



Prepared For:

**LIVINGSTON PARISH GOVERNMENT**

**REQUEST FOR PROPOSAL (RFP) FOR  
ENVIRONMENTAL CONSULTING SERVICES**

Submitted By:

**Coastal Environments, Inc.  
1260 Main Street  
Baton Rouge, LA 70802  
Contractor License #32569**



**This Proposal Is Valid For Ninety (90) Days**

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## 1.0 Introduction



# Coastal Environments, Incorporated

### Services:

Applied Science  
& Planning

Environmental  
Restoration &  
Monitoring

Cultural Resources  
Management

Geographic  
Information  
Services (GIS)

Litigation Support

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April 22, 2025

Heather Crain, Grant Manager  
Livingston Parish Government  
20355 Government Blvd., 2nd Floor, Suite E  
Livingston, LA 70754

### Subject: Request For Proposal for Environmental Consulting Services

Dear Mrs. Crain and Members of the Selection Committee:

Coastal Environments, Inc. (CEI), with a staff of over 35 science professionals, offers extensive experience in environmental science consulting services including NEPA and regulatory compliance, cultural and marine archaeological investigations, T&E species surveys, Phase I environmental site assessments, mitigation planning, wetland restoration, shoreline protection, coastal zone management, and more. CEI possesses the capability to conduct simultaneous environmental and cultural resource assessments across both terrestrial and marine environments to include but not limited to review and determine level of environmental review for 58.5, conduct and submit environmental reviews as required by 24 CFR Part 58, determine project activity compliance with 24 CFR 50.4, 58.5 and 58.6 laws and authorities while completing and submitting HUD forms and meeting and coordination with oversight/regulatory agencies.

CEI has an extensive project history working with federal, state, and local agencies including the Louisiana Department of Transportation and Development, Texas Department of Transportation, and the U.S. Army Corps of Engineers. CEI has completed NEPA documentation for the National Park Service, U.S. Fish and Wildlife Service, U.S. Coast Guard, and FHWA/LDOTD. The firm has participated in major restoration efforts under funding from CIAP, CWPRA, ARRA, CPRA, FEMA, NOAA and The Nature Conservancy of Louisiana. Notable projects include New Orleans Land Bridge (PO-169), Bayou Bonfouca Marsh Creation (PO-104), and East Leeville Marsh Creation (BA-0194), among others.

CEI confirms that it meets all appropriate state licensing requirements to practice environmental consulting in the State of Louisiana. Furthermore, CEI affirms that it has not engaged in any unethical practices since inception. If awarded the contract, CEI accepts full responsibility for the execution of the entire contract, including the payment of all charges resulting from the agreement.

We appreciate the opportunity to be considered for this important project and look forward to the possibility of contributing our expertise to Livingston Parish.

Respectfully,

Beth Manly

President

[bmanly@coastalenv.com](mailto:bmanly@coastalenv.com)

## 2.0 Background and Experience

### 2.1 Qualifications

Coastal Environments, Inc. (CEI), (UEI# MKT2FKYNS9Z8) has been active in planning, basic research and applied environmental sciences in the Northern Gulf Coastal Region and Lower Mississippi Valley Region since its establishment in 1967. CEI is a certified Woman Owned Small Business, headquartered in Baton Rouge with branch offices in New Orleans; Biloxi, MS; Corpus Christi and Houston, TX. The focus of CEI's work centers on five major areas: 1) planning and regulatory compliance, 2) cultural resources investigations, 3) geological, hydrological, and biological investigations, 4) natural systems management, restoration and monitoring, and 5) geoforensic investigations. The firm's GIS professionals are an integral component of all projects providing GPS and remote sensing support and GIS services, database development, data analyses and report deliverables. With approximately 26 full-time science professionals, CEI routinely provides environmental science consulting services that involve cultural resources investigations (terrestrial and underwater); wetland restoration/management and shoreline protection planning and implementation; wetland delineations, biological evaluations and assessments; NEPA and other regulatory compliance; permitting; mitigation and project monitoring; Phase 1 Environmental Site Assessments; HTRW investigations; Mitigation Bank planning, implementation and monitoring; coastal zone management programs; rare, threatened and endangered species and critical habitat surveys; oyster surveys; and associated GIS database development, analysis, management and graphic/map production.

Major strengths of the firm are the interdisciplinary nature and long-term working relationship of the professional staff, most with advanced degrees in a wide range of disciplines relating to the earth, biological, and cultural/social sciences, and its extensive practical experience in applying scientific principles and methodologies to address major environmental issues in coastal and riverine environments within a scientific, socioeconomic and regulatory framework. Identifying opportunities and constraints, assessing the feasibility of proposed actions, understanding and incorporating natural form-process relationships in project designs, and achieving buy-in from stakeholders, affected property owners, regulatory/permitting agencies and elected officials are essential components for successful development and implementation of coastal restoration and flood protection plans that would enable citizens to live in safe and sustainable communities. An equally essential component of finding solutions to coastal, riverine and deltaic "problems" is the formulation of a vision for dynamic coastal areas with regard to the physically and financially affordable sustainability of people, natural resources, habitats, and quality of life.

The firm has demonstrated the capability to conduct multiple, large-scale natural environmental and cultural resources surveys and assessments simultaneously, whether onshore in terrestrial, palustrine, riverine and estuarine environments or offshore in deeper water. CEI is a full-service environmental consulting firm with scientists who have the expertise to take projects from conception to implementation, with assistance as required from consultant engineers. CEI scientists routinely characterize and access sites for project development; identify opportunities and constraints to wetland development; coordinate project development with regulatory and



commenting agencies; develop wetland management plans in coordination with consultant engineering firms; prepare regulatory compliance documents, including permit applications and NEPA documents as needed; respond to concerns of agencies; implement vegetation plantings; monitor sites for success and recommend adaptive management as needed. The firm also has a full array of vehicles, vessels and equipment suitable for conducting field surveys and performing biological, geological and hydrological sampling in terrestrial, aquatic and marine environments. In-house laboratory facilities support analysis of cultural resources, biological and geological materials. GIS hardware and software facilitate database development, analyses and report deliverables.


