



Standard Operating Procedures

RESTORE Act Center of Excellence for Louisiana

January 9, 2019

V2





ABOUT THE RESTORE ACT CENTER OF EXCELLENCE FOR LOUISIANA

The mission of the RESTORE Act Center of Excellence for Louisiana (LA-COE) is to support research directly relevant to implementation of Louisiana’s Coastal Master Plan by administering a competitive grants program and providing the appropriate coordination and oversight support to ensure that success metrics are tracked and achieved. The LA-COE is a program within The Water Institute of the Gulf, which is a not-for-profit, independent research institute dedicated to advancing the understanding of coastal, deltaic, river and water resource systems, both within the Gulf Coast and around the world. For more information please visit LA-COE.org.

This document was created by the LA-COE with input from the Coastal Protection and Restoration Authority and the LA-COE’s Executive Committee.

SUGGESTED CITATION

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1.0 Statement of Purpose

The purpose of this document is to establish a set of standard and guiding procedures for the RESTORE Act Center of Excellence for Louisiana (LA-COE). The document represents the second version, and substantive edits to the previous version are listed in Table 1.

Table 1. Substantive changes to the Standard Operating Procedures.

Version No.	Purpose/Change	Contributors	Date
1	Inaugural version	K. Darnell D. Reed C. Groat A. Freeman E. Haywood D. Lindquist	2016
2	<p>Addition of:</p> <ul style="list-style-type: none"> The Subject Matter Experts (3.5) The Technical Working Group (3.6) Acknowledgements (16.0) <p>Revision of:</p> <ul style="list-style-type: none"> LA-COE organizational structure diagram (Figure 1) Conflict of interest language (14.0 Best Practices and Ethical Standards) Notification of dissemination language (9.0 Post Research Award Reporting) Document title from Research “Strategy” to “Needs” (throughout) <p>Additional detail regarding the competitive grants and associated review process (6.0 Competitive Grants Process)</p> <p>Expansion of the data management plan (10.0 Data Management and Appendix A)</p> <p>Text revisions throughout (including tables) to update and clarify text</p>	M. Baustian A. Dausman A. Grace A. Freeman E. Haywood D. Lindquist	2018

2.0 Mission

The mission of the LA-COE is to support research directly relevant to implementation of [Louisiana’s Coastal Master Plan](#) by administering a competitive grants program and providing the appropriate coordination and oversight support to ensure that success metrics are tracked and achieved. The Coastal Master Plan was developed by the Coastal Protection and Restoration Authority (CPRA) of Louisiana with input from citizens, legislators, parish representatives, and stakeholder groups using the best

available science and engineering. It focuses state coastal restoration and protection efforts and helps guide actions needed to sustain Louisiana’s coastal ecosystems, safeguard coastal populations, and protect vital economic and cultural resources. The Coastal Master Plan is updated every six years, providing an opportunity for new knowledge and understanding to be incorporated.

3.0 Roles and Responsibilities

Several organizations, committees, and boards are integral to the functioning of the LA-COE. Participants collaboratively work toward the mission of the LA-COE (Figure 1). CPRA is the LA-COE prime awardee and contract manager with ultimate responsibility over the LA-COE. CPRA receives the grant funds from the U.S. Department of the Treasury. The LA-COE coordinates the Executive Committee (EC), External Review Board (ERB), Subject Matter Experts (SMEs), and Technical Working Group (TWG).

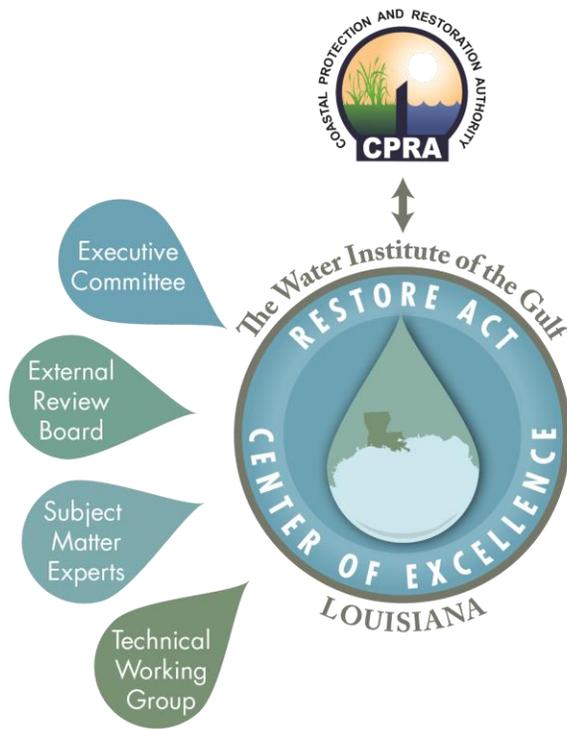


Figure 1. Organizational structure of the RESTORE Act Center of Excellence for Louisiana.

3.1. THE COASTAL PROTECTION AND RESTORATION AUTHORITY

The Coastal Protection and Restoration Authority (CPRA) of Louisiana is the single state entity with authority to articulate a clear statement of priorities and to focus development and implementation efforts to achieve comprehensive coastal restoration and protection for Louisiana. Its mandate is to develop, update, and implement Louisiana’s Coastal Master Plan. The RESTORE Act provides funds via U.S. Department of the Treasury to CPRA to use toward the development of its Center of Excellence Research Grants Program. In 2014, CPRA named The Water Institute of the Gulf (Water Institute) as the LA-COE for the Grants Program. CPRA is the LA-COE project sponsor and contract manager with ultimate responsibility over the LA-COE. CPRA works with the LA-COE to develop the Standard Operating

Procedures (SOPs), the Research Needs document, and the Request for Proposals (RFP); determines the relevancy of research proposals to Coastal Master Plan implementation; and is involved in aspects of proposal review and selection, depending on the specifics of any RFP issued. CPRA and the LA-COE communicate through in-person meetings, phone calls, and email as frequently as necessary to ensure clear coordination and completion of these tasks. Key CPRA personnel are responsible for LA-COE activities and oversight (Table 2).

Table 2. CPRA staff roles and responsibilities.

CPRA Role	Responsibilities
Program Manager	<ul style="list-style-type: none"> • Provides LA-COE program management for CPRA • Provides overall management and oversight of the contract between CPRA and the LA-COE • Reports to U.S. Department of the Treasury
Technical Advisors	<ul style="list-style-type: none"> • Provide technical guidance and support, including development of SOPs, Research Needs document, RFP, peer review, and serve as liaisons to research projects
CPRA Liaison	<ul style="list-style-type: none"> • Coordinates with Technical Points of Contact (TPOC) regarding research subrecipient progress • Confirms research results are directly related to implementation of the Coastal Master Plan

3.2. THE WATER INSTITUTE OF THE GULF

Water Institute personnel charged with managing the LA-COE (hereafter referred to as "LA-COE staff") oversee activities related to the LA-COE, including developing and adhering to the LA-COE timeline; coordinating committees, working groups, and meetings to develop the SOPs, Research Needs document, and RFP; the competitive grants process; grants management; research subrecipient monitoring; establishing and ensuring adherence to appropriate data management practices; reporting; developing and accessing success metrics; and adhering to best practices and ethical standards. The LA-COE staff are responsible for key aspects of LA-COE activities and oversight (Table 3).

Table 3. LA-COE staff roles and responsibilities.

LA-COE Role	Responsibilities
Director	<ul style="list-style-type: none"> • Provides strategic guidance and oversight • Chairs the Executive Committee • Liaison with External Review Board
Chief Scientist	<ul style="list-style-type: none"> • Provides technical guidance and support • Liaison with other Centers of Excellence and Gulf science and restoration funding entities
Deputy Director	<ul style="list-style-type: none"> • Manages technical aspects of LA-COE operations, including development of the SOPs, Research Needs document, RFP, and peer review process • Tracks progress of research subrecipients with input from Technical Points of Contact and CPRA Liaisons • Coordinates adherence to LA-COE policies and procedures • Coordinates with Technical Points of Contact and CPRA Liaisons
Data Manager	<ul style="list-style-type: none"> • Oversees research subrecipient adherence to data management requirements

LA-COE Role	Responsibilities
Technical Points of Contact	<ul style="list-style-type: none"> • Tracks technical progress of the research for reporting purposes • Ongoing points of contact for the research subrecipients • Coordinates with CPRA Liaisons regarding research subrecipient progress
Grants Manager	<ul style="list-style-type: none"> • Manages all aspects of contracts and grants administration, including subawards and reporting
Program Manager	<ul style="list-style-type: none"> • Provides program management support including tracking financial and technical progress of the subawards and the overall project
Financial Manager	<ul style="list-style-type: none"> • Provides oversight and guidance related to all aspects of financial and administrative compliance

3.3. THE EXECUTIVE COMMITTEE

The Executive Committee is comprised of research officials from Louisiana’s universities and research organizations and is weighted toward those with a strong historic focus on coastal issues. Permanent members of the Executive Committee are:

- Chair - LA-COE Director
 - Senior-level research officials from the following institutions:
 - Louisiana State University
 - Louisiana Universities Marine Consortium (LUMCON)
 - Nicholls State University
 - Tulane University
 - University of Louisiana at Lafayette
 - University of New Orleans
 - Two at-large two-year rotating appointments, beginning with Louisiana Tech University and Xavier University of Louisiana and to include Southern University, Southeastern Louisiana University, and McNeese State University

The primary responsibilities of the Executive Committee are to:

- Work with the LA-COE to develop the SOPs and Research Needs document
- Approve guidelines and requirements for the competitive grants program
- Approve processes to ensure research conducted and reports produced are appropriately reviewed and consistent with the Research Needs document
- Approve success metrics for the program
- Work with the LA-COE to establish the ERB by developing the ERB terms of reference, a document outlining the roles and responsibilities of the ERB, reviewing a list of ERB candidates, and recommending ERB members to the LA-COE Director
- Work with the LA-COE to establish the TWG

Executive Committee members are not compensated for their service on the committee. The Executive Committee will meet as needed, but at least annually. The decision-making process for the Executive Committee is based on consensus.

3.4. THE EXTERNAL REVIEW BOARD

The ERB is a group of independent experts convened to provide technical feedback on LA-COE research activities. Their role is to review and advise on the quality and importance of research proposals; support the development of a relevant, balanced, and achievable Research Needs document to support implementation of Louisiana’s Coastal Master Plan; and to guide the long-term advancement of coastal

research under the LA-COE. The ERB members provide independent and objective advice and guidance, yet do not make funding or strategic decisions.

The ERB is comprised of nationally- and internationally- recognized experts on topics relevant to Louisiana’s Coastal Master Plan. The ERB is comprised of two types of members:

- Up to six *standing members* with a range of expertise in fields of science and engineering relevant to overall restoration and protection issues in coastal Louisiana; one of the standing members of the ERB is appointed as the Chair of the ERB
- Up to six *temporary members* serve on the ERB during the proposal review process; these additional members are to ensure that the range of expertise on the ERB is appropriate for the nature of the proposals under consideration

Individuals serving on the ERB and current members of their research team (graduate students, post-doctoral researchers, etc.) are prohibited from participating in any way in research proposals submitted to the competitive grants process, and thus it is likely that most members would be from outside of Louisiana. The LA-COE solicits nominations from the EC for ERB members as well as public suggestions on potential members. These nominations are compiled and shared with CPRA for review and comments/suggestions, and a recommendation for selection is made by the Executive Committee. The final decision on selection of the ERB members is made by the LA-COE Director.

The primary responsibilities of the ERB are to:

- Review proposals and advise on the quality and importance of proposed research pursuits
- Support the development of a relevant, balanced, and achievable Research Needs document
- Provide feedback on the long-term advancement of coastal research under the LA-COE

ERB members are compensated for their time and appropriate expenses. The ERB terms of reference are listed in Table 4.

Table 4. External Review Board terms of reference.

External Review Board	
Number of members	Up to 12
Chair	A standing member, selected by the EC
Meeting frequency	As needed, at least annually
Decision-making process	The ERB provides guidance, advice, recommendations and feedback for consideration by LA-COE and CPRA

3.5. THE SUBJECT MATTER EXPERTS

The SMEs are technical experts that independently and anonymously evaluate the proposals received following an RFP. The SMEs are selected based on qualifications, such as educational level (usually PhD or PE) and area(s) of expertise. The topical areas in the Research Needs document selected by the researchers when the proposals are submitted are used to help identify relevant SMEs. Post-doctoral researchers may be utilized as SMEs, but only one post-doctoral researcher is allowed per proposal. Lastly, an additional evaluation goal is to select one SME that is neither located in Louisiana nor conducts research in Louisiana with the intent of broadening the technical evaluation of the proposals.

3.6. THE TECHNICAL WORKING GROUP

The TWG is an ad-hoc group established to help draft the Research Needs document and is comprised of researchers from Louisiana academic institutions. The TWG works with contributing experts (individuals who support TWG member identification of research needs). The TWG is selected by the EC, LA-COE, and CPRA. The EC sets the overall approach for the Research Needs document.

4.0 Development of the Research Needs Document

Following a mandate by the U.S. Department of the Treasury requiring that RESTORE Act Centers of Excellence must focus efforts on a selected set of disciplines. The LA-COE focuses on the following:

<https://www.treasury.gov/services/restore-act/Pages/COE/Centers-of-Excellence.aspx>

- *Coastal and deltaic sustainability, restoration, and protection, including solutions and technology that allow citizens to live in a safe and sustainable manner in a coastal delta in the Gulf Coast Region*
- *Coastal fisheries and wildlife ecosystem research and monitoring in the Gulf Coast region*
- *Sustainable and resilient growth, economic, and commercial development in the Gulf Coast region*
- *Comprehensive observation, monitoring, and mapping of the Gulf of Mexico*

The Research Needs document is a core component of the LA-COE, and it guides the competitive research that the LA-COE supports. It is focused on the disciplines listed above not only because they are pertinent to Louisiana, but also because of their emphasis on supporting and advancing Louisiana's Coastal Master Plan. The Research Needs document was developed using a two-phased approach. During the first phase, in year 1 of LA-COE operations (November 1, 2015 – October 31, 2016), key topical near-term and mid-term research needs were identified. The second phase included revisiting the document during years 2 and 3 of LA-COE operations (November 1, 2016 – October 31, 2018), and key topical long-term research needs were included, resulting in a final Research Needs document.

Research needs were identified in coordination with CPRA, the TWG, the ERB, the EC, and the public. Research needs are grouped within topic areas relevant to the Coastal Master Plan. For each topic within the Research Needs document, the scientific and technical questions underlying the research needs are outlined, research needs are identified, including some that address multiple topical areas, and potential outcomes (e.g., measurable impacts or results) are briefly summarized.

5.0 Project Management

The integrated approach described in the roles and responsibilities section contributes to overall project management, financial tracking, and reporting as follows:

- Ensures funding is managed in accordance with CPRA's Internal Agency Policies¹
- Provides accurate and timely reporting
- Improves transparency and auditability of program activities
- Streamlines business processes from proposal to award through close out

¹ <https://cims.coastal.louisiana.gov/RecordDetail.aspx?Root=0&sid=22031>

- Allows for online access for the ERB and other authorized users to review applications and subawards, while restricting access in cases of conflict of interest
- Creates controls to ensure expenses are allowable and within budget based on the guidelines
- Reduces costs of operations by eliminating manual processes (to the extent possible) for planning, managing, and reporting award activities

6.0 Competitive Grants Process

LA-COE funds for research activities address topical areas and research needs identified in the Research Needs document through a competitive grants process. The approach used for the distribution of competitive funds is developed by the LA-COE in coordination with CPRA. Proposals for research funding are solicited via an RFP posted on the LA-COE website and by dissemination of the RFP through relevant electronic outlets, such as list-servs. The specific nature of the RFP depends, during any funding cycle, on the amount of funds that are expected to be available. Letters of Intent, subject to review for the relevance and applicability of the proposed research, may be required prior to proposal submission. The competitive grants process incorporates at least three levels of independent proposal review, that may include evaluation by independent SMEs selected by LA-COE staff, SMEs added to a review panel, ERB members added to a review panel, and a review of relevance and applicability by LA-COE staff and CPRA.

Academic institutions, private firms, non-governmental organizations, non-profit organizations, and governmental agencies are all eligible for various categories of awards. Staff from CPRA and the Water Institute may not participate in Letters of Intent or be part of research teams or participate in proposal development in any way, including the submission of Letters of Support. There is no limit on the number of organizational partners that can be included in a single proposal. An individual investigator may only lead one proposal submission per award type but may participate in others.

Award types may include:

Graduate Studentships – These awards will only be made available to support full-time graduate students conducting relevant research at Louisiana college/universities.

Research Awards – Any organization/institution may be the lead on a proposal and participate in the proposed research. In the case of proposals involving multiple organizations, a single organization must be identified as the lead.

Collaborative Awards – The Principal Investigator (PI) on each proposal must be a full-time employee of a Louisiana college/university. Other participants may be from any organization or institution within or outside Louisiana. A Louisiana college/university must be identified as the lead.

7.0 Research Subaward Management

7.1. SUBAWARD ADMINISTRATION

Once the LA-COE Director has selected research projects for funding, subject to CPRA's concurrence, the LA-COE executes research subawards. The research subawards are issued using standard terms and conditions referenced in the RFP to allow for a smooth and efficient contracting process. Subaward administration is conducted according to all applicable federal guidelines, the terms of the LA-COE's Cooperative Endeavor Agreement with CPRA, and the Water Institute of the Gulf's internal operating procedures.

7.2. POST-AWARD ADMINISTRATION

Once the funds have been awarded to research subrecipients, research subawards are posted and managed through an integrated system. Expenses and reimbursement claims are processed, funds are disbursed, and financial and programmatic performance are monitored through integrated system functionality. Budget, time, and expense tracking in addition to payment capabilities are at the core of this process, including: forecasting and appropriation of funds, task allocation of time and expenses, requesting payment or reimbursement of funds, preparing paperwork, confirming the mechanism and date to issue payment order and transfer of funds to appropriate accounts, and calculating and accounting for funds.

7.3. REPORTING

Research subrecipients are required to submit quarterly progress reports (Performance Progress Reports - PPR), in addition to an invoice, to allow for individual grants and overall projects to be analyzed and evaluated for compliance with the project timeline in addition to financial and programmatic objectives. Each quarterly PPR requests information about the funds expended, the key research accomplishments, any challenges that may have arisen, a list of presentations and publications, outreach activities, data management efforts, student involvement, research subrecipient monitoring, and permits required. PPRs are due within 30 days of calendar quarters. The Grants Manager reviews each invoice and PPR to ensure the information is properly recorded, evaluates the invoice against the approved budget and provides the invoice and PPR (that includes a total percent expended) to the Technical Point of Contact (TPOC). The TPOC reviews the content of the invoice and PPR in coordination with the assigned CPRA Liaison, as well as the PI as necessary. Once the TPOC approves the PPR, the Deputy Director provides the final review and approval of the PPR prior to payment.

7.4. SECURITY

System security protects the data and LA-COE personnel, the reviewers' and research subrecipients' authentication and personally identifiable information with levels of authorization within the systems.

8.0 Research Subrecipient Monitoring

Monitoring research subrecipients is integral to supporting the mission of the LA-COE and serves to ensure compliance with project timelines and programmatic objectives throughout the duration of the award. In addition to the risk assessment and monitoring requirements in 2 CFR 200.331, the LA-COE monitors the technical aspects of research subrecipient awards through:

- A ‘kickoff webinar’ hosted by the LA-COE describing all research subrecipient reporting and monitoring requirements, with mandatory participation by at least one Principal Investigator (PI) from each award, ensuring research subrecipient awareness of requirements. The webinar is held within 60 days following execution of the research subawards.
- Quarterly webinars to review requirements and highlight and share recent accomplishments.
- Mandatory quarterly PPRs submitted to the LA-COE.
- An annual All-Hands in-person meeting coordinated by LA-COE staff in Baton Rouge, Louisiana, with mandatory participation by at least one PI from each award. The meeting is intended to promote collaborations and inform research progress. A PI from each award is expected to describe their research progress-to-date and upcoming activities.
- Submission of final reports, within 30 days of the close of the award. These should include copies of thesis/dissertations for Graduate Studentships (to be provided as soon as they are finalized), a final report describing all research activities and findings (for Research Awards and Collaborative Awards), management implications of the research findings, and copies of all publications and presentations made during the award period. The financial support from the LA-COE shall be acknowledged in all research products and outputs.

A TPOC may be assigned to each research subaward to enable technical evaluation of progress and dialog with the PI as appropriate. The TPOC are Water Institute technical staff. A CPRA Liaison will also be assigned to each research subaward and work with the TPOC to ensure the research results assist with implementation of the Coastal Master Plan. If progress is not deemed adequate, LA-COE staff will work with the lead PI to establish revised milestones. Failure to meet milestones and respond to LA-COE requirements may result in discontinuation of or reductions in funding, as detailed in research subawards.

9.0 Post Research Award Reporting

No data or results of activities funded through a research subaward shall be publicly released, published, or presented by the LA-COE or its research subrecipients by any means, prior to submission of the final report to the CPRA Project Manager except through the following process: In the event that LA-COE research subrecipients wish to publish data or results or activities funded through research from a subaward prior to submission of the final report, the entity so desiring will furnish the State with two (2) copies of any materials intended for publication at least 60 days prior to the initial submission of those materials to the publishing group. The CPRA Project Manager shall then have 30 days from receipt of such materials to review and provide the entity with written comments with respect to the material. The LA-COE and its research subrecipients agree to give due consideration to any written comments made by the CPRA and discuss any such written comments with State personnel prior to publication. If the entity receives no written response from the State within the 30-day period, it may proceed with the publication. The State’s written comments shall specifically identify State confidential information that shall not be disclosed, unless subject to one of the exceptions listed in the LA-COE’s Cooperative Endeavor Agreement with CPRA.

10.0 Data Management

The LA-COE follows the federal government’s definition of data in federal regulation 2 CFR 200.315 and supports research that generates knowledge and information products, including but not limited to: data sets, databases, digital models and simulations, graphical illustrations and maps, software code and documents such as scholarly publications and reports. The LA-COE implements data management practices that prepare data and information products for future use and ensures they are widely available for public access. Therefore, the LA-COE requires practices that support data discovery and sharing. These practices allow the reproduction of research results, verification of data and data properties, and the re-use of those data and results. The Data Manager for the LA-COE oversees research subrecipient adherence to data management requirements and management of all scientific and technical information products. In this context, the objectives of data management are:

- The creation and management of metadata that clearly documents all important properties of the data and data collection methods; this includes temporal and spatial information associated with the data and data collection; and
- Stable data archiving that allows a potential user to locate, access, and understand a desired dataset over the indefinite future. Data archiving should not alter data fidelity over time.

Detailed information regarding Data Management procedures is included in Appendix A.

11.0 Data Documentation and Dissemination Protocols

The State of Louisiana encourages the use of data collected for the purpose of dissemination of information through publication of abstracts and scientific and technical papers and by direct presentations. Suitable venues for presentations include conferences, seminars, and workshops. Suitable venues to publish research results may include peer-reviewed technical journals and formats designed for popular audiences such as popular magazines, newspaper articles and television news, etc. However, to ensure proper quality assurance/quality control (QA/QC) of the information released, the dissemination of data/project information collected via State contracts is subject to the following protocols:

- After submission of the final report, the data and deliverables are considered “public domain” and the LA-COE, its research subrecipients, and the State are free to use the data and results without restriction except as noted in the “Confidentiality” and “Patents and Copyrights” Articles of the LA-COE’s Cooperative Endeavor Agreement with CPRA.
- The State may post the final report and all interim reports on the CPRA website except as noted in the “Confidentiality” and “Patents and Copyrights” Articles of the LA-COE’s Cooperative Endeavor Agreement with CPRA.
- Publications by the State, the LA-COE, or its research subrecipients shall give credit to the Parties and to all other funding agencies unless any funding agency or Parties request that its credit acknowledgement be omitted.
- Consistent with developing federal policy on the open access of government-funded research, the LA-COE, and/or its research subrecipients will, to the extent provided for by law and to help advance science and improve the management of the Louisiana coastal area, make all reasonable efforts to ensure that any peer-reviewed journal manuscripts are made accessible to the public no later than 12 months after publication.

The research subrecipients shall maintain all books, documents, papers, accounting records, and other evidence pertaining to costs incurred and shall make such materials available at their respective offices at all reasonable times during the contract period and for **five (5) years from the date of final payment of RESTORE Act Center of Excellence funds** for inspection by the State, Legislative Auditor and/or the Office of the Governor, Division of Administration auditors, and copies therefor shall be furnished if requested.

12.0 Success Metrics and Assessment

Several metrics reflect both the operational success of the LA-COE and the utility/quality of the research conducted and are categorized as follows: (1) competitive grants process, (2) research progress, (3) research accomplishments, and (4) outcomes (Table 5). Success of each of these categories is comprehensively assessed with quantitative targets dependent on the current budget and number and size of awards associated with the competitive grants process and reflect the inclusion of academia, industry, non-profits, and agencies. Success metrics were co-developed by CPRA, LA-COE, and EC.

Periodic reports, at least every three years, are generated and submitted to CPRA to quantitatively track progress towards the targets and determine where both successes and problems have been identified. Success metrics for the program are approved by the EC. Amendments or changes to success metrics, assessment criteria, and targets require review and approval by the EC.

Table 5. Success metrics, assessment criteria, and targets.

Success Metric	Assessment	Target
Competitive Grants Process	Percent of submitted proposals that include more than one Louisiana-based institution ²	>50%
	Percent of submitted proposals that include collaborations between colleges/universities and industry/non-profits/agencies	>25%
	Percent of proposals that provide training opportunities for graduate/undergraduate students or postdocs at Louisiana-based colleges/universities	>90%
	Percent of topical areas identified in the Research Needs document addressed by the proposals	100%
	Maximum time from initiation of the contract to execution	10 weeks
Research Progress	On-time reporting	100%
	On-time completion of deliverables	100%
	On-time adherence to data management procedures	100%
	Percent of proposals for which no-cost extensions are requested	<20%

² Louisiana-based institutions are defined as those institutions with their main office based in Louisiana.

Success Metric	Assessment	Target
Research Accomplishments	Number of publications per funded project within one year of project completion	1–3
	Percent of funded projects that train graduate/undergraduate students or postdocs at Louisiana-based colleges/universities	>90%
Outcomes	Number of Coastal Master Plan projects and programs that directly utilize research findings within one year of project completion	>10

13.0 Reporting

The LA-COE will assess and report on progress using defined metrics and address federal reporting requirements required for CPRA’s reporting to the Department of the Treasury. In addition to financial and performance reports required by 2 C.F.R. Part 200, the LA-COE shall assist CPRA with providing the following:

- Any performance report as required by Section 5.0 Department of the Treasury’s RESTORE Act Centers of Excellence Research Grants Program Guidelines and Application to Receive Federal Financial Assistance and any reports as prescribed by Treasury in accordance with 31 C.F.R. § 34.706(b)
- An annual report to the Gulf Coast Ecosystem Restoration Council (Council) in accordance with 31 C.F.R. § 34.706(a) in a form set by the Council no later than 60 days after the end of the federal fiscal year

14.0 Best Practices and Ethical Standards

The LA-COE implements best practices and follows the highest ethical standards for financial tracking and reporting. The LA-COE management accepts responsibility for the preparation and fair presentation of financial statements including the design, implementation, and maintenance of internal control. The Water Institute’s Board of Directors meetings are held quarterly during which time detailed financial reports are presented to them and the Board reviews the Institute’s annual Tax Return Form 990 before filing. The Board of Directors adopted—and the Institute has implemented—a code of ethics and conflicts of interest policy given to all employees in the employee handbook that is followed by all LA-COE personnel.

In addition to the conflicts of interest policy implemented by the Institute, the LA-COE complies with the conflicts of interest provisions referenced in the [CPRA Internal Agency Policies](#) and will comply with any additional agency conflicts of interest policies or procedures that CPRA may implement in the future. Any entity or individual performing work subject to any form of legal agreement with the Institute, including without limitation, research subrecipients, consultants, contractors and subcontractors, must disclose any actual or potential conflicts of interest. In doing so, the entity or individual must establish that no conflict of interest exists regarding any existing or anticipated contractual and/or funding agreements and the receipt of funding from CPRA or the Institute. In addition, proposal submitters to LA-COE must provide a list of collaborators, advisors, and advisees for identifying potential conflicts of interests and avoiding bias in the selection of proposal reviewers. Collaborators are individuals who have

participated in a project or publication within the last 60 months with any proposal submitter, including co-authors on publications. Collaborators also include those persons with whom the proposal submitters may have ongoing collaboration negotiations. Advisees and advisors do not have a time limit. Advisees are persons with whom the submitter has had an association as thesis or dissertation advisor or postdoctoral sponsor. Advisors include a submitter's own graduate and postgraduate advisors.

15.0 Amending the Standard Operating Procedures

Any amendments or changes to the SOPs by the LA-COE will require review and approval by the EC and CPRA. In the event of any inconsistent or incompatible provisions for research subrecipients in these SOPs, the terms and conditions of the subaward take precedence.

16.0 Acknowledgements

This project was paid for with federal funding from the U.S. Department of the Treasury through the Louisiana Coastal Protection and Restoration Authority's Center of Excellence Research Grants Program under the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act of 2012 (RESTORE Act). The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of the U.S. Department of the Treasury.

Appendix A. Data Management Policy

REQUIREMENTS FOR RESEARCH SUBRECIPIENTS OF LA-COE FUNDS

All full proposals submitted to the LA-COE require a data management plan that addresses the data management objectives stated above and follows the guidelines outlined in the RFP. Protocols for data collection and processing, record-keeping, and data management are required to be consistent with the specifications defined in the CPRA internal policies, the LA-COE's Standard Operating Procedures, and the Standard Terms and Conditions. All projects must ensure that data and materials are collected, archived, digitized, and made available using methods that allow current and future investigators to re-use the data and material. Data re-use requires the same approximate knowledge of the data properties as the original researcher/investigator. Therefore, the use of open standards for data sharing (i.e., data formats that do not require proprietary software to be read) is required. All data, collected data products and metadata must be made publicly available within two years after the final report is submitted to the CPRA Contract Manager, unless written permission for earlier publication has been granted by CPRA.

All information products resulting from funded projects must be associated with detailed, machine-readable metadata (ISO format) and shared in a regional or national digital repository or data center (i.e., National Centers for Environmental Information, Inter-university Consortium for Political and Social Research, DataOne Dash) that promotes discovery and long-term preservation. The LA-COE encourages the use of free data repositories, although there might be situations, such as that relating to data format or file size, when this is not possible. Failure or delay to make data accessible may be considered by the LA-COE when making future funding decisions. Metadata and details of the repositories used must be provided to the LA-COE to enable tracking of all LA-COE data and information products. The LA-COE will provide a catalogue of all LA-COE data to the public upon request to facilitate data dissemination.

Requirements for data management plans include, but are not limited to, the following information:

- Data types, sample types, physical collections, coordinates, software, hardware, and any other materials or data to be produced, including that collected from primary sources and that derived from secondary sources, over the course of the grant
- QA/QC procedures to assess and improve data integrity and account for data interpretation
- Details on short-term data management procedures, including plans and timelines for data back up to secure the data storage
- Details on long-term data management procedures, including publishing and archiving data, samples, and other research products in corresponding regional or national data archives

Data management should be considered prior to the project starting to implement robust and efficient protocols best tailored to each individual research project. The initial steps of data management should include documenting the following:

- Source and permissions for use of proprietary data; justification for protection if the proposed project involves creation or use of confidential or sensitive information
- Hardware, software and infrastructure used to collect, process and store data
- Data organization plans
- Detailed procedures and timelines for release of data and associated metadata.

Prior to awarding the subrecipients, the data management plans in the full proposals of the Research and Collaborative Award categories will be reviewed by the LA-COE’s Data Manager to determine adherence to LA-COE SOPs and RFP requirements.

Once awarded, the research subrecipients will be reminded/notified of the data management requirements of the program-funded projects. Documents, such as lists of data management resources, data repositories, metadata creation tools, data “back up” strategies, and a checklist may be provided to help facilitate good data management practices. The Data Manager will be made available to researchers via email (datamanager@thewaterinstitute.org) or webinar, when requested, to help answer specific project-related questions and help expand the data management plan from their proposal to a fully functioning plan for their project by taking into consideration the review comments provided by the Data Manager and the LA-COE data management guidelines. Additionally, the Data Manager will provide an overview about best practices tailored to early career researchers in data and file management in the form of a webinar for the research subrecipients of the Graduate Studentship Awards. The following table (Table A1) lists the responsibilities of research subrecipients and the related support by the LA-COE’s Data Manager.

Table A1. LA-COE Data Manager support and the research subrecipient responsibility.

Research Subrecipient Responsibility	LA-COE Data Manager Support
Plan to manage data	Support research subrecipient in answering questions in the data management plan checklist
Collect, generate, acquire and organize data	<ul style="list-style-type: none"> • Ensure that researchers collect, record and organize information required to complete metadata records • Assist researchers in implementing data management best practices for their data and projects
Create metadata	Provide information and links about metadata creation tools, specifically related to proper formats and information that should be included
Plan data “back-up” storage strategies	Identify possible data “back-up” storage strategies and tools
Long-term data storage/archival	Identify possible long-term data storage options

Research subrecipients are required to make information products, initiatives, and activities publicly discoverable and widely accessible in a timely manner after the final report is delivered (e.g., two years). The Data Manager will review all quarterly Performance Progress Reports (PPRs) for updates on the data management. Key tasks that need to be reported include:

- Progress on the implementation of the data management plan regarding physical samples (if applicable) and data tracking (e.g., chain of custody for physical samples, versions of programming code)
- Progress on data processing
- Progress on data reporting (e.g., number of presentations, peer-reviewed publications; differentiating those in preparation and those completed)
- Report on data storage procedures (including data back-up procedures)
- General report of the completion of activities listed in the project data management plan (including relative progress towards completion, justification for any deviations from the plan, and foreseeable problems in the future and the expected problem mitigation activities)

An initial meeting with the Data Manager will be held to introduce best file- and data management practices, identify areas of concern, and provide strategies for implementing best practices.

REQUIREMENTS FOR OPERATION OF LA-COE

The Data Manager of the LA-COE oversees all management of scientific and technical information products produced by the COE. Furthermore, the Data Manager takes part in the Data Management Working Group of the Gulf of Mexico Restoration and Science Programs Coordination Forum. Internally, the Data Manager assures that the products produced from the LA-COE are:

- Available only to their intended audience
- Securely stored
- Organized in a logical way allowing for efficient future retrieval

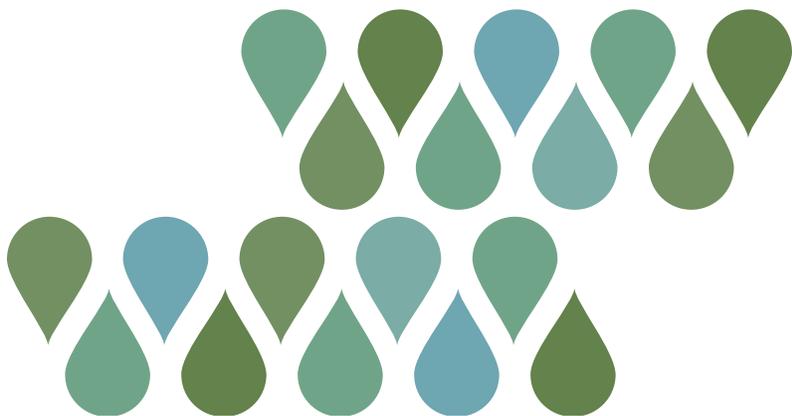
The Data Manager will guide the LA-COE team in organizing their data, devise protocols for robust daily on- and off-site data storage (including planning redundant, i.e., back-up data storage), and support the review process of the full proposals.

All files – including, but not limited to pre-proposal documents (e.g., letters of intent), full proposals, PPRs, meeting notes, presentations, contracts, saved email communications – are stored in the project folder on the LA-COE's network and are backed up frequently. Electronic communication (i.e., emails) will also be securely backed up. The expected files types related to LA-COE workflow include Adobe Portable Document Format (i.e., pdfs), Microsoft Word and Outlook documents, PowerPoint presentations, Excel sheets, and jpeg (and other vector formats) and tiff (and other raster formats) image file formats. Full proposals will also be saved in grant management software.

Files will be backed up on- and off-site on a daily basis. Restoration of backed-up files will be tested monthly.

The LA-COE shall maintain all books, documents, papers, accounting records, and other evidence pertaining to costs incurred and shall make such materials available at their respective offices at all reasonable times during the contract period and for **five (5) years from the date of final payment of RESTORE Act Center of Excellence funds** for inspection by the State, Legislative Auditor and/or the Office of the Governor, Division of Administration auditors, and copies therefor shall be furnished if requested.

Quarterly PPRs will be submitted through grant management software and then saved by Grants and Contracts staff under the folder of the associated funding cycle. Should PPRs indicate that the data management efforts are not sufficient or if problems arise that the TPOC cannot address over the course of the three-month period, the Data Manager will inform the Deputy Director regarding any concerns. They will work directly with the research subrecipient to support the data management through email, calls, Skype video calls, or even on-site visits if other methods of support do not suffice.



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