

# COASTAL RESTORATION AND ENHANCEMENT THROUGH SCIENCE AND TECHNOLOGY PROGRAM

## Request for Proposals

Date: 10.10.05

### I. General information

#### Background

The Coastal Restoration and Enhancement through Science and Technology program (CREST) was established in 2001 as an alliance of academic institutions within southern Louisiana and Mississippi. Current members of CREST are: Louisiana State University, Louisiana State University Agricultural Center, Louisiana Universities Marine Consortium, Loyola University, McNeese State University, Nicholls State University, Southeastern Louisiana University, Southern University at New Orleans, Tulane University, University of Louisiana at Lafayette, University of New Orleans, and the University of Southern Mississippi. The aim of the alliance is to create a cooperative program to help policymakers, planners and coastal resource managers use the latest science and best technologies to ensure sustainable and productive coastal habitats and communities.

#### Funding

Funding for the CREST program is administered by the Louisiana Universities Marine Consortium, LUMCON, using funds provided by the National Ocean Service of the National Oceanic and Atmospheric Administration. It is anticipated that approximately \$350,000 will be available. It is hoped to broaden the federal funding base in future years. Due to the limited funding available and the breadth of issues and needs in the area of coastal restoration science and technology, funds will be distributed across the following categories:

- research proposals approximately \$75,000 per proposal or \$75,000 per institution if more than one institution is involved; one or two years in duration);
- graduate and undergraduate student support proposals (for projects and stipends over two years, but NOT including PI salary support); and
- graduate and undergraduate student research proposals (small allocations for project work, NOT including stipends; maximum allocation \$7,500).

Campuses may submit multiple proposals and are strongly encouraged to partner with other academic institutions, private entities and government agencies. There is no limit on the number of institutional partners that can be included in a single proposal, but each collaborating institution will be limited to approximately \$75,000 per proposal, whether the proposal is for one year or for two. If Principal Investigators (PIs) have exceptional proposals that require more than this amount of funding, they may still submit them but the review process will require substantial justification for the higher funding level.

#### Deadline for submission

The initial request is for pre-proposals only. Electronic versions of all pre-proposals submitted under this RFP must be sent to Dr. Piers Chapman, Director, CREST Office, 3153 Energy, Coast and Environment Building, Louisiana State University, Baton Rouge, LA 70803, so as to arrive by 1.00 p.m. on Monday November 28, 2005. Hard copies are required a week later. **Please note that for this year only, signatures are not required on pre-proposals.**

#### Questions about this RFP

Specific questions concerning the program and scientific aspects of this RFP may be sent to Dr. Piers Chapman at the above address (email: [pchapman@lsu.edu](mailto:pchapman@lsu.edu); phone 225-578-0069).

## II. Program Description

### Overview

Southern Louisiana and Mississippi are badly impacted by coastal erosion, sea level rise, and the loss and degradation of natural wetland habitats. This combination of factors puts at risk the infrastructure of the region and the livelihood of its inhabitants, presenting an urgent need for a swift and successful response that will restore the natural protective structures in the region and enhance the ecology. Successful restoration of any natural ecosystem requires sound understanding of the problems and how they developed, as well as clearly defined targets for what we expect from the system after restoration. Scientific uncertainties and technological inadequacies must not limit our ability to respond to the needs of coastal communities. Rather, advances in science and technology should be integrated directly into restoration programs to ensure that coastal habitat restoration is implemented cost-effectively and successfully sustains coastal resources.

The CREST mission is to develop innovative, practical technologies and techniques to provide coastal managers with the most effective approaches to habitat restoration. In this respect, CREST generally defines “coastal habitats” to include the region between the shoreface and areas of bottom land hardwood forests, including estuaries. However, where specific potential regulatory actions can impact areas within the marine coastal zone, the outer limit may be extended as necessary. “Restoration” is defined as replacing habitat (from bottomwood hardlands to the shoreface) that has been lost due to a variety of human-induced and natural causes. It does not mean a return to a previous, unaltered state. The program’s research agenda is focused primarily on alleviating the urgent needs of the north central Gulf coast, and seeks to capitalize on the high concentration of restoration professionals presently in the region. CREST will facilitate the continued advancement of restoration science and engineering through support of research and training of a new generation of restoration scientists, and develop the sound technical framework essential to advance restoration efforts in the Gulf region, as well as across the United States and elsewhere.

### Priority research areas

The CREST program is driven by the critical need for evaluation, demonstration and introduction of innovative techniques, best management practices and methodologies, and decision-making tools to enhance and restore the nation’s coastal habitats. CREST will fund research projects that have direct application to the development of practical, cost-effective approaches to restoration project design, implementation and monitoring.

At the CREST Symposium, held in Lafayette in April 2005, a workshop was held to discuss potentially important areas for future research. This document is available also via the web and should be consulted by investigators proposing to CREST.

This RFP solicits proposals on the general topics listed below. However:

- (i) particularly innovative or opportunistic proposals in any field within CREST’s agenda also will be considered;
  - (ii) given the recent devastation caused to coastal Louisiana and Mississippi by Hurricanes Katrina and Rita, CREST will consider proposals that seek to understand (a) how present restoration practices fare under different strength storms and (b) how future restoration practice should be modified to take account of the effect of living in a landscape that is periodically affected by major storms.
1. Assessing the performance of planned and existing restoration efforts and their cumulative effects on coastal systems.  
Proposals should seek to develop new tools, or refine existing tools, for evaluating restoration techniques and operational approaches that are applicable to both ongoing and

planned projects in coastal Louisiana and Mississippi. In particular, we are looking for new ways to indicate whether restoration efforts have been successful, that aid in the preparation of operational manuals for field use by project management, or that include a collective assessment of particular techniques, rather than the effects of individual restoration projects. As part of this topic we will consider reanalyses of collective groups of projects funded under the Coastal Wetlands Planning, Protection and Restoration Act (the Breaux Act); however, CREST will not fund direct monitoring of such projects.

2. Human dimensions of coastal restoration efforts.  
Proposals should seek to provide sociological and economic information of direct use to managers and planners involved in coastal restoration efforts. These can be of relevance to any coastal habitat falling within the CREST definition given above. Examples of potential topics that fall under this title include, but are not limited to, proposals dealing with aspects such as land use, resource use and management, mitigation of coastal habitat loss, legal or industrial matters, environmental history, socio-economic and behavioral effects, and public awareness and education. In particular, we are interested in proposals that provide information on the values placed by the public on restoration efforts and how these values can be quantified.
3. Proactive assessments of emerging threats to coastal habitats.  
Proposals should seek to provide information of use to managers and planners that will prevent or minimize current and future degradation of coastal habitat resulting from planned human activities. Examples of potential topics that fall under this title include, but are not limited to, proposals that provide methods of assessing the future impact of activities such as navigation channel deepening, cypress logging, or water abstraction.

#### Evaluation of proposals

The initial review round will include pre-proposals only. Reviews of anonymous pre-proposals will be carried out by an evaluation panel made up of scientists and coastal managers. This initial review will screen pre-proposals both for relevance to the RFP and for scientific content. Principal Investigators who are successful at the pre-proposal stage will be asked to submit a full proposal, which will be reviewed by a second panel including out-of-state experts. It is anticipated that proposals totaling more than the available funds will be solicited, thus a request to submit a full proposal should not be taken as meaning that funding will be forthcoming. The panels will evaluate proposals based on scientific merit, relevance to the program goals, and the likely ability to transfer the results from a specific site to other, larger regions. Joint proposals between institutions will generally be viewed more favorably, as will proposals that are either synergistic with ongoing studies or that involve study of some facet of an existing restoration effort. The final decision on funding will be made by the CREST Executive Board, following recommendations from the second review panel.

#### Eligibility

Eligible institutions include those listed in the Background paragraph of section I. While the Principal Investigator on each proposal must be a full-time employee of an eligible institution, other participants may be from any university or institution, whether or not from Louisiana or Mississippi, and inter-institutional proposals, including partnerships with federal, state or private organizations, are encouraged.

#### Financial considerations

It is anticipated that the total funding available during this request for proposals will be about \$350,000. However, at this stage the NOAA budget for FY2006 has not been confirmed and neither CREST nor NOAA will be responsible for any costs incurred by individuals or institutions responding to this Request for Proposals.

For this round of proposals institutions will be permitted to charge overhead rates to a maximum of 17.5% on Modified Total Direct Cost (MTDC), i.e., excluding equipment purchases. (Individual university rates for permanent equipment vary; principal investigators should state what amount is allowed by their own institutions.) However, as a general rule, CREST will not support requests for major items of capital equipment such as boats, analytical instrumentation, computers and the like. Other items specifically excluded from CREST proposals include: purchase of office furniture or routine office equipment, construction of facilities, routine renovation or upgrading of equipment and buildings, and equipment maintenance (e.g., upgrades to computers or software).

All funding from CREST will be funneled through the Louisiana Universities Marine Consortium, which will negotiate contracts with successful proposing institutions. Matching funds are not required for CREST proposals.

#### Duration of projects

Research projects and proposals for graduate student support may last up to two years. Graduate student research proposals (without stipends) and any undergraduate research proposals are for a maximum of one year. It is anticipated that proposal support will commence on 07.01.2006. This may be dependent on approval by the Louisiana Office of Contract Review.

#### Deadlines

Pre-proposals must be submitted electronically as .pdf files to Dr. Piers Chapman ([pchapman@lsu.edu](mailto:pchapman@lsu.edu)) at the CREST Office no later than 1.00 p.m. on 11.28.2005. In addition, ten hard copies, complete with signatures, must be sent to the CREST Office by 12.05.2005. Failure to meet these deadlines will invalidate the submission. The proposed timeline for proposal review is as follows:

Deadline for receipt of electronic pre-proposals at CREST Office	11.28.05
Pre-proposals sent out for review by local evaluation panel	11.30.05
Deadline for receipt of hard copies of pre-proposals at CREST Office	12.05.05
Full proposals requested from PIs of relevant pre-proposals	01.06.06
Deadline for receipt of electronic full proposals at CREST Office	02.24.06
Proposals sent out for review by out-of-state experts	02.24.06
Deadline for receipt of hard copies of proposals at CREST Office	03.03.06
Reviews forwarded to Executive Board	05.15.06
Final decisions on funding and notification of awardees	05.29.06
Negotiation and finalization of awards	05.29.06

### III. Proposal submission and format requirements

#### A. Pre-proposal

The pre-proposals will be used to screen initial ideas for research projects; they should therefore be clear and concise. They must be submitted in accordance with the timetable presented above, and follow the guidelines below. All pre-proposals must contain the following sections:

- Introduction (including rationale and relationship to RFP)
- Objectives of research
- Methodology
- Expected outcome
- Key references

Pre-proposals must demonstrate a high level of relevance to the needs of coastal resource managers within Louisiana and Mississippi. Project relevance can be demonstrated in many different ways, ranging from the location of study sites to collaboration with resource managers

on project design. Additionally, they must show the potential for widespread and demonstrable field or planning application. These two criteria will be a major part of the evaluation process; PIs therefore should describe how the pre-proposal relates to the RFP. PIs must state to which of the eligible fields of study their pre-proposal refers.

Principal Investigators are not limited in the number of pre-proposals that they may individually submit. However, no researcher may be the lead investigator on more than one funded proposal in any one year.

The review panel may recommend that individual PIs collaborate on a full proposal if they feel that two or more pre-proposals can be combined into a more-effective single proposal.

All pre-proposals will be reviewed anonymously by the review committee, therefore it is imperative that both cover pages are supplied. The first cover page (Appendix 1) is a standard page and contains all the necessary signatures, the second (Appendix 2) is a shortened page that gives only the title of the proposal and funding requirements. **Note that for this year signatures are not required for pre-proposals.**

The narrative should be no more than three (3) single-spaced 8.5" x 11" pages, using easily legible twelve (12) point type. All pages are to be numbered consecutively and have 1" margins on top, bottom and sides. They should be printed on one side of the sheet only, and stapled in the top left-hand corner. An in-line bibliography style (e.g., Mitsch, 2001) should be used. The listed bibliography does NOT count as part of the three pages.

The budget should be submitted on the official budget page (Appendix 3). This must be based on the actual cost of the research using an overhead rate not exceeding 17.5% of MTDC. Note that the Principal Investigator will be required to attend an annual meeting in Louisiana to present the results of the research, therefore any relevant travel costs must be included in the budget. Because funding is coming through the Louisiana Universities Marine Consortium (LUMCON) travel costs must comply with standard Louisiana state general travel regulations (available on the web at <http://www.state.la.us/osp/travel/travelOffice.htm>). A budget justification must be included as a separate sheet.

Two copies of the budget are required; one should list all personnel to be funded, the other should use terms such as "PI", "research student" etc. to ensure anonymity during the review process. If a pre-proposal is recommended for possible support, the budget may not be changed substantially from that submitted with the pre-proposal.

While matching funds are not required for CREST proposals, they may be used to provide additional support for a particular project. It is the responsibility of the proposing investigator to ensure that a letter from the matching organization, confirming that such matching funds will be available, is included with the pre-proposal.

#### B. Full proposals

Only those investigators whose pre-proposals have been reviewed and ranked by the review panel will be invited to submit full proposals. No new proposals will be considered at this stage, although PIs whose pre-proposals were not ranked highly by the review panel may submit a full proposal if they believe they can address the comments of the pre-proposal review panel. A request for a full proposal does not guarantee that it will be funded. Proposals should be printed on one side of the paper only, and stapled in the top left-hand corner.

All proposals must be received at the CREST Office as specified in the timetable above. Electronic versions should be sent as .pdf files, and do not require signatures. In the case of very

large files, it may be preferable to send them on a CD-ROM. Addenda may only be submitted after this date if requested by the CREST Office. Ten hard copies of each proposal, including signatures, are also required.

Cover sheet: Use the cover sheet (Appendix 1).

Summary: Use the summary sheet (Appendix 4). Summary sheets of funded projects will be used in the CREST annual report. It is therefore important that this format be adhered to.

Project description: The project description should be formatted to a standard 8.5 x 11 inch page; all pages are to be numbered consecutively and have 1" margins on top, bottom and sides. Typing should be readily legible, using 12-point type, single-spaced. Figures, charts, tables and figure legends may use a smaller font but must be legible. Project descriptions are limited to ten (10) pages, including all figures and tables. Projects exceeding this limit will be returned without review. Appendices or other material not specified here will not be accepted.

The project description should include:

- a. Introduction and background
- b. Objectives of research
- c. Methodology, including quality assurance and quality control where appropriate
- d. Expected outcomes of the work, including the possible impact of the findings and their implication for Louisiana and Mississippi as a whole
- e. Performance benchmarks
- f. Cooperation with other academic, state, federal or private partners (if applicable)
- g. How the findings will be disseminated

Products must include an illustrated fact sheet or technical summary of findings for use by resource managers and Principal Investigators are expected to make an oral presentation to managers at the end of the project. Formats for these summary products will provided by CREST (see also section IV).

Literature cited: An in-line bibliography style (e.g., Mitsch, 2001) should be used in the text. The listed bibliography does NOT count as part of the ten-page limit. List separately all references, including the names of all authors, title, book or journal title, volume and page numbers, and year of publication. While there is no page limit on references, only those actually cited in the text should be included. A general reference list of work related to the proposal is not wanted.

Biographical sketches: A biographical sketch of key personnel is required. These should be no longer than 2 pages, and should include a list of people who may not review the proposal because of potential conflicts. This list should include anyone with whom the PIs have worked, written papers, or submitted proposals within the past three years.

Budget and budget justification: The budget should be submitted on the standard budget form (Appendix 3). Where projects are submitted for two years of work, budgets are required for each individual year and for the total amount. Only minor changes to the budget submitted with the pre-proposal will be permitted. The need for all items should be justified. Note that the Principal Investigator will be required to attend an annual meeting in Louisiana to present the results of the research, therefore any relevant travel costs must be included in the budget. Because funding is coming through the Louisiana Universities Marine Consortium (LUMCON) travel costs must comply with standard Louisiana state general travel regulations (available on the web at <http://www.state.la.us/osp/travel/travelOffice.htm>). An indirect cost of 17.5% MTDC will be allowed.

While matching funds are not required for CREST proposals, they may be used to provide additional support for a particular project. It is the responsibility of the proposing investigator to ensure that a letter from the matching organization, confirming that such matching funds will be available, is included with the pre-proposal.

Institutional capabilities and equipment: Institutional capabilities and commitment with respect to the proposed research must be described, including available facilities and major items of equipment that will be used in the research program.

Current and pending support: A list of current and pending support for all principal investigators and other senior personnel must be included. This should include the title of the proposal, sponsoring agency, amount, period of award, and months per year supported.

Potential reviewers: PIs should provide the names of three people (not in conflict) who may be prepared to review the complete proposal.

#### IV. Reporting requirements

The specific nature of the technical products required cannot be described until the awards are made through the RFP process. However, research proposals will be required to produce both detailed technical reports and a 2-3 page summary report for resource managers, as well as copies of any scholarly publications resulting from the work. These should acknowledge the support of CREST. The summary report is due within three months of final support date for the project. Graduate student support and research proposals should deliver a copy of any thesis or other scholarly publication, together with the 2-3 page summary report. Projects lasting for two years will be required to produce an interim report at the end of the first year. Additionally, Principal Investigators will be required to make an annual oral presentation to managers. This will be given in southern Louisiana or Mississippi.

The interim and summary reports will form the bulk of the CREST annual report, which will assess the progress of the program and highlight significant findings. Thus, the use of graphic information in the form of pictures, figures or tables in interim and summary reports is encouraged. Failure to produce the required reports may result in further funding being denied.

**Appendix 1 - Cover sheet format (full)**

**COASTAL RESTORATION AND ENHANCEMENT  
THROUGH SCIENCE AND TECHNOLOGY (CREST)**

**2005-2006 Proposal Application**

Applicant information (institution):

Project Title:

Eligibility field:

Principal Investigator:

Address:

Phone:

Fax:

Email:

Other Principal Investigator(s): (list names and institutions)

Project start date:

Project end date:

CREST funding requested

Year 1

Year 2

Total

Name and telephone number of contact person:

Technical:

Fiscal:

To the best of my knowledge and belief, all data in this application are true and correct, and the document has been duly authorized by the governing body of the applicant.

PI (s)

Date

Department Head/Dean

Date

Authorized fiscal representative(s)

Date

**It is the Principal Investigator's responsibility to obtain all necessary signatures**

**Appendix 2 - Cover sheet format (anonymous)**

**COASTAL RESTORATION AND ENHANCEMENT  
THROUGH SCIENCE AND TECHNOLOGY (CREST)**

**2005-2006 Proposal Application**

Project Title:

Eligibility field:

Project start date:

Project end date:

CREST funding requested  
Year 1

Year 2

Total

## **Appendix 3**

### **PROJECT SUMMARY**

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The project summary should include a statement of objectives, methods to be employed, and the significance of the proposed activity to Louisiana and Mississippi. Do not exceed one page.

## Appendix 4 - Standard budget page

Project title:

Principal Investigator:

Year:

Duration:

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A. Salaries and wages (show numbers in brackets)	Person months	Amount
1. Senior personnel (Co) Principal Investigator Associates		
2. Other personnel Professionals (technicians, programmers) Research Associates Graduate students Undergraduate students Secretarial-clerical Other		
Total salaries and wages		
B. Fringe benefits		
C. Permanent equipment		
D. Expendable supplies and equipment		
E. Travel (domestic) (international)		
F. Publication/documentation costs		
G. Other costs		
1. Computer costs		
2. Graduate student tuition		
3. Ship time		
4. Phone/photocopying/postage		
5. Subcontracts		
6. Other		

Total direct costs (A through G)

Indirect costs (Total direct costs minus C and G2 x rate (17.5 %))

Total costs