineering. In addition, a variety of initiatives to enhance the competitiveness of science and engineering (S&E) faculty of the State’s higher education institutions are also supported. This project continues the efforts begun under the EPSCoR ADP, SI, NCA, RII, and LSII awards previously described.

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**DOE EPSCoR Implementation Renewal**  
FY2007-08 – FY2009-10  
DE-FG02-04ER46136  
DOE  
3 years  
$900,000  
$1,200,000

**Participating Institutions:** ULL, LSU-BR, SUBR

**Description/Purpose:** This is a three-year renewal of the DOE EPSCoR program, which seeks to develop the infrastructure for energy and energy-related research in Louisiana, while improving the quality of energy research and education in the State and encouraging human resource development in this area. This award funds the multi-institutional, multidisciplinary research project entitled “Ubiquitous Computing and Monitoring System (UCoMS) for Discovery and Management of Energy Resources.”

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**NASA EPSCoR 2009 Research 3**  
FY2009-10 – FY2011-12  
NNX09AP72A  
NASA  
3 years  
$750,000  
$750,000

**Participating Institutions:** LSU-BR, LA Tech, SUBR

**Description/Purpose:** Support for a research project to develop thermal barrier coatings with high reflectance in both the visible and infrared bandwidth to reduce the thermal radiation transport. Such nano-structured TBCs would make significant contributions to NASA’s efforts to develop advanced thermal barrier systems for jet engine propulsion.

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**NASA EPSCoR 2009 Research 4**  
FY2009-10 – FY2011-12  
NNX10AP07A  
NASA  
3 years  
$750,000  
$750,000

**Participating Institutions:** LSU-BR, LA Tech, SUBR

**Description/Purpose:** This research program will investigate existing and novel microorganisms with tolerances to cold, desiccation, and radiation as models for astrobiology. The expected outcomes include the development of fundamental astrobiological concepts and operational capabilities that would promote the success of future NASA-driven life detection missions, inform policies on planetary protection, and lay the foundation for a new space research enterprise in Louisiana.

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**Louisiana EPSCoR Research Infrastructure Improvement (LA-Sigma)**  
FY2009-10 – FY2013-14  
EPS-1003897  
NSF  
5 years  
$20,000,000  
$10,000,000

**Participating Institutions:** A significant number statewide, including LSU-BR, Grambling, LA Tech, SUBR, Tulane, Xavier, and UNO. A portion of the grant funds will be awarded to these and other institutions on a continuing, competitive basis.

**Description/Purpose:** The research component of the NSF EPSCoR project will create the Louisiana Alliance for Simulation-Guided Materials Applications (LA-Sigma). Program objectives include: building the next generation of experimentally validated formalisms, algorithms, and codes for multiscale materials simulations; implementing them on present and next generation super-computers; and educating the next generation of a highly skilled workforce of materials scientists and engineers.
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<tr>
<th>Title</th>
<th>Fiscal Years</th>
<th>Federal Award Number</th>
<th>Federal Agency</th>
<th>Duration</th>
<th>Federal Award Amt.</th>
<th>Support Fund Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASA LaSPACE Renewal</td>
<td>FY2010-11 – FY2014-15</td>
<td>NNX10AI40H</td>
<td>NASA</td>
<td>5 years</td>
<td>At least $3,145,000</td>
<td>$1,250,000</td>
</tr>
</tbody>
</table>
| **Participating Institutions:** A consortium composed of sixteen campuses; grant funds are awarded on a competitive basis  
**Description/Purpose:** This award continues the efforts begun under the original LaSPACE program and the LaSPACE renewals described previously. |
| LAMP Phase IV (Senior-Level Alliance)     | FY2010-11 – FY2014-15 | HRD-1002541          | NSF            | 5 years  | $2,500,000         | $2,500,000         |
| **Participating Institutions:** Dillard, Grambling, LUMCON, LSU-BR, McNeese, Nunez, SUBR, SUNO, SUSBO, Tulane, ULL, UNO, Xavier  
**Description/Purpose:** The purpose of the LAMP program is to increase the number of underrepresented minorities in Louisiana receiving degrees in science, engineering, and mathematics. Phase IV will continue a comprehensive set of institutional transformation and systemic mentoring activities, with special emphasis on the progression of minority STEM students to and through graduate school and their transition to research-based careers that include the professoriate. |
| NASA EPSCoR 2009 Research 5               | FY2011-12 – FY2013-14 | NNX11AM17A           | NASA           | 3 years  | $750,000           | $750,000           |
| **Participating Institutions:** LSU-BR, SUBR  
**Description/Purpose:** This research program will provide NASA with more durable, reliable, lighter, safer, and smarter composite sandwich structures, create knowledge and develop enabling technology in self-healing composite materials/structures, and enhance related research infrastructure and workforce training at LSU and SU. |
ATTACHMENT II
Board of Regents Support Fund
Results of Selected Projects

ENHANCEMENT

An award made to Fletcher Technical Community College through the Enhancement Program for Two-Year Institutions has helped to strengthen the production safety systems course and training laboratory by acquiring new equipment and materials that allow students to learn on real-life systems. Students, most of whom go on to work for offshore oil companies, are able to receive hands-on training in activating and calibrating equipment crucial to preventing accidental release of hydrocarbons. This equipment supports a program of high value to the Gulf oil industry and unique in the region. Students who have been trained on the equipment have been highly successful in securing internships and promises of permanent positions upon completion of the program. \{LEQSF(2010-11)-ENH-PEN-08; John Hamner, PI\}

A Traditional Enhancement award at Tulane University has enabled the Biomedical Engineering program to incorporate engineering design into its curriculum. The project aided development of a design studio teaching laboratory that, in concert with curriculum revisions, provides students with opportunities that prepare them both for professional practice and translational research. These enhancements link computer-aided design of biomedical devices to computer-aided engineering, virtual testing, and iterative improvement of designs using industry-standard design and analysis software. Through access to these tools and approaches, the program better prepares students for the high-tech workforce, engages their creativity and innovative imaginations, and even allows faculty research to evolve in unanticipated ways. \{LEQSF(2009-10)-ENH-TR-55; Ronald Anderson, PI\}

Louisiana State University has continued to address Louisiana’s demand for high-quality, well-trained K-12 teachers in math, science, engineering and technology fields through a Traditional Enhancement award designed to boost teacher participation in professional master’s degree programs. Board of Regents support enabled LSU to launch a new track of the Master’s of Natural Science degree program designed specifically for in-service math and science teachers. Attracting teachers throughout the region, the program to date has graduated more than 20 students and secured over $20 million in external funding in support of program and closely allied activities. \{LEQSF(2008-10)-ENH-TR-10; James Madden, PI\}

Undergraduate Enhancement funding has helped Centenary College to integrate state-of-the-art 2D and 3D design resources into the Department of Art and Visual Culture through establishment of a digital 2D and 3D modeling computer lab. The new equipment and capacity have already enabled professors and students to create a public sculpture for the Port of Shreveport/Bossier City as well as produce large-scale, professionally printed photographs for

1 BoRSF Results of Selected Projects (Attachment II, BoRSF Plan & Budget FY 2012-13)
public buildings in the Shreveport and Bossier City area. This modeling technology, at the cutting edge of the booming field of digital design, provides students with skills critical to success in the workforce and graduate study in studio arts, design, and related fields.  
\{LEQSF(2010-11)-ENH-UG-01; Bruce Allen, PI\}

**Bossier Parish Community College** has used an Enhancement Program for Two-Year Institutions grant to augment its Technical Competency Certificate in Biotechnology, to better prepare students for work in all phases of the industry, from production to research and development and quality control. This project was designed with extensive input from economic development entities and industry employers, to ensure workforce needs are addressed. The highly sophisticated equipment and level of faculty expertise are unusual for a two-year campus, and the program is unique among Louisiana’s community colleges. The result of BoRSF funding is elevated capacity to prepare students for four-year training programs, enhanced hands-on training opportunities, and increased opportunities in the regional high-tech workforce.  
\{LEQSF(2010-11)-ENH-PEN-04; Margaret Cox, PI\}

A Traditional Enhancement award at the **University of Louisiana at Monroe** has assisted in the establishment of a unified online virtual herbarium for the State. A consortial project involving all fifteen of Louisiana’s herbaria, this project supports the imaging and databasing of more than 1.1 million specimens. A National Science Foundation grant in 2009 created CyberFlora Louisiana to begin the imaging and cataloging work; the Enhancement award supplements and expands on this award, increasing the imaging capacity of ULM, which houses more than 30% of the specimens held statewide. An additional benefit of the Enhancement funding is the development of interactive exhibits for ULM’s Museum of Natural History. These exhibits will use virtual reality technology to provide an immersive experience for attendees and make the herbarium collection both more accessible and more applicable for classroom and virtual use.  
\{LEQSF(2009-11)-ENH-TR-74; Thomas Sasek, PI\}

Funding from the Enhancement Program for Two-Year Institutions has helped **Nunez Community College** establish a center for child-care professionals and students in the Care and Development of Young Children and Teaching programs to gather, interact, and pursue professional development. The project included creation of a website, which has dramatically improved communication and awareness among students, faculty, teaching professionals, and the general public. In addition, the Center was able to provide support to child-care facilities which enabled them to build and maintain high ratings through the Quality Start Louisiana Program. The variety of activities managed through the Center ensures that it has an impact on the community in myriad ways: training quality child-care professionals for the workforce, providing a space for students and professionals to interact, and participating in community service activities throughout the region.  
\{LEQSF(2010-11)-ENH-PEN-10; Tonia Loria, PI\}
A Traditional Enhancement award has enabled **Southeastern Louisiana University** to upgrade and modernize the vivarium facilities housing two captive colonies of red-ear slider turtles. The turtle colony, used by graduate and undergraduate students as well as faculty members, represents a major resource for Southeastern’s environmental programs and a strong recruitment tool for potential students in the biological sciences. With Enhancement funding, the vivarium is now available for student access as well as public display, and outfitted for faculty and students to conduct studies of turtle reproduction. The completion of the new facility is particularly important in the wake of the 2010 Deepwater Horizon disaster, as researchers are pursuing activities and major funding to study the effects of crude oil and dispersant exposure on native Louisiana populations. \{LEQSF(2009-10)-ENH-TR-51; Roldan Valverde, PI\}

Principal investigators at **Louisiana State University in Shreveport** have used an Undergraduate Enhancement award to establish interdisciplinary programs to train students in biological and computer sciences to compete in the global marketplace. BoRSF support has enabled the purchase of multiple workstations to support bioinformatics training and foster collaborative work and thought among participating students. To accommodate the requirements of this interdisciplinary approach and the capabilities of the equipment, faculty members have developed teaching modules to enhance students’ problem-solving and data analysis abilities, as well as train them in the use of bioinformatics technology. But beyond just classroom learning, the project gives college and high school students opportunities for hands-on experience with scientific research. These interactions are fostering collaborative thinking and problem-solving skills essential for the 21st-century workplace and the high-tech environment. \{LEQSF(2009-10)-ENH-UG-22; Stephanie Aamodt, PI\}

The Psychology Department’s Clinic at the **University of New Orleans** has been restored in the wake of Hurricane Katrina thanks in part to funding through the Traditional Enhancement Program. Through BoRSF support, the clinic was able to begin offering services to the New Orleans metropolitan community at a reduced rate; by summer 2011, 62 individuals and families had received clinical services and the department had established connections with numerous local agencies for clinical and research purposes. In addition, undergraduate and graduate students have engaged in clinical training services, receiving professional observation and supervision while helping at the clinic. Significantly, Enhancement support has been successfully leveraged to attract other external funding to sustain and grow clinic activities, with $100,000 per year in NIH research support as well as self-generated funds from services rendered. Restoration of UNO’s Psychology Clinic benefits the department, the university, and New Orleans through the provision of essential community services, enhanced training opportunities for students and faculty, and recruitment of additional graduate and undergraduate students into this vital field. As New Orleans continues to recover from Hurricane Katrina, and from more recent disasters like the 2010 Gulf oil spill, sustainable services through entities like this clinic will be critical to the resiliency of the community. \{LEQSF(2009-11)-ENH-TR-78; Michelle Martel, PI\}
RESEARCH AND DEVELOPMENT

Research Competitiveness Subprogram (RCS)

An RCS researcher at LSU Health Sciences Center – New Orleans, in collaboration with partners at Louisiana State University, is investigating a novel protein, insulinoma-associated 1, to determine its role in small cell lung carcinoma, a form of lung cancer. RCS support enabled the development of an animal model to study the protein in vivo, to better understand its function both in normal lung development and in lung cancers. Data collected from this animal model will be unique and will make a significant contribution to published literature. Four publications have already resulted from funded research, speaking to the success of the research. Study of lung cancers is particularly important for Louisiana, where it is the most frequently diagnosed cancer and the leading cause of cancer death. \{LEQSF(2007-10)-RD-A-16; Mary Breslin, PI\}

Thanks in part to an RCS award, a principal investigator at the University of Louisiana at Lafayette has established a highly competitive research program focused on geometric structures and their applications in broad engineering fields: computer graphics, computer vision, and wireless sensor networks. The rapidly growing field uses concepts from mathematics, computer science, and engineering to enable reconstruction, analysis, manipulation, and simulation of three-dimensional models, greatly in demand across a variety of digital imaging and engineering fields. Though the RCS project is still ongoing, the principal investigator has already developed a significant national profile, with fourteen peer-reviewed research articles either published or in press (one featured on the cover of a top academic journal), six invited presentations, and substantial external funding. In 2010, she received NSF’s Faculty Early Career Development (CAREER) award, a prestigious five-year, $400,000 grant, as well as participating in a second major NSF award studying 3D wireless sensor networks. In addition to supporting the principal investigator’s own research, the project has helped train two graduate students, one of whom has published four papers during the grant term. To build on this strong research foundation, the principal investigator has also developed a new graduate course in discrete geometry processing. \{LEQSF(2009-12)-RD-A-21; Miao Jin, PI\}

A principal investigator at Xavier University of Louisiana has shown success in combining traditional biological sciences research with cutting-edge data mining to study Alu elements, primate-specific short interspersed elements comprising 11% of the human genome. The goal of the project was to develop the first customized data mining framework to determine the bases in the DNA framework that affect Alu insertions. The project’s substantial advancement toward this goal is important for the treatment and prevention of cancer as well as other genetic diseases. The focus on bioinformatics has enabled the principal investigator to use computer science, mathematics, and information technology to collect, organize, and analyze volumes of biological data, and significantly advance our ability to use the human gene to understand and fight disease. The results of the project have already been substantial: two prestigious peer-reviewed journal
articles, several regional, national and international presentations, and six funded awards from the National Institutes of Health and the Department of Defense, totaling more than $1.5 million. \textit{LEQSF(2008-11)-RD-A-32; Kun Zhang, PI}

Through RCS funding, a principal investigator at \textbf{Louisiana State University} has successfully established a coastal sediment stability study laboratory within the Department of Civil and Environmental Engineering to study biodegradable polymers and their potential use in addressing coastal erosion and wetland loss, issues of significant concern for Louisiana. The principal investigator’s research has shown promising early results, yielding six peer-reviewed articles published or in press and over $500,000 in external funding from the Office of Naval Research and the Louisiana Universities Marine Consortium. The lab is now fully equipped, with several graduate and undergraduate students assisting with project and related research. In addition, the project has promoted synergistic partnerships across departments and institutions, particularly the Naval Research Laboratory at the Stennis Space Center in Mississippi. \textit{LEQSF(2007-10)-RD-A-15; Guoping Zhang, PI}

An RCS principal investigator at \textbf{Tulane University} has recently received a prestigious NSF Faculty Early Career Development (CAREER) award for his work in developing a novel gel micropatterning technique that is simple, fast, and reproducible. The approach forms the foundation for 3D tissue culture systems in which structural and molecular microenvironments can be systematically altered, providing a new platform for tissue culture experiments. The materials and methods developed by the principal investigator, in addition to being highly useful in his ongoing research, may potentially be commercialized for the research market. The results of this highly successful project have been disseminated to national and international audiences through invited conference presentations and two major peer-reviewed journal articles. Further research in this area will be supported through the $500,000, five-year NSF CAREER award. \textit{LEQSF(2009-10)-RD-A-18; Michael Moore, PI}

\textbf{Industrial Ties Research Subprogram (ITRS)}

A team of researchers at the \textbf{LSU Agricultural Center} has used ITRS funding to pursue critical research related to the area of alternative fuels, investigating biodiesel production from soybeans and rice bran. In particular, investigators studied the use of microwave technology in fuel production, using ITRS funding to move research from a laboratory scale to pilot scale, a crucial step in determining viability of the method for the marketplace. Results of these studies show that biofuels from soybeans provide a better net energy balance (ratio of energy required to produce the fuel to energy produced from the fuel) than petroleum diesel, and economic analysis indicates that the use of microwave technology is a promising approach to reducing overall costs and moving production to an industrial scale. Over the course of the project, the research generated seventeen research papers and invited presentations. Numerous graduate and
undergraduate students directly benefited from the project by engaging in research activities, participating in writing manuscripts for publication, gaining admission to graduate school, and securing industry positions. \{LEQSF(2007-10)-RD-B-01; Dorin Boldor, PI\}

An ITRS project at **Louisiana Tech University** is working to create a sensory system to recognize defects in and predict failures of critical infrastructure. Buried pipe systems deteriorate over time under the loads they were designed to accommodate. Hidden damage and failure can cause collapse of structures, loss of service, environmental damage, and disruption to adjacent communities. Critical to infrastructure management, then, is availability of data that provide a picture of the condition and potential problems of facilities and equipment and enable managers to identify appropriate rehabilitation measures before failure occurs. ITRS funding has supported the development of one of the most advanced pipeline condition assessment sensors currently existing, which uses innovative technology recognized by the Association of University Technology Managers (AUTM) and featured at the 2009 InnovationState annual conference. As a result of this research, principal investigators have filed three patents related to both the methodology and equipment. This transformative research is expected to establish a new standard for evaluating the structural integrity of critical civil infrastructure systems, and is a key element in the elevation of Louisiana Tech’s Trenchless Technology Center into a national leader in the development of advanced condition assessment technologies for buried pipes. \{LEQSF(2009-12)-RD-B-05; Erez Allouche, PI\}

A researcher at **Pennington Biomedical Research Center** has developed novel and innovative cell therapy applications that have resulted in a strong industrial partnership and two patent applications jointly owned by Pennington and the industrial partner, NuPotential, Inc. The goal of the project was to develop a novel source of pluripotent cells – cells able to differentiate into different cell types – to be used for cell therapies or to screen drug molecules designed to affect cell differentiation. These cells provide two key advantages: first, a patient’s own cells can be used to develop therapies; and second, new sources of cells can help address current limited supplies of adult and embryonic stem cells available for research. Highly successful to date, this project and its successful industrial partnership contributed to the principal investigator receiving the Louisiana Technology Council’s Governor’s Award in 2011. \{LEQSF(2008-11)-RD-B-06; Kenneth Eilertsen, PI\}

**Awards to Louisiana Artists and Scholars (ATLAS) Subprogram**

A jazz trumpet player/composer at the **University of New Orleans** and 2009 Grammy Award winner has used a one-year ATLAS award to complete a jazz suite titled *Elysian Fields*, that serves as a tribute to the victims of Hurricane Katrina – particularly his own father – and a poignant celebration of the rebirth of New Orleans. The piece, performed by the New Orleans Jazz Orchestra, premiered at UNO’s Commencement exercises and in a free concert in New Orleans.
Orleans’ Washington Square Park in May 2010. The Orchestra has gone on to perform the piece at festivals across the country and on an eight-city tour of Brazil throughout the summer and fall of 2010; their tour culminated in a performance at Carnegie Hall in New York. One reviewer has called the work “modern, thrilling, and swinging… absorbingly intelligent jazz.” The piece, endorsed by the French Consulate in New Orleans, is also set to be performed in Paris, France, on the Champs Elysées. {LEQSF(2009-10)-RD-ATL-10; Irvin Mayfield, PI}

In summer 2011, a faculty member at the University of Louisiana at Lafayette completed a major gallery project and book, titled Pacha Mama: earth realm, with assistance from a BoRSF ATLAS award. The book includes 30 artworks, Sanskrit prayers, essays about nature from noted healers Kathi von Koerber and Michele Baker, and poetry written for the project by Darrell Bourque, Louisiana’s poet laureate. The series Pacha Mama: earth realm was presented at Red Bud Galley in Houston, Texas, in May and at the Acadiana Center for the Arts in Lafayette, Louisiana, in November 2011. {LEQSF(2010-11)-RD-ATL-10; Lynda Frese, PI}

An ATLAS principal investigator at Louisiana State University has recently completed a major study of the rise and significance of the written word in English, Middle-Class Writing in Late Medieval London, published by Pickering & Chatto. The work is a major contribution to the understanding of both the history of written English and the function of writing amongst the middle classes. Though commonly understood as illiterate, Londoners in the late Middle Ages used writing in sophisticated ways to conduct their daily lives. A dramatic shift in writing habits, from an upper class activity to a broad social practice, led to the growth of ‘private’ writing and particularly the use of writing among women. The PI used a one-year ATLAS award to complete work on the book and prepare it for publication. {LEQSF(2008-09)-RD-ATL-07; Malcolm Richardson, PI}

POST-KATRINA SUPPORT FUND INITIATIVE

Through a five-year P-KSFI Primarily Research Subprogram grant, a research team at LSU Health Sciences Center – New Orleans has established the Louisiana Vaccine Center (LVC), a Board of Regents-recognized Center of Excellence for vaccine research and development. This Center, funded with $5.5 million from the P-KSFI, has leveraged $51 million in new external grants from the National Institutes of Health and other Federal agencies. In addition, the LVC has shown strong early results from its research commercialization efforts, yielding 18 invention disclosures in vaccine-related research, four provisional patents, and one international patent cooperation treaty. Working with developing LVC research, one startup business has been incorporated, two additional business plans are in development, four industry partnerships have been established, and one SBIR/STTR grant has been attained. The LVC’s ultimate goal, which it is well on the way to achieving, is to establish the Center as a major venue for vaccine-related
Thanks to five-year funding through a Post-Katrina Support Fund Initiative Primarily Education Subprogram award, Xavier University of Louisiana has restructured, streamlined, and improved the curricula for its General Biology courses. Prior to the grant, faculty had noted a marked decrease in student understanding of fundamental principles and a corresponding decline in performance as measured by test scores, grades and pass/fail rates. The funded P-KSFI project, “Biothrust 21, A Post-Katrina Recovery Initiative: Producing a Better Prepared 21st Century Biosciences Workforce for Louisiana and the Nation”, proposed a creative approach to curricular redesign to accomplish three major goals: improvement of student learning and performance; improvement of student retention; and an increase in the number of graduates well-trained and ready to handle the needs of Louisiana and the nation in the ever-expanding field of biological sciences. As a result of work undertaken with P-KSFI support, within three years student performance has shown dramatic improvement. General biology courses have seen steadily trending decreases in the percentage of failing and near-failing grades and corresponding increases in class grade point averages and course pass rates. The project leaders have also successfully integrated tutoring requirements for at-risk and low-performing students and new technology to measure and test student learning. Both of these elements have contributed measurably to student success. During a 2010 project assessment, the Xavier curriculum development project was praised by a team of external evaluators as a model for other biological sciences programs in need of redesign or restructuring.

Delgado Community College, in partnership with Southeastern Louisiana University, has used a four-year Post-Katrina Support Fund Initiative Primarily Education Subprogram award to establish an articulation program between the two institutions in the area of Computer and Information Sciences. The original intent of the grant was to respond to the setbacks caused by Katrina and help post-Katrina workforce development by increasing educational and training opportunities for students in the computer and information sciences. The project has focused on new courses and revised curricula as well as resource sharing at Delgado and Southeastern, which feed into an articulation agreement enabling students to transfer seamlessly from Delgado’s two-year to Southeastern’s baccalaureate programs. To date, both campuses have accomplished major curricular and course revisions, designed several new courses and concentrations, implemented targeted assessment methodologies, and upgraded facilities and equipment. Delgado has established a new web design and digital media lab and a start-up lab for information technology security/assurance and support. Southeastern has implemented the Network Systems Administration Laboratory and integrated this new facility into curricular offerings, including tutoring support for Delgado students. During the final years of the grant, the partners are completing work on the articulation program and exploring further collaborations.
across departments and the institutions, to maximize the reach of this investment. In addition, the partners are preparing for the first students to enroll in the transfer program to move from Delgado to Southeastern. {LEQSF(2007-11)-ENH-PKSFI-PES-01; Warren Duclos, PI}

LOUISIANA EPSCoR

The Board of Regents committed matching funds to a Louisiana EPSCoR program that in 2010 was awarded a five-year $20 million grant from the National Science Foundation (NSF)—the largest single award ever made by NSF to Louisiana—for a major research and education project involving seven campuses. The researchers will leverage existing statewide computational, experimental, and intellectual assets to design useful, cost-effective, and environmentally friendly new materials for specific tasks. The power of modern computers and sophisticated computational tools will enable researchers to develop and test these materials quickly and economically using simulations. The institutions involved in the project, known as the Louisiana Alliance for Simulation-Guided Materials Applications, or LA-SiGMA, are: Grambling State University, Louisiana State University – Baton Rouge, Louisiana Tech University, Tulane University, Southern University – Baton Rouge, the University of New Orleans, and Xavier University of Louisiana.

Louisiana EPSCoR was also successful in securing two additional EPSCoR awards in 2010: a $2.1 million Research Infrastructure Improvement (RII) Track 2 project that, in conjunction with researchers in Alabama and Mississippi, establishes the Northern Gulf Coast Hazards Collaboratory to address engineering design, coastal system response, and risk management of coastal hazards; and a $1.2 million RII Cyberinfrastructure Connectivity (C2) project to connect Xavier University of Louisiana to the Louisiana Optical Network Initiative, or LONI.
ATTACHMENT III
### TAXONOMY OF DISCIPLINES USED IN THE BOARD OF REGENTS SUPPORT FUND PROGRAMS

#### NATURAL SCIENCES - BIOLOGICAL

- **Agriculture**
  - 0101 Agricultural Economics
  - 0102 Agricultural Production
  - 0103 Agricultural Sciences
  - 0104 Agronomy
  - 0105 Animal Sciences
  - 0106 Fishery Sciences
  - 0107 Food Sciences
  - 0108 Forestry and Related Sciences
  - 0109 Horticulture
  - 0110 Resource Management
  - 0111 Parks and Recreation Management
  - 0112 Plant Sciences (Except Agronomy, see 0104)
  - 0113 Renewable Natural Resources
  - 0114 Soil Sciences
  - 0115 Wildlife Management
  - 0199 Agriculture - Other

- **Biological Sciences**
  - 0201 Anatomy
  - 0202 Biochemistry/Biophysics
  - 0203 Biology
  - 0204 Biometry
  - 0205 Botany
  - 0206 Cell and Molecular Biology
  - 0207 Ecology
  - 0208 Embryology
  - 0209 Entomology and Parasitology
  - 0210 Genetics
  - 0211 Marine Biology
  - 0212 Microbiology
  - 0213 Neurosciences
  - 0214 Nutrition
  - 0215 Pathology
  - 0216 Pharmacology
  - 0217 Physiology
  - 0218 Radiobiology
  - 0219 Toxicology
  - 0220 Zoology
  - 0299 Biological Sciences - Other

#### NATURAL SCIENCES - BIOLOGICAL (CONTINUED)

- **Health and Medical Sciences**
  - 0601 Allied Health
  - 0602 Audiology and Speech Pathology
  - 0603 Chiropractic
  - 0604 Dental Sciences
  - 0605 Environmental Health
  - 0606 Epidemiology
  - 0607 Health Science Administration
  - 0608 Immunology
  - 0609 Medical Sciences
  - 0610 Nursing
  - 0611 Optometry
  - 0612 Osteopathic Medicine
  - 0613 Pharmaceutical Sciences
  - 0614 Podiatry
  - 0615 Pre-Medicine
  - 0616 Public Health
  - 0617 Veterinary Science
  - 0699 Health and Medical Sciences - Other

#### NATURAL SCIENCES - PHYSICAL

- **Chemistry**
  - 0301 Chemistry, General
  - 0302 Analytical Chemistry
  - 0303 Inorganic Chemistry
  - 0304 Organic Chemistry
  - 0305 Pharmaceutical Chemistry
  - 0306 Physical Chemistry
  - 0399 Chemistry - Other

- **Physics and Astronomy**
  - 0801 Astronomy
  - 0802 Astrophysics
  - 0803 Atomic/Molecular Physics
  - 0804 Nuclear Physics
  - 0805 Optics
  - 0806 Planetary Science
  - 0807 Solid State Physics
  - 0899 Physics and Astronomy - Other
NATURAL SCIENCES - COMPUTATIONAL

Computer and Information Sciences
0401 Computer Programming
0402 Computer Sciences
0403 Data Processing
0404 Information Sciences
0405 Microcomputer Applications
0406 Systems Analysis
0499 Computer Sciences - Other

Mathematical Sciences
0701 Actuarial Sciences
0702 Applied Mathematics
0703 Mathematics
0704 Probability and Statistics
0799 Mathematical Sciences - Other

NATURAL SCIENCES - EARTH/ENVIRONMENTAL

Earth, Atmospheric, and Marine Sciences
0501 Atmospheric Sciences
0502 Environmental Sciences
0503 Geochemistry
0504 Geology
0505 Geophysics and Seismology
0506 Paleontology
0507 Meteorology
0508 Oceanography
0599 Earth, Atmospheric, and Marine Sciences - Other
4403 Environmental Design
4405 Landscape Architecture

ENGINEERING - A (CONTINUED)

Engineering - Electrical and Electronics
1201 Computer Engineering
1202 Communications Engineering
1203 Electrical Engineering
1204 Electronics Engineering
1299 Electrical and Electronics Engineering - Other

ENGINEERING - B

Engineering - Industrial
1301 Industrial Engineering
1302 Operations Research
1399 Industrial Engineering - Other

Engineering - Materials
1401 Ceramic Engineering
1402 Materials Engineering
1403 Materials Science
1404 Metallurgical Engineering
1499 Materials Engineering - Other

Engineering - Mechanical
1501 Engineering Mechanics
1502 Mechanical Engineering
1599 Mechanical Engineering - Other

Engineering - Other
1601 Aerospace Engineering
1602 Agricultural Engineering
1603 Biomedical Engineering
1604 Engineering Physics
1605 Engineering Science
1606 Geological Engineering
1607 Mining Engineering
1608 Naval Architecture and Marine Engineering
1609 Nuclear Engineering
1610 Ocean Engineering
1611 Petroleum Engineering
1612 Systems Engineering
1613 Textile Engineering
1699 Engineering - Other

ENGINEERING - A

Engineering - Chemical
1001 Chemical Engineering
1002 Pulp and Paper Production
1003 Wood Science
1099 Chemical Engineering - Other

Engineering - Civil
1101 Architectural Engineering
1102 Civil Engineering
1103 Environmental/Sanitary Engr.
1199 Civil Engineering - Other
SOCIAL SCIENCES

 Anthropology and Archaeology
  1701 Anthropology
  1702 Archaeology

 Economics
  1801 Economics
  1802 Econometrics

 Law (5102)

 Political Science
  1901 International Relations
  1902 Political Science and Government
  1903 Public Policy Studies
  1999 Political Science - Other

 Psychology
  2001 Clinical Psychology
  2002 Cognitive Psychology
  2003 Community Psychology
  2004 Comparative Psychology
  2005 Counseling Psychology
  2006 Developmental Psychology
  2007 Experimental Psychology
  2008 Industrial and Organizational Psychology
  2009 Personality Psychology
  2010 Physiological Psychology
  2011 Psycholinguistics
  2012 Psychometrics
  2013 Psychopharmacology
  2014 Quantitative Psychology
  2015 Social Psychology
  2099 Psychology - Other

 Sociology and Social Work
  2101 Demography
  2102 Sociology
  5001 Social Work

 Social Sciences - Other
  2201 Area Studies
  2202 Criminal Justice/Criminology
  2203 Geography
  2204 Public Affairs and 4801 Public Administration
  2205 Urban Studies and 4406 Urban Design
  2299 Social Sciences - Other
  4401 Architecture
  4402 City and Regional Planning
  4404 Interior Design

SOCIAL SCIENCES (CONTINUED)

 Communications
  4501 Advertising
  4502 Communications Research
  4503 Journalism and Mass Communication
  4504 Public Relations
  4505 Radio, TV and Film
  4506 Speech Communication
  4599 Communications - Other

 Home Economics
  4601 Consumer Economics
  4602 Family Relations
  4699 Home Economics - Other

 Library and Archival Sciences
  4701 Library Science
  4702 Archival Science

 ARTS

 Arts - History, Theory, and Criticism
  2301 Art History and Criticism
  2302 Music History, Musicology, and Theory
  2399 Arts - History, Theory, and Criticism - Other

 Arts - Performance and Studio
  2401 Art
  2402 Dance
  2403 Drama/Theatre Arts
  2404 Music
  2405 Design (including Industrial)
  2406 Fine Arts
  2499 Arts - Performance and Studio - Other

 Arts - Other
  2999A Arts - Other
  5101A Interdisciplinary Programs

 HUMANITIES

 English Language and Literature
  2501 English Language and Literature
  2502 American Language and Literature
  2503 Creative Writing
  2599 English Language and Literature – Other
HUMANITIES (CONTINUED)

Foreign Language and Literature
  2601 Asiatic Languages
  2602 Foreign Literature
  2603 French
  2604 Germanic Languages
  2605 Italian
  2606 Russian
  2607 Semitic Languages
  2608 Spanish
  2699 Foreign Languages - Other

History
  2701 American History
  2702 European History
  2703 History of Science
  2799 History - Other

Philosophy
  2801 All Philosophy Fields

Humanities - Other
  2901 Classics
  2902 Comparative Language and Literature
  2903 Linguistics
  2904 Religious Studies; 4901 Religion; and 4902 Theology
  2999H Humanities - Other
  5101H Interdisciplinary Programs

EDUCATION

Education - Administration
  3001 Educational Administration
  3002 Educational Supervision

Education - Curriculum and Instruction
  3101 Curriculum and Instruction

Education - Early Childhood
  3201 Early Childhood Education

Education - Elementary
  3301 Elementary Education
  3302 Elementary-level Teaching Fields

EDUCATION (CONTINUED)

Education - Evaluation and Research
  3401 Educational Statistics and Research
  3402 Educational Testing Evaluation and Measurement
  3403 Educational Psychology
  3404 Elementary and Secondary Research
  3405 Higher Education Research

Education - Higher
  3501 Educational Policy
  3502 Higher Education

Education - Secondary
  3601 Secondary Education
  3602 Secondary Level Teaching Fields

Education - Special
  3701 Education of the Gifted
  3702 Education of the Handicapped
  3703 Education of Special Learning Disabilities
  3704 Remedial Education
  3799 Other Special Education Fields

Education - Student Counseling and Personnel Services
  3801 Personnel Services
  3802 Student Counseling

Education - Other
  3901 Adult and Continuing Education
  3902 Bilingual/Crosscultural Education
  3903 Educational Media
  3904 Junior High/Middle School Education
  3905 Pre-Elementary Education
  3906 Social Foundations
  3907 Teaching English as a Second Language/Foreign Language
  3999 Other Education Fields
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