The firm has worked on numerous coastal planning and/or restoration projects in Louisiana under several funding programs (e.g., Coastal Protection and Restoration Authority, Coastal Impact Assistance Program, Coastal Wetlands Planning, Protection and Restoration Act, American Recovery and Reinvestment Act of 2009, Dept. of Homeland Security-Federal Emergency Management Act, The Nature Conservancy of Louisiana). The firm has been awarded numerous environmental and cultural resource, multi-year, services contracts with agencies such as Louisiana Department of Transportation and Development (LDOTD), Mississippi Department of Transportation, Texas Department of Transportation, US Army Corps of Engineers and Federal Emergency Management Agency. CEI has prepared NEPA process compliance documents for National Park Service, Federal Highway Administration/LDOTD; US Fish and Wildlife Service, US Coast Guard Service, USDA Natural Resource Conservation Service and Bureau of Indian Affairs.

Additionally, since 2005, CEI has worked through the Louisiana Office of Community Development on US Department of Housing and Urban Development funded disaster relief projects. The earliest of these projects was in response to Hurricanes Katrina and Rita. CEI served as a subcontractor to Environ International Corporation on a contract for environmental review services for the Louisiana Office of Community Development in relation to disaster recovery after Hurricanes Katrina and Rita in 2005. CEI's role on that contract was to screen properties that had applied for assistance through the program to identify ones that may contain structures or archaeological sites that are eligible for the National Register of Historic Places, as required by the National Historic Preservation Act of 1966. To efficiently carry out that review, CEI developed a process that included (1) online review of digital photographs of the property; and (2) plotting the location of the property in relation to recorded archaeological sites, historic structures and National Register districts through the Department of Culture, Recreation and Tourism's online GIS. Using that process, CEI reviewed over 7,500 properties that applied for funding to carry out repairs through the Road Home small rental properties program. CEI also reviewed another 5,600 properties that were acquired by the Louisiana Land Trust, and 700 properties that were acquired by the New Orleans Recovery Authority.

After extensive flooding in the Baton Rouge area in the spring and summer of 2016 damaged an estimated 80,000 homes in Louisiana, CEI was again asked to serve as a subcontractor to Environ Corporation (now Ramboll) on another disaster-relief program administered by the Louisiana Office of Community Development. This program, known as Restore LA, used the same process discussed above and evaluated over 19,000 homes for the NRHP.

In 2021 a series of hurricanes, including Laura and Delta, struck the Louisiana coast and CEI was again selected to carry out the review of an estimated 50,000 properties for the NRHP. The review process has now been streamlined through the use of GIS to plot the property locations, display their photographs, and record the evaluations, all online. This project is currently ongoing.

## 2.2 Project Descriptions

Coastal Environments, Inc. 

CPRA Bayou Sauvage Forested Wetland Mitigation (BSFWM) Project (PO-0145), Orleans Parish, Louisiana

Coastal Protection and Restoration Authority  
P.O. Box 44027  
Baton Rouge, LA 70804-4027  
Jammie Favorite, Coastal Resources Senior Scientist  
(225) 342-4119; [Jammie.Favorite@la.gov](mailto:Jammie.Favorite@la.gov)  
Gloria Tigner, Contracts and General Services  
(225) 342-5023; [Gloria.Tigner@la.gov](mailto:Gloria.Tigner@la.gov)

Initiation Date: 07/2024  
Completion Date: 12/2024  
Cost (in thousands): \$67.5

**Synopsis:** USACE, NOD (MVN) constructed the Bayou Sauvage Forested Wetland Mitigation Project to compensate for impacts to forested habitat incurred during the acquisition of borrow from Walker Road and New Orleans East borrow pits for Task Force Guardian (TFG) emergency repairs to the levees around New Orleans after Hurricane Katrina in Orleans Parish. After the year three success criteria were met, the project was turned over to CPRA as the state managing agency who is responsible for ensuring that the project meets intermediate and long-term success criteria throughout the project life. CPRA has developed a monitoring program designed to quantitatively assess the survivability and coverage of past planting efforts. Under the CPRA Contract No. 4400024123 with Moffatt & Nichol, CPRA contracted CEI to conduct environmental monitoring of the 139.1 acres of native wetland forests, including 83.5 acres of bottomland hardwood (BLH) and 55.6 acres of swamp habitats and prepare a report of findings.

**Methodology:** CEI provided all personnel, equipment, materials and supplies to perform four (4) tasks: 1) coordinate with regulatory personnel and contracting company of schedule and scope; 2) collect data on vegetation at monitoring stations using ATVs; 3) process and analyze monitoring data; 4) prepare report documenting methodology, data collection, and analysis and history of previous mitigation activities. A CEI biologist familiar with the ecology of coastal Louisiana and proficient in plant identification and mitigation monitoring methodology conducted the investigation, analyzed the data and prepared the report following protocols established by the CPRA. He used the CRMS vegetation sampling survey method to record and photograph conditions at 58 sampling points that were previously established by the USACE along nine transects within three sub-areas. Raw data were collected on planted and volunteer canopy and mid-story species, invasive and nuisance species and ground cover (species and percent cover) and wetland indicator status and entered into MS Excel spreadsheet files for generation of various summary tables using CPRA approved calculations.

Data analysis collection and analysis were designed to determine whether applicable restoration revegetation success criteria have been achieved. The report also included recommended management and maintenance activities (e.g., replanting, better water management, eradication of invasive species) to ensure project mitigation success criteria and goals set by the CPRA.

**Deliverables:** *Bayou Sauvage Forested Wetland Mitigation Project Report, Orleans Parish, Louisiana* (2024).





**Cypress Bayou Green Infrastructure Project, East Baton Rouge Parish, Louisiana.****Duplantis Design Group, PC (DDGPC)****9015 Bluebonnet Blvd.****Baton Rouge, LA 70810****Alex Shortess, Project Manager****225-751-4490; [ashortess@ddgpc.com](mailto:ashortess@ddgpc.com)****BREC-Recreation & Park Commission****Reed Richard; 225-273-6405; [RRichard@brec.org](mailto:RRichard@brec.org)****Initiation Date: 05/31/2023****Completion Date: 12/30/2024****Cost (in thousands): \$24.7**

**Synopsis:** Coastal Environments, Inc. (CEI) subcontracted to Duplantis Design Group, PC (DDGPC), consultant to BREC, to provide environmental consulting services for preparation of environmental documents and Section 404 permit application. The overall goal of this project was to deliver tangible reductions in flood risks within the Cypress Bayou watershed while delivering recreational and ecological benefits envisioned by BREC for Greenwood Park and the surrounding community. The project was funded by local and federal funds from the Louisiana Watershed Initiative and work conformed to Disaster Recovery Community Development Block Grant (CDBG) Program requirements.

**Methodology/Results:** CEI scientists conducted a literature review of environmental documents for the project area, including CEI prepared documents for the Greenwood Park and Baton Rouge Zoo Master Plan project (e.g., wetland delineation, ESA-I, T&E Species, and Cultural Resources Desktop Review). CEI reviewed available data from BREC, DDGPC and web searches and conducted a field reconnaissance to determine additional information required to obtain environmental clearances as part of the permitting process.



CEI Biologists consulted with the DDGPC Team to prepare the Cypress Bayou Green Infrastructure Plan and associated maps and diagrams; mitigate adverse impacts; identify permits required; assemble environmental information needed for preparation of Section 404 permit application and LPDES Stormwater Construction Permit, including NOI and Stormwater Pollution Prevention Plan (SWPPP). CEI prepared and submitted a Section 404 permit application, tracked the application and responded to comments. The firm provided information to DDGPC for preparation of Environmental Assessment (EA) Determinations and Compliance Findings for HUD-Assisted Projects 24-CFR Part 58 and Environmental Review Record (ERR) Information Document Cypress Bayou Green Infrastructure Project.

**Deliverables:** Section 404 Permit Application and information for inclusion in Environmental Assessment (EA) Determinations and Compliance Findings for HUD-Assisted Projects 24-CFR Part 58 and Environmental Review Record (ERR) Information Document Cypress Bayou Green Infrastructure Project.



**Fulton Beach Road, Town of Fulton, Fulton (Aransas County), TX, DRS010049-5004-1, Texas Community Development Block Grant**

**TLC Engineering**  
8204 Westglen Drive  
Houston, TX 77063  
David Fredrick (713) 868-9600

**Completion Date: 2010**  
**Cost (in thousands): \$5.3**

**Synopsis:** Coastal Environments, Inc. (CEI) was a subcontractor to TLC Engineering, Houston, TX for the preparation of an Environmental Assessment (EA) and associated Community Development Block Grant (CDBG) documents for the proposed roadway and drainage improvements of Fulton Beach Road. The client was the Texas Department of Rural Affairs, Disaster Recovery Division which managed the 2008 Supplemental Disaster Recovery Fund for Hurricanes Ike and Dolly. The Fulton Beach Road, a primary access and emergency evacuation road for the community of Fulton, was submerged by flood waters from Hurricane Ike. This event highlighted recurring problems of standing water and inefficient drainage encountered after moderate to heavy rainfall events and prompted the community to seek disaster recovery funding for improvements.

**Methodology/Results:** CEI conducted Website database searches and field reconnaissance to document site characteristics and prepare exhibits, the EA and Environmental Review Record. The work effort included: (1) description of, and need, for project, (2) completion of a series of checklists that identified the type and degree to which NEPA related concerns would be impacted by the project, (3) mitigation, (4) agency correspondence and documentation and (5) photo documentation of the site visit. CEI provided assistance to TLC, on behalf of the community of Fulton, for the process of completing CDBG forms which included coordinating the development and publishing of the public notice and request for release of funds for the project.



**Fulton Beach Road, Fulton, Texas (CEI 2009).**

**Deliverables:** Environmental Assessment and exhibits depicting site characteristics, Components of the Environmental Review Record, Public Notice and Request for Release of Funds.

## A Cultural Resources Survey of the West Bank and Vicinity Hurricane Protection Levees, Plaquemines, Jefferson, Orleans, and St. Charles Parishes, Louisiana

US Army Corps of Engineers, New Orleans District  
7400 Leake Street  
New Orleans, LA 70118-3651  
Mike Swanda (504) 862-2036

Completion Date: 2011  
Cost (in thousands): \$338

**Synopsis:** Coastal Environments, Inc. (CEI) conducted background research and an archaeological survey of high-probability areas of the proposed West Bank and Vicinity (WBV) Hurricane Protection Levees, designed to protect the portions of the greater New Orleans area on the West Bank of the Mississippi River from flooding associated with tropical weather events.



**Methodology:** In the initial stages of the project, high probability areas were designated based on the position of the 66-mi- (106.2-km-) long survey corridor with respect to the natural levees (subsided and extant) of the Mississippi River and its distributaries, as well as historic maps. These areas were subsequently surveyed with shovel testing at 30-m intervals, and auger testing where the potential for deeper deposits existed. Archaeological sites determined potentially eligible were subjected to Phase II testing to determine NRHP eligibility. Overall, 391.6 ac (158.5 ha) of high probability landform were surveyed for cultural resources, and an additional 3.5 mi (5.7 km) of bankline was surveyed on Bayou Segnette, Bayou Barataria, Bayou Concession, Hero Canal, and several unnamed distributaries.

**Results and Deliverables:** Four archaeological sites were identified within the survey corridor, and all four were recommended for further work. Two of these, Oakville (16PL168) and Mahoney-Crouere (16PL169), were subjected to further testing for eligibility to the National Register of Historic Places (NRHP). The sugar plantation recorded at the Mahoney Crouere site dates from the early 19<sup>th</sup> century to the mid-twentieth century. Oakville is the archaeological footprint of the town of Oakville, Louisiana, an African-American community founded by emancipated slaves in the late 1860s, and still occupied by many of their descendants.



Backhoe trenching and test units at the Mahoney Crouere site yielded evidence that the site had been heavily disturbed by repeated episodes of land clearance, and the site is not considered eligible for the National Register of Historic Places (NRHP). Testing at the Oakville site, however, yielded evidence for intact trash pits and privies dating as early as the 1860s, offering a unique window into a Reconstruction-era

African American settlement. The site was determined to be eligible for the NRHP, and construction plans were subsequently redrawn to avoid the site.



**Environmental Impact Statement and Master Plan, Bayou Sauvage National Wildlife Refuge, New Orleans, LA**

U.S. Fish and Wildlife Service  
1010 Gauge Blvd.  
Slidell, LA 70458  
Pon Dixon, (985-285-0060), [pon\\_dixon@fws.gov](mailto:pon_dixon@fws.gov)

Completion Date: 1994  
Cost (in thousands): \$219

**Synopsis:** Coastal Environments, Inc. (CEI) participated in a joint venture project with Design Consortium and N-Y Associates, Inc. to develop a Master Plan and Environmental Impact Statement (EIS) for the 22,000-acre plus Bayou Sauvage National Wildlife Refuge managed by the U.S. Fish and Wildlife Service (USFWS) in Orleans Parish, Louisiana. CEI was responsible for development of the EIS, Environmental Resource Atlas, and the wetland management portion of the Master Plan.



**Data Collection and Synthesis:** The 16-month project involved collection and analysis of baseline information, (e.g., threatened and endangered species, wetlands, habitats, soils, prime farmland, hydrology, geology, flood plains and flood zones, flora, fauna, climate, air quality, noise, community resources, land use, zoning and local plans, social and economic conditions, transportation, utilities and other easements, flood protection, hazardous waste sites and landfills, and cultural resources), development of alternatives, and identification of impacts.

**Coordination and Permits:** The firm coordinated with the public regulatory agencies, and other local, state, and federal agencies as part of the National Environmental Policy Act (NEPA) process related to development of a refuge management plan and advised the USFWS on permit issues associated with management of the refuge. Presentations, accompanied by maps and slides, were made at the scoping meeting and DEIS public hearing.

**Issues:** Major conflicts addressed during the EIS process and Master Plan development included: public versus wildlife use of the refuge; hunting and fishing; development of areas adjacent to the refuge in a manner compatible to the refuge; maintenance of wetland habitats in a deteriorating deltaic environment; acquisition of additional outparcels within the refuge boundary; and development of refuge facilities in the least environmentally damaging manner.

**Documents:** Final documents reflected public and agency input. Master Plan recommendations were designed by Design Consortium to meet USFWS mission requirements regarding public use, environmental protection, education, and wildlife conservation. Four major documents generated included the EIS, Master Plan, Environmental Resource Atlas, and Cultural Resources Evaluation. Other documents included: news releases, project maps, and informational handouts.





**Stage 1 EA, Hooper Rd Extension & Widening, East Baton Rouge & Livingston Parishes, LA**

Louisiana Department of Transportation and Development  
1201 Capitol Access Rd  
Baton Rouge, LA 70802

Nicholas Olivier, 225-379-1733; Nicholas.Olivier@la.gov

Bruce Richards, N-Y & Associates, 504-885-0500, brichards@n-yassociates.com

Initiation Date: 5/2012

Completion Date: 3/2015

Cost (in thousands): \$136.6

**Synopsis:** The LDOTD proposes to widen and extend Hooper Rd (LA 408) from its existing terminus at LA 37/64 to LA 16 and construct a bridge over the Amite River. CEI, as subcontractor to N-Y & Associates, Inc., conducted surveys to document the setting and environmental effects of three alternatives on wetlands, threatened and endangered (T&E) species, cultural resources and hazardous materials. Karen Wicker was the Project Manager; Walker Wilson conducted the T&E survey, Biological Assessment and wetland delineation and Ed Fike performed the ESA-Phase 1 survey.

**Methodology/Results-Wetlands & Threatened & Endangered Species:** CEI biologists researched local governmental databases and Websites, coordinated with LDWF, USFWS and LDOTD biologists and conducted field surveys. They mapped wetlands according to USACE criteria, took photos of soils and vegetation at sample sites and prepared data forms for these sites along three alternative ROWs. Wetland maps were prepared and wetland impacts quantified using GIS. Results of the investigation were presented in a Wetland Findings report prepared according to FHWA criteria. Initial research revealed that sections of the Amite River were habitat for the Alabama (Inflated) Heelsplitter Mussel. After consultation with biologists from the USFWS, LDWF and LDOTD, aquatic field surveys using SCUBA gear were conducted in the vicinity of two alternative bridge crossings for the mussel. Results of the survey were presented in a Biological Assessment prepared according to USFWS criteria. Several species of mussels were identified; however, no Heelsplitter Mussel was located.

**Hazardous Wastes:** An Environmental Site Assessment-Phase 1 survey was performed according to ASTM standards using field inspections, records searches, selected interviews, and analysis of historic maps, street directories and aerial photographs. No sites of environmental concern were identified.



**Cultural Resources:** A Cultural Resources Report and a Sec. 106 Adverse Effect Documentation were developed through field surveys of the potential area of impact (APE) for three alternative sites and records searches at the LA Div. of Historic Preservation and Div. of Archaeology. No archaeological remains were encountered, and no archaeological sites were recorded. A total of 78 structures constructed before 1968 were examined and sixty-three of these were common to all alternatives. No structures were eligible for listing on the HRHP.

**Deliverables:** Wetland Findings Report, Biological Assessment (Alabama

[Inflated] Heelsplitter Mussel); ESA 1 report; Cultural Resources Report, Section 106 Adverse Effect Documentation; sections of EA on wetlands, T&E species, cultural resources, hazardous materials.



**Lake Lery Marsh Creation, Coastal Impact Assistance Plan (CIAP), St. Bernard Parish, LA****St. Bernard Parish Government**

8205 W Judge Perez Drive

Chalmette, LA 70043

William McCartney, St Bernard CZM Adm., 504.278.4303, [wmccartney@sbpg.net](mailto:wmccartney@sbpg.net)Phillip Olivier, PE, URS (AECOM), 504.586.8111, [Phillip.olivier@aecom.com](mailto:Phillip.olivier@aecom.com)

Initiation Date: 11/2013

Completion Date: 10/2016

Cost (in thousands): \$77.3

**Synopsis:** St. Bernard Parish's proposed Lake Lery Marsh Creation Project was accepted for funding under the Coastal Impact Assistance Program (CIAP), one of CPRA's funding sources for coastal restoration. The project proposed to restore intermediate marsh habitat in eroded, open water areas along the west bank of Bayou Terre Aux Boeufs using dredge fill from Lake Lery, for the purpose of preventing storm surge from breaching the natural levee and exposing the road and communities along the east bank of the river. Coastal Environments, Inc. (CEI) assisted URS (now AECOM) in preparing a proposal and making a bid presentation to the parish.

**Methodology:** CEI scientists provided input to URS engineers regarding project design opportunities/constraints and project parameters (existing elevation and tidal range, target marsh elevation for fill, salinity ranges and trends, habitat type and potential revegetation species, etc.) that would influence successful establishment of an intermediate marsh.

The firm assisted in defining the proposed action and construction techniques to facilitate permitting and avoiding adverse effects, obtaining permit application data, coordinating pre-application meeting with USACE, other regulatory agencies and URS to identify agency concerns and conditions and define environmental issues and mitigation requirements. CEI prepared, submitted and tracked the permit applications (Section 404, Section 10, CUP) to the USACE and LDNR and responded to comments. The USCG was consulted regarding navigability of waterways in the project area.



CEI prepared a wetland delineation and tracked the submittal until the USACE issued a jurisdictional determination. CEI biologists consulted USFWS and LDWF databases for potential threatened and endangered species in the area and looked for T&E species during the wetland delineation survey. Prior to construction, CEI biologists conducted a nesting bird survey and submitted a report of findings.

The archaeological investigation resulted in the recommendation that the project area be realigned to avoid a previously identified historically significant archaeological site. During the course of project implementation, a previously unrecorded archaeological site was discovered, and CEI archaeologists recorded and delineated the sites and assessed the potential impacts of construction. Site 16SB197 was found to have three intact prehistoric mounds dating to the Bayou Petre Phase of the Mississippi Period (1200-1700 A.D.). With the assistance of the USACE-NOD, recommendations for No-Work areas were established to the satisfaction of the State of Louisiana and interested Tribal entities. CEI monitored the construction phase to ensure avoidance of adverse impacts to cultural resources.

**Deliverables:** Wetland Delineation Report and Jurisdictional Determination from USACE; Maps of Environmental and Cultural Resources Features; Section 10, 401 & 404 and Coastal Use Permits; Wading Bird Nesting Survey Report and Cultural Resources Report.





## Cultural Resources Investigations of Section 110 Managed Lands, Little Rock District, U.S. Army Corps of Engineers, Arkansas and Missouri

US Army Corps of Engineers, Little Rock District  
700 West Capitol  
Little Rock, AR 72201  
Allen Wilson, (501) 324-5752, Allen.D.Wilson@usace.army.mil

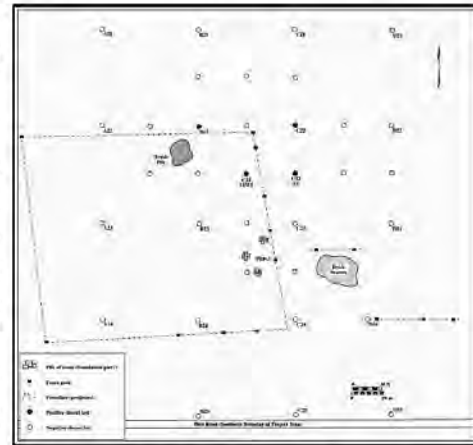
Initiation Date: 06/2016  
Completion Date: 07/2019  
Cost (in thousands): \$491.6

**Synopsis:** Coastal Environments, Inc., (CEI) carried out Phase I cultural resources surveys at 22 locations adjacent to 10 reservoirs in western and northeastern Arkansas and south-central Missouri. The goal of the work was to assist the U.S. Army Corps of Engineers (Little Rock District) in obtaining an inventory of the cultural resources present on the lands the Corps manages and for which logging, recreation, and other uses are permitted. A total of 2,029.3 acres was examined in the course of this work.

**Methodology:** The project areas were surveyed on foot, using visual survey and shovel testing at 30-m intervals for areas with a 0° to 15° slope, and at 60-m intervals for slopes up to 60°. The transects themselves were spaced no greater than 30 m apart. When encountered, sites were delineated with shovel tests at 15-m intervals. A standing structure survey within the Corps lands was also conducted in an effort to record extant architectural features more than 50 years in age (bridges, locks and dams, roadways, etc.).



**Results:** In addition to twelve previously recorded archaeological sites, 116 cultural features were found and delineated. Among these were: (1) elements of a farmstead at Blue Mountain Lake possibly associated with the Arkansas State Sanatorium (a tuberculosis hospital in operation in the early decades of the 20th century); (2) numerous building remains and a cemetery related to the nineteenth- and early-twentieth-century mining town of Lead Hill, now partially inundated by Bull Shoals Lake; (3) Archaic lithic scatters, a Caddo-era farmstead, and an 1840s cemetery within the McClellan-Kerr Arkansas River Navigation System (MKARNS) near Fort Smith; (4) mid-twentieth-century stone structural foundations at Greers Ferry Lake, probably representing another farmstead; (5) additional early-twentieth-century farmsteads, the remains of an early-twentieth-century school, plus several lithic scatters at Nimrod Lake; (6) several isolated lithic artifacts and a small Fourche Maline period site at Millwood Lake; (7) two lithic scatters at Dierks Lake; (8) an isolated Archaic or Woodland period projectile point at DeQueen Lake, and (9) a late-nineteenth or early-twentieth-century farmstead at Ozark Pool. No cultural remains were found at the tenth reservoir, Clearwater Lake.



Remains of early-twentieth-century farmstead at Nimrod Lake

**Deliverables:** CEI prepared and submitted management summaries for Blue Mountain, Greers Ferry, Clearwater, and Nimrod prior to preparation of the full draft report. The latter is currently in the process of being completed. All recovered artifacts will be curated with the Arkansas Archeological Survey.

**Greenwood Park and the Baton Rouge Zoo Phase I, East Baton Parish, Louisiana**

East Baton Rouge Parish Recreation and Park Commission (BREC)  
6201 Florida Blvd.  
Baton Rouge, LA 70806  
Reed Richard, (225) 273-6405, Rrichard@brec.org  
% Sasaki  
62 Pleasant St.  
Watertown, MA 02472  
Zachery Chrisco, (617) 923-7134, zchrisco@sasaki

Initiation Date: 01/2020  
Completion Date: on-going  
Cost (in thousands): \$74.9

**Synopsis:** Under subcontract to Sasaki, Coastal Environments, Inc., (CEI) provided environmental consulting services related to the Phase 1 design and implementation of the Greenwood Park and Baton Rouge Zoo Master Plan for BREC. CEI scientists primarily participated in three tasks: 1) Meetings and Program Development, 2) Schematic Design and 3) Design Development.

**Results:** Scientists reviewed environmental documents prepared under the BREC pre-design environmental database development and wetland delineation contracts; the location and description of design features identified in the Master Plan; historic maps and aerial photographs; and references on the site's flora, fauna, hydrology, and restoration of natural channels and floodplains. Field surveys were made to characterize existing habitats and hydrology along selected transects of Cypress Bayou and other sensitive habitats containing proposed design elements. The cumulative data were used to provide input on proposed design elements with the objective of mitigating adverse environmental impacts, enhancing project outcome and facilitating permit approvals.

**Deliverables:** Documentation of existing hydrologic conditions and vegetation communities; recommendations for habitat enhancement and or restoration of native flora and fauna; and refinement of the description and implementation of the proposed Cypress Bayou restoration design element.





**USACE Bayou Segnette Mitigation Monitoring, Jefferson Parish, Louisiana****USACE New Orleans District****P.O. Box 60267****New Orleans, LA 70150-0267****Kristen Butcher, Environmental Studies Section****504.862.1390; Kristen.Butcher@usace.army.mil****Paul Hughbanks, Contracting Officer's Representative****504.862.1100; Paul.J.Hughbanks@usace.army.mil****Initiation Date: 01/2020****Completion Date: 12/2020****Cost (in thousands): \$51.3**

**Synopsis:** The USACE, NOD (MVN) constructed the Bayou Segnette Bottomland Hardwood Mitigation Project to mitigate for unavoidable environmental impacts from implementation of the West Bank and Vicinity Hurricane Protection Project in Jefferson Parish. The USACE contracted CEI to conduct baseline and initial environmental monitoring of the 123-ac mitigation area and prepare a report of findings.

**Methodology:** CEI provided all personnel, equipment, materials and supplies to perform five (5) tasks: 1) install field monitoring stations; 2) collect data on vegetation at monitoring stations; 3) process and analyze monitoring data; 4) prepare report documenting methodology, data collection and analysis and history of previous mitigation activities; 5) construct replacement wood plank bridge to access a sampling area. A CEI biologist familiar with the ecology of coastal Louisiana and proficient in plant identification and mitigation monitoring methodology conducted the investigation, analyzed the data and prepared the report following protocols established by the USACE. He used the Point-Centered Quarter (PCQ)



survey method to record and photograph conditions at 86 sampling points along 8,000 ft of transects within three planted sub-areas. Raw data were collected on planted and volunteer canopy and mid-story species, invasive and nuisance species and ground cover (species and percent cover) and wetland indicator status and entered into MS Excel spreadsheet files for generation of various summary tables using USACE approved calculations.

Data analysis collection and analysis were designed to determine whether applicable mitigation success criteria have been achieved. The report also included recommended mitigation management and maintenance activities (e.g., replanting, better water management, eradication of invasive species) to ensure project mitigation success criteria and goals set by the USACE.

**Deliverables:** *Bayou Segnette Bottomland Hardwood Mitigation Project Baseline and Initial Monitoring Report, Jefferson Parish, Louisiana* (2020). Small wood plank bridge over drainage canal.



**Phase I Submerged Cultural Resources Survey and Remote Sensing Investigations in Lake Amedee and Surrounding Waterbodies for the North Delacroix Marsh Creation and Terracing Project (BS-0041) – Submerged Cultural Resources Survey, Lake Amedee and Surrounding Waterbodies, St. Bernard Parish, Louisiana**

**C.H. Fenstermaker & Associates**

135 Regency Square

Lafayette, LA 70508

Justin Bordelon, (337) 849-7926, [justinb@fenstermaker.com](mailto:justinb@fenstermaker.com)

Jessica Diez, CPRA, (225) 342-1477, [jessica.diez@la.gov](mailto:jessica.diez@la.gov)

**Initiation Date: 01/2022**

**Completion Date: 06/2022**

**Cost (in thousands): \$23.6**

**Synopsis:** Coastal Environments, Inc. (CEI) was contracted to conduct an archaeological assessment of remote sensing data over a proposed borrow area and dredge conveyance corridors within Lake Amedee and surrounding waterbodies located in St. Bernard Parish, Louisiana. The survey area measures approximately 775 acres (313 hectares). The survey was requested by the Louisiana Coastal Protection and Restoration Authority (CPRA), as part of the Addendum No. 1 to the North Delacroix Marsh Creation and Terracing project (BS-0041). The survey was designed following Section 106 Field Standards issued by the Louisiana Division of Archaeology (LDA); the report adheres to Section 106 Report Standards. An Antiquities Permit was not required by LDA for the geophysical survey.

**Methodology/Results:** All field work was conducted by Fenstermaker, with the assistance of a CEI marine archaeologist between 20 and 31 January 2022. A total of 56 sonar contacts were identified none of which were interpreted as probable archaeological resources. A total of 260 magnetic anomalies were recorded. Two anomalies (MAG\_0260 and MAG\_0230) are recommended for avoidance as potential cultural resources. It is recommended that the two anomalies to be avoided are not eligible for inclusion on the National Register of Historic Places under Criteria A, B, or C; their eligibility under Criterion D, however, remains undetermined. If avoided by the recommended distances in this report, the anomalies should not be impacted by the proposed dredging operations. Subbottom data recorded a homogenous sediment structure throughout the survey area; no evidence of high potential paleolandscapes such as incised estuarine channels, levees, or shell middens was observed. In areas that were too shallow for traditional geophysical remote sensing, a sediment probing campaign was undertaken in which no cultural resources were observed.



**Deliverables:** The primary deliverable (*Phase I Submerged Cultural Resources Survey and Remote Sensing Investigations in Lake Amedee and Surrounding Waterbodies for North Delacroix Marsh Creation and Terracing Project (BS-0041)*) was submitted to the client for delivery to CPRA, NMFS, and the State Historic Preservation Officer in June 2022



**Caad Kuujamnix/Bayou Sale Living Shoreline Design, East Cote Blanche Bay, St. Mary Parish, Louisiana**

Wayti Services, LLC (Chitimacha Tribal Enterprise)  
3221 Chitimacha Trail  
Jeanerette, LA 70544  
Matthew Richard, General Manager  
(237) 298-0383; [matt.richard@waytiservices.com](mailto:matt.richard@waytiservices.com)

Initiation Date: 05/2023  
Completion Date: 08/2024  
Cost (in thousands): \$613.0

**Synopsis:** This project demonstrates CEI's ability to assist a client, Wayti Services, LLC, in preparing a successful NOAA NMFW grant application through development of scope of work and budget and execute the approved project through application of proven applied science, planning and engineering principles for wetland restoration and shoreline protection. The CEI team and engineering sub-consultant Leonard Chauvin P.E., P.L.S. Inc., conducted empirical data collection (background research and terrestrial and marine field investigations using a variety of vessels, instruments and methodologies), data analyses and mapping to document the natural and human environment; define the areal extent and condition of two prehistoric sites (16SMY17 & 16SMY95); and create a preliminary design for a living shoreline. Individual technical reports contain information relevant to NOAA's use as lead in the NEPA process and regulatory compliance.

**Methodology:** The areal extent of the project area to be protected by a proposed offshore living shoreline was determined by cultural resources field investigations (background research and review of records in LA Div. of Archaeology, field work involving augering, probing and testing) and remote sensing surveys using an Autonomous Survey Vessel (ASV) to collect magnetometer, side-scan sonar and bathymetric data. Additional offshore surveying to locate buried midden shell deposits used marine, ground-penetrating radar and a sub-bottom profiler. The ESA I was prepared according to ASTM standards and documented environmental conditions within a mile radius of the prehistoric sites. Production of the Biological Resources and Habitat Inventory involved background research, air photo interpretation and field investigations of project area to document and/or map flora and fauna; wetlands; National Wetland Inventory classifications; T&E species; Essential Fish Habitat (EFH); geology; soils; elevation; and hydrology.

Chauvin, with input from CEI, prepared a Conceptual Living Shoreline Design Project based on research on environmental conditions (tides, winds, geotechnical); environmental constraints; costs; living shoreline design options; as well as empirically derived data from bathymetric, topographic and magnetometer surveys. Chauvin flew a drone over the project area to create a current base map and depicted the shoreline location, topography and bathymetry, subaqueous anomalies and proposed living shoreline design location and features. The firm prepared cross sections at transect locations along the length of proposed living shoreline structure and depicted the configuration and height of the structure (SEABLOCK™ unit) for various water depths.



**Deliverables:** CEI submitted five reports: 1) Cultural Resources, 2) Environmental Site Assessment Phase I, 3) Biological Resources and Habitat Inventory, 4) Preliminary Design for Living Shoreline Demonstration Project and 5) Summary of Environmental and Cultural Resources and Living Shoreline Project Design.



**USACE Morganza to the Gulf (MTG) Hurricane and Storm Damage Risk Reduction System (HSDRRS) under IDIQ contract- W912P819D0007, St. Mary, Terrebonne, and Lafourche Parishes, Louisiana**

USACE New Orleans District  
P.O. Box 60267  
New Orleans, LA 70150-0267  
Kristen Butcher, Environmental Studies Section  
504.862.1390; [Kristen.Butcher@usace.army.mil](mailto:Kristen.Butcher@usace.army.mil)  
Paul Hughbanks, Contracting Officer's Representative  
504.862.1100; [Paul.J.Hughbanks@usace.army.mil](mailto:Paul.J.Hughbanks@usace.army.mil)

Initiation Date: 05/2024  
Completion Date: 12/2024  
Cost (in thousands): \$240.8

**Synopsis:** The USACE, New Orleans District (MVN), is seeking technical support to conduct field investigations as part of the Morganza to the Gulf (MTG) Hurricane and Storm Damage Risk Reduction System (HSDRRS), Supplemental Environmental Impact Statement (SEIS). CEI was contracted to perform a wetland value assessment (WVA) on multiple vegetation plots to assist in the impact potential for the proposed levee project to mitigate unavoidable environmental impacts from implementation of the MTG HSDRRS project. The USACE, USFWS, and local parish levee boards worked with CEI to determine scope, and project needs for the environmental monitoring and transect/sample plot set up and location and prepare a data report of findings.



**Methodology:** CEI provided all personnel, equipment, materials and supplies to perform five (5) tasks: 1) interaction and planning with USACE/USFWS staff and contact land owners for plot area access; 2) locate and monitor field vegetation plots and transects; 3) collect data on vegetation at monitoring stations; 4) collected water depths, SAV occurrence/coverage, and salinity/conductivity along open water transects; 5) process and deliver monitoring data. A CEI biologist familiar with the ecology of coastal Louisiana and proficient in plant identification and mitigation monitoring methodology established by the USACE/USFWS and conducted the investigation, record and provide the data to regulatory staff. He used the Point-Centered Quarter (PCQ) survey method to record and photograph conditions at 176 sampling and transect points along 102-mile proposed levee corridor. Raw data were collected on natural and volunteer canopy and mid-story species, invasive and nuisance species and ground cover (species and percent cover) and wetland indicator status and entered into MS Excel spreadsheet files for generation of various summary tables using USACE approved calculations.



The data was provided to the USACE and USFWS for their analysis to determine the amount of mitigation acreage will be needed to offset the impacts from the proposed levee project. success criteria

have been achieved. A mitigation project will be designed by the federal agencies to offset these impacts.

**Deliverables:** Plot photographs and data sheets along with spreadsheets with information collected during field monitoring event, St. Mary, Terrebonne, and Lafourche Parishes, Louisiana.



## Architectural Evaluation of Structures Damaged by Hurricane Katrina: Orleans, Plaquemines, St. Bernard, St. Tammany and Washington Parishes, LA

US Army Corps of Engineers, NOD

7400 Leake Ave

New Orleans, LA 70118

Michael Swanda, (504) 862-2038, Michael.L.Swanda@mvno2.usace.army.mil

Completion Date: 2008

Cost (in millions): \$1394

**Synopsis:** Numerous properties in SE Louisiana were identified for potential demolition due to damage from Hurricane Katrina. As part of the Section 106 process undertaken by FEMA, CEI evaluated a number of standing structures in terms of eligibility for inclusion on the National Register of Historic Places (NRHP) in St. Tammany, Orleans, Plaquemines, St. Bernard, Jefferson and Washington Parishes, LA.

**Methodology/Results:** CEI conducted a variety of architectural field surveys in a six-parish area. The "Red Tag" survey consisted of an architectural evaluation of properties that were determined to be unsafe to enter, posed a safety hazard to area residents, and/or whose owners requested demolition. CEI recorded the current (and former) location of each property with a Trimble XT or XM Global Positioning Satellite (GPS) receiver. Pertinent architectural details for property were recorded in a data dictionary contained within the GPS receiver and cross-referenced with digital photographs taken of each property. Recommendations for NRHP eligibility for each property were also recorded in the data dictionary. CEI evaluated over 5,000 "Red Tag" structures in the five-parish area.

CEI examined 947 Private Property Debris Removal (PPDR) properties in the Lower Ninth Ward of New Orleans. FEMA established the PPDR program to remove debris from private property where such debris posed an immediate threat to public health and safety. CEI's survey teams examined PPDR properties to positively identify listed properties within the survey area and confirm that the properties did not contain structures or substantial structural remains. Non-conforming properties were noted and photographed and information was provided to FEMA in tabular form.

CEI also examined five of 33 Designated Clean-Up Zones (DCZ) in St. Bernard Parish. The primary goal of that survey was to visually inspect every property within each DCZ and identify all above-ground properties listed on or eligible for inclusion on the NRHP. Properties identified as listed on or potentially eligible for inclusion on the NRHP were recorded using the same methodology as that used in the "Red Tag" survey. CEI developed a Determination of Eligibility (DOE) for each DCZ. Each DOE provided an overview of existing architecture in the area and specific recommendations for NRHP eligible properties and results of archival and historical research.

CEI resurveyed portions of three NRHP districts (Parkview, Carrollton, and New Marigny) using GPS technology with a data dictionary to record each structure. Digital photographs were taken of each property and cross-referenced with the data dictionary. Recommendations for NRHP eligibility status (contributing, non-contributing, unknown, etc.) were also recorded.

**Deliverables:** Data gathered with the data dictionaries, photographs, photo logs, field notes and Determinations of Eligibility.



### **3.0 Specialized Knowledge / Methodology**

CEI proposes to provide environmental consulting services primarily related to environmental permitting. CEI will review each project description and verify the level of environmental review required (Exempt, Categorical Exclusion not Subject to 58.5, Categorical Exclusion Subject to 58.5., Environmental Site Assessment (ESA) and Environmental Impact Statement (ESI)). CEI also proposes to conduct tiered environmental reviews, submit broad and site-specific environmental reviews, and determine project activity compliance as required by 24 CFR Part 58, 50.4, 58.5. and 58.6 Laws and Authorities. CEI will complete and submit Housