



**STATE OF LOUISIANA  
COASTAL PROTECTION AND RESTORATION AUTHORITY**

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**REQUEST FOR STATEMENT OF INTEREST AND QUALIFICATIONS (RSIQ)  
FOR ENGINEERING AND DESIGN**

**RSIQ NO. 2503-16-31**

**GOLDEN TRIANGLE MARSH CREATION (PO-163)**

**JUNE 10, 2016**

## **1.0 INTRODUCTION**

The Coastal Protection and Restoration Authority (CPRA) is seeking a qualified firm to provide engineering and design phase services for the Golden Triangle Marsh Creation Project (PO-163). The CPRA is proposing to implement this project through the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act (RESTORE Act). The RESTORE projects are of vital and urgent interest to the State of Louisiana, and as such CPRA is seeking a firm capable of performing the design phase in a complete but accelerated manner.

Tasks pertinent to this RSIQ include, but are not limited to the following: project management; project initiation and planning; compilation, review and analysis of historic data; sand, topographic, and bathymetric surveys; borrow area and project area geotechnical investigations, including numerical wave modeling and water quality analysis; environmental investigations; land rights services; permit development; and engineering and design. CPRA reserves the right to modify or identify additional tasks during the contract negotiation phase and/or the design phase of the project.

## **2.0 LOCATION**

The Golden Triangle is a narrow band of brackish marsh directly east of New Orleans between Lake Borgne and the confluence of the Mississippi River Gulf Outlet and the Gulf Intracoastal Waterway. The Inner Harbor Navigation Canal – Lake Borgne Surge Barrier stretches across the Golden Triangle Marsh. The center of the project area is located at the approximate coordinates 30° 0'33.81"N, 89°53'23.68"W. See Appendix A for vicinity map.

## **3.0 GENERAL BACKGROUND AND DESCRIPTION**

A combination of natural and human-driven impacts, including natural subsidence, the loss of substrate replenishment due to the channelization of the Mississippi River, oil and gas exploration, navigation dredging, and pollution, are driving the loss of important wetland ecosystems in Louisiana (Reed et al., 2012; Sillman et al., 2012).

The Golden Triangle wetlands are an important natural buffer in the multiple lines of defense protecting geographically and socially vulnerable communities in the city of New Orleans from storm surge. In addition, the Golden Triangle Marsh falls within Bayou Sauvage National Wildlife Refuge acquisition boundary, one of the last remaining marsh areas adjacent to Lakes Pontchartrain and Borgne (U.S. Fish and Wildlife Service 2009). It is the largest urban National Wildlife Refuge, as it falls within the city

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limits of New Orleans. The refuge includes fresh and brackish marshes, coastal hardwood forest, and serves as valuable wildlife, fish, and shellfish habitat. Because of its close proximity to New Orleans and the Bayou Sauvage National Wildlife Refuge, the Golden Triangle Marsh Creation project will provide an opportunity to promote natural resource stewardship and environmental education and outreach.

The Golden Triangle Marsh Creation project's objective is to restore and protect wetland, fish, and wildlife habitat and help maintain landscape integrity and enhance community resilience. Once designed, it is anticipated that the Golden Triangle Marsh Restoration Project will be constructed by hydraulically dredging and pumping sediment from Lake Borgne approximately 16 miles to the designated fill site. The fill site is approximately 600 acres. The slurry fill may be constructed to an elevation of +2 feet. The borrow area currently has a depth of -10 feet and may be dredged to a depth of -20 to -30 feet. Earthen containment dikes will be constructed to facilitate the construction of the marsh. A cutterhead suction dredge will likely be utilized to construct this project and up to three booster pumps may be required.

The scope of services for this task order entails performing the project management, project initiation and planning, engineering and design, environmental compliance and permitting, and initial adaptive management tasks needed for the Golden Triangle Marsh Creation project. Once these planning activities are completed, the state will have a construction-ready project, complete with data collection report, design reports, plans and specifications, assessment of environmental impacts and corresponding documentation, and the required permits.

#### **4.0 MINIMUM REQUIREMENTS**

Due to the complex requirements for the design and implementation of this project, it will be a requirement for the Contractor to employ highly-specialized personnel on a full-time basis. The following full-time personnel are required for the Contractor's project team, either through direct employment or through use of an experienced and qualified Subcontractor:

- A. **One Landrights Manager** with at least 15 years of experience and whom is responsible for project landrights oversight, coordination, schedule, budget and QA/QC of landrights deliverables. Land Rights Manager must have experience in federal acquisitions and relocations and leads a team of qualified and experienced personnel further identified under Appendix C.
  - B. **One Project Scientist** with a minimum of 7 years of Louisiana Department of Natural Resources Coastal Use and U.S. Army Corps of Engineers, New Orleans District, Section 10/404 permitting experience to provide environmental science, science, or specialist consulting services. The Project Scientist must provide specific examples with timelines regarding submittal of applications, response to information requests, and receipt of permits in a timely manner from DNR and USACE for complex construction projects. Experience with U.S. Fish and Wildlife Service, NOAA-National Marine Fisheries, and Louisiana Department of Wildlife and Fisheries regarding threatened and endangered species, as well as Wetland Value Assessment determinations is highly preferred.
  - C. **One Professional Engineer**, holding a current license from the Louisiana Professional Engineering and Land Surveying Board, with a Masters Degree in Civil or Coastal Engineering from an ABET-accredited engineering program. The Engineer shall have at least five years of experience in the following areas: design and analysis of sediment dredging, conveyance, and containment; numerical studies of coastal processes including wave modeling. Extensive hydraulic and hydrodynamic analysis experience in a coastal wetland or marine environment is preferred.
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- D. **One Geologist/Geophysicist**, preferably a Professional Geologist, with a Masters level of education and at least five years of experience in the following areas: coastal processes; coastal geomorphology; coastal sedimentology; geophysical investigation of borrow areas, including—but not restricted to—high-resolution seismic, bathymetry, side-scan sonar, and magnetic data.
- E. **One Hydrographer** with at least five years of experience in hydrographic surveying, including two years of technical supervision of surveys and two years of field experience. Shall be well-versed in undertaking geophysical surveys and geotechnical investigations using the latest state-of-the-art equipment. Certification as a Hydrographer by the American Congress on Surveying and Mapping (ACSM) is preferred.
- F. **One Professional Land Surveyor** licensed in the State of Louisiana.
- G. **One Professional Civil Engineer** with specialized training and experience in geotechnical engineering, holding a current license from the Louisiana Professional Engineering and Land Surveying Board shall oversee all engineering work performed for the geotechnical investigation and geotechnical analyses.
- H. **One Project Manager** with at least ten (10) years of relevant experience in project management and whom will be responsible for delivering the Golden Triangle Marsh Creation Project per the planned and agreed upon scope of work, budget, and schedule, and serve as the main line of communication and point of contact with the CPRA Project Manager. The Project Manager must have demonstrated experience of successfully utilizing schedule compression techniques on projects of a related nature and of a similar or larger scale.
- I. **One Principal Investigator** who meets the Archaeologist Qualifications as published in the Louisiana Register dated April 20, 1994, and has completed the course on Section 106 of the National Historic Preservation Act offered by the Advisory Council, or its equivalent training.

## 5.0 SCOPE OF WORK

### 5.1 Project Management

The Contracting Party will be responsible for providing overall project management including but not limited to developing and maintaining budget and schedule, scoping the work of all sub-consultants and administration of their tasks, maintaining accurate project data, maintaining and providing project records in a record management system, providing itemized task schedules in a P6 format and conducting and documenting project meetings.

### 5.2 Project Initiation and Planning

The Contracting Party will gain an understanding of the intended outcome of the Golden Triangle Marsh Creation project based on the RESTORE proposal and application, the State Master Plan, and a review of previous work completed under CPRA expectations. The Contracting Party will proceed with project initiation steps including: compiling Project Vision, Project Definition, Team Charter, and Project Delivery Planning. Please reference Appendix D for additional information.

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### **5.3 Engineering and Design**

The Contracting Party shall review the following subtasks for design, permitting, and environmental compliance for the development of all the deliverables specified in Section 6.0. These tasks should be used as a guide for the development of the Contracting Party's final scope of work and detailed work plan. Therefore, additional subtasks may be required based on the Contracting Party's design team experience, expertise, and rationale.

#### **5.3.1 Data Collection**

##### **5.3.1.1 Data Gap Analysis**

The Contracting Party shall obtain and review all existing models, studies, reports, bathymetric data, geotechnical and geophysical data, and other available data pertaining to the design of this project. A data gap analysis shall be performed to evaluate data needs and develop a data acquisition plan. Findings of this effort will be presented in a Historical and New Data Collection Plan Summary Report. This effort shall be optimized to meet the schedule milestones.

##### **5.3.1.2 Surveying Services**

Develop and prioritize a topographic, bathymetric, geophysical, magnetometer, and boundary survey plan to obtain sufficient data for finalizing the location of the proposed design features, which should be of a sufficient level for permitting, environmental compliance, and final design. This effort shall be optimized to meet the schedule milestones and shall include but not be limited to the following subtasks:

- Coordination with land owner investigations;
- Establishment of survey monuments and/or temporary bench marks, if necessary;
- Location and identification of ALL existing infrastructure, and discovered anomalies;
- Survey Report.

##### **5.3.1.3 Borrow Area Biological Investigation**

Develop and prioritize an investigation plan to obtain a sufficient quantity of samples in and around the proposed borrow area in order to delineate existing foraging habitat and benthic prey organisms regarding Atlantic Sturgeon. This species is identified as being threatened by the USFWS and NOAA-NMFS in the Federal Register. The plan should be of a sufficient level for permitting, environmental compliance, and construction. This effort shall be optimized to meet the schedule milestones and shall include but not be limited to the following engineering subtasks:

- Investigation Plan;
  - Sample Collection;
  - Sample Analyses;
  - Borrow Area Biological Report
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#### **5.3.1.4 Geotechnical Subsurface Investigation**

Develop and prioritize a geotechnical investigation plan to obtain and analyze soil boring samples of the borrow and marsh creation areas. Determine all parameters necessary to successfully dredge the borrow area and construct the marsh creation area, including containment dike slope stability, marsh fill and subgrade consolidation, etc. These should be of a sufficient level for permitting, environmental compliance, and construction. This effort shall be optimized to meet the schedule milestones and shall include, but not be limited, to the following geotechnical engineering subtasks:

- Geotechnical Investigation layout
- Soil Boring Collection
- Geotechnical Analyses
- Geotechnical Engineering Report

#### **5.3.1.5 Numerical Modeling**

Develop an optimal numerical modeling plan to assess regional hydrodynamics and impacts on wave climate due to borrow site dredging. This effort shall be optimized to meet the schedule milestones.

Additionally, numerical modeling shall be conducted to investigate the potential change in residence time for dissolved oxygen in the proposed borrow pit in Lake Borgne. Simulations should be conducted to evaluate very low circulation and changes to the conditions resulting from the borrow pit. A 3-D circulation and constituent transport model may be utilized to evaluate the changes to residence time.

#### **5.3.1.6 Pipeline Conveyance Corridor Alternatives Analysis**

Lake Borgne has been identified as the borrow area for this project. Obstructions such as oyster leases, flow lines, and pipelines exist between the borrow area and the fill area. The Contracting Party shall perform an alternatives analysis to determine the feasibility of several pipeline corridors for the proposed project. Primary factors to consider are the Engineer's Opinion of Probable Construction Cost, conveyance options, equipment access and limitations, impacts, environmental value assessment, and construction duration. A design decision document shall be developed to support the preferred conveyance corridor for inclusion in the preliminary engineering and design effort.

#### **5.3.1.7 Data Collection Summary Report (20% Design)**

The Contracting Party shall prepare the Historical and New Data Collection Summary Report. Supporting information and data shall include, but are not limited to, coastal processes; ownership, oyster lease, oil/gas activity, and existing contour maps; fill source maps; preliminary survey report; preliminary borrow area biological investigation report; preliminary geotechnical report; existing adjacent marsh types/habitat maps; and, preliminary feasibility and risk assessment.

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### **5.3.2 Preliminary Design (30% Design)**

The primary goal of the preliminary engineering design task is to develop design parameters and permit parameters through the use of existing data, numerical modeling, and preliminary data acquisition, for the design of each proposed feature. A Preliminary Design Report is to be prepared which will document physical conditions of the project area, including all modeling results, geotechnical conditions for the borrow and marsh creation areas, and cultural resources. The report will also summarize the development and evaluation of conceptual restoration alternatives and will present a recommended design, including quantities and costs. These efforts should be of a sufficient level and shall be prioritized to meet schedule milestones. The scheduled submittal date for the permit application process is anticipated to occur upon delivery of the Preliminary Design Report.

### **5.3.3 Final Design (95% Design)**

The primary goal of the final design of the recommended project features is the development of a construction bid package for the proposed project, and to finalize all remaining permitting questions and rationale for compliance. Final design shall incorporate all previous engineering and analysis comments. This task will include the Final Engineering Report and components necessary to complete the Golden Triangle Marsh Creation Project. This design effort should be of a sufficient level and shall be prioritized to meet schedule milestones.

### **5.3.4 Construction Bid Package (100% Design)**

The Contracting Party shall prepare the Construction Bid Package which shall include the schedule of items to be bid upon by proposing contractors.

## **5.4 Land Rights Services**

### *Landrights Necessary for Data Collection:*

The Contracting Party will be responsible for acquiring the necessary landrights easements, servitudes or other access agreements necessary for surveys or other site investigations. CPRA may assist the Contracting Party with obtaining access if necessary.

### *Landrights Necessary for Project Construction:*

CPRA shall reserve its rights to retain responsibility for the acquisition of all lands, easements, rights-of-way, relocations, servitudes, dredged material disposal areas and servitudes (LERRDS) necessary for project construction. As part of the landrights acquisition process, CPRA would then identify affected landowners, oil and gas activities and oyster leases, as well as coordinate with affected landowners during the preliminary design process to include concerns and comments necessary for landowner acceptance.

However, as part of the SIQ submittal, CPRA requires the Contracting Party provide qualifications to perform all land rights tasks as set forth in Appendix C.

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## **5.5 Permit Application Development**

The Contracting Party will be tasked to develop a complete Joint Coastal Use Permit application For Work Within the Louisiana Coastal Zone package, including all aspects and features of the project. The Contracting Party shall be responsible for providing data for all the necessary NEPA compliance documentation and permitting, including documentation of the predicted environmental benefits. The Contracting Party shall indicate in the design any buffers for avoidance of areas of sensitive areas, including cultural resources. The Contracting Party shall be responsible for preparing and submitting a Coastal Use Permit, and a Clean Water Act Section 10/404 Permit. Permit applications for construction will be submitted at the preliminary engineering (30%) design stage.

## **5.6 Adaptive Management and Monitoring**

The primary goal of the adaptive management plan is to put into place key management and monitoring parameters that will be required for project success. The Contracting Party will develop an adaptive management and monitoring plan that identifies key monitoring elements to assess the success of the project as related to its goals and objectives. The draft Adaptive Management and Monitoring plan shall be submitted as part of the Preliminary Design Report. The final Adaptive Management and Monitoring Plan shall be submitted as part of the Final Design Plan.

## **6.0 DELIVERABLES**

Develop a Historical and New Data Collection Plan Summary Report, Pipeline Conveyance Corridor Alternatives Analysis Design Decision Document, Preliminary Design Report, Final Design Report, Environmental Documents, Construction Cost Estimate, Plans and Specifications, Permit Package(s), and Construction Bid Documents.

## **7.0 STATEMENT OF INTEREST AND QUALIFICATIONS (SIQ) SUBMITTAL REQUIREMENTS**

If interested, firms should submit a SIQ that highlights the track record of the prime firm/team on successful implementation of large scale coastal projects of similar size, type and complexity. The CPRA will review the SIQs in an effort to select a firm/team that displays a thorough understanding of the implementation process with a proven track record of success. In addition, the submittal should emphasize the firm's understanding of the following:

- Accelerated project delivery methods
- Major components of the engineering and design phase process and course of action necessary for completion of the design phase as it relates to barrier island restoration and shoreline protection.
- Expertise and experience working in a coastal and marine environment with an emphasis on the Louisiana coast and Barataria Bay hydrodynamics and coastal systems.
- Expertise and experience performing land rights services as indicated in Appendix C.
- Anticipated environmental compliance associated with coastal restoration projects.

Firms should also document their current workload and capacity to fulfill the requirements of the engineering and design phase process in an optimal timeframe. The firm should include in the SIQ a detailed work plan and schedule which demonstrates the firm's understanding of the item described in the previous paragraph and shall include the persons, or Subcontractors who will be responsible for each task. Relevant experience of the person or Subcontractor shall be included in the work plan and schedule outline.

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**Any questions regarding this Request For Statement of Interest and Qualification should be submitted by email to Ms. Gloria Tigner at [CPRAcontracts@LA.GOV](mailto:CPRAcontracts@LA.GOV) and received by 3:00 p.m., June 24, 2016.**

Official responses to all questions submitted by potential proposers will be posted at <http://coastal.la.gov/resources/doing-business-with-cpra/contracts-and-grants/>.

Submittals should be no more than fifty (50) pages in length including contents pages, and SIQ supporting appendices and resumes. Text shall not be smaller than a font size of 10. Elaborate submittals are not required and are discouraged. Included in your SIQ should be (1) an executive summary stating the firm's particular expertise, resources and advantages they or their team will bring to the agency. This summary is limited to two pages; and (2) Standard Form CPRA 24-102 (SF 24-102) which is attached in Appendix B and is required to be filled by both prime contractor and subcontractors separately. In the event the SIQ contains subcontractors, the particular task they will perform together with the relevant experience should be included. Also, if the subcontractor is a Disadvantaged Business Enterprise (DBE) or participates in the Hudson/Veteran's Initiative, they shall include supporting documentation. Names listed on Standard Form CPRA 24-102 must precisely match the names filed with the Louisiana Secretary of State, Corporation Division, and the Louisiana State Board of Registration for Professional Engineers and Land Surveyors. Resumes or any organizational chart included in SF 24-102 shall clearly state the location (city and state) of the office in which the staff member resides. Any potential contractor failing to submit any of the information required on the SF 24-102 will be considered non-responsive.

**One signed original, by an authorized representative of the prime firm and six (6) paper copies of the SIQ, along with a digital copy of the SIQ in pdf format on a CD-ROM or USB flash drive, shall be included in the submittal. SIQ's will be accepted until 3:00 pm, on July 11, 2016. Statements must be addressed to:**

**Ms. Gloria Tigner  
CRP Supervisor  
Coastal Protection and Restoration Authority  
450 Laurel St, Suite 1501, North Tower  
Baton Rouge, Louisiana 70801**

**and if not mailed, may be hand delivered to**

**Ms. Gloria Tigner  
CRP Supervisor  
Coastal Protection and Restoration Authority  
450 Laurel St, Suite 1501, North Tower  
Baton Rouge, Louisiana 70801**

Timely submission of the SIQ is the responsibility of the prime firm. SIQ's received after the deadline date of 3:00 p.m., July 11, 2016 will not be considered nor reviewed.

The selected firm will be posted at:

<http://coastal.la.gov/resources/doing-business-with-cpra/contracts-and-grants/>. **If selected, the firm shall be prepared to negotiate a full scope, fee and schedule on an expedited timeframe immediately following the date of notification.**

Firms electing to submit a proposal as a prime contractor cannot be listed as a subcontractor on another firm's proposal. Firms not submitting as a prime contractor are allowed to be listed as a subcontractor on

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as many proposals as they deem appropriate.

The general criteria to be used by the CPRA in evaluating SIQ submittals for the selection of a potential contractor and their sub-contractors to perform the services are:

**Firm/Team Specialized Experience**

**0-30 points**

- Firm/Team shall be evaluated based on project specific expertise, experience and resources related to applicable work performed for CPRA or similar projects performed for other agencies with emphasis on the Louisiana coastal and marine environment. Firm/Team should provide their proposed project approach explaining the methodology for the design of the project which should reflect an understanding of the project and its objectives and a schedule for the work.
- Primary focus should be on prime consultants' experience however sub-consultants experience will be considered based on the element of work identified in Standard Form CPRA 24-102.

**Key Personnel Qualifications and Experience**

**0-30 points**

- Evaluates the professional qualifications of key personnel of the firm's project team related to the work described in the RSIQ, including academic attainment, professional achievements, relevant experience and project responsibilities. While firm principals are listed, they traditionally have little involvement in the project tasks; therefore emphasis should be placed on the experience of project managers, project engineers and technical staff with similar size/type projects.

**Capability of Firm**

**0-25 points**

- Evaluates the firm/team ability to successfully provide services similar to those required by the agency, expedited in a manner reflecting the urgent priority of CPRA, the funding program, the eroding nature of the project site, and the closing window of opportunity to accomplish the goals of the project. Criteria include past performance, knowledge of locality, coordination and cooperation with agency staff, ability to meet and exceed the client's expectations on schedule, deadlines, budgets, and quality of work.

**Capacity of Firm**

**0-15 points**

- Evaluates the firm/teams ability and capacity to perform multiple projects simultaneously, and to complete work efficiently in an urgent manner.

The CPRA reserves the right to reject any and all submittals for this RSIQ invitation. This invitation does not constitute an acceptance of any offer, nor does such invitation in any way obligate CPRA to execute a contract with any offeror. CPRA reserves that right to negotiate final terms, including scope, budget, rate sheet, contract type, and contract amount, with the successful submitter prior to the awarding and execution of the contract. The final decision to execute a contract with any party rests solely with CPRA.

All potential contractors should be advised that contractors may, in certain circumstances be deemed public employees as defined by the Ethics Commission. Full disclosure to the CPRA is required of any potential conflicts. Any potential conflicts shall be resolved with the Ethics Commission prior to seeking a contract. The commission on Ethics for Public Employees is located at 617 North Third Street, LaSalle Building, 10th Floor, Baton Rouge, LA 70802; telephone number 225 219-5600; toll free at 1-800-842-6630.

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According to the provisions of LA. R.S. 12:301-302, any corporation which is not incorporated in the State of Louisiana must obtain a certificate of authority to transact business in Louisiana from the Louisiana Secretary of State, Corporations Division, 3851 Essen Lane, Baton Rouge, Louisiana 70809, Phone no. (225) 925-4704.

For-profit and non-publicly traded corporations must provide a Disclosure of Ownership form when contracting with CPRA. The Disclosure of Ownership should not be submitted with SIQ. However, prior to contracting with the CPRA, the forms must be completed, notarized, and submitted to the Louisiana Secretary of State, Corporations Division, 3851 Essen Lane, Baton Rouge, Louisiana 70809 and a copy stamped by the Corporations Division must be provided to the CPRA.

The firm, engineers, or surveyors that will accomplish the work as described in this RSIQ, shall be certified by the Louisiana State Board of Registration for Professional Engineers and Land Surveyors and shall possess current licenses throughout the term of the contract. The firm, engineers, or surveyors shall provide all services in compliance with the registration law for Professional Engineers and Land Surveyors (L.R.S. 37:681 through 37:703 as amended by Act 568 of 1980) and the rules of the Board of Registration for Professional Engineers and Land Surveyors.

APPENDIX A - PROJECT MAP

APPENDIX B - CPRA-SF24-102

APPENDIX C - SCOPE OF LANDRIGHTS SERVICES

APPENDIX D - PROJECT INITIATION AND PLANNING

APPENDIX E – SAMPLE OF PROFESSIONAL SERVICES CONTRACT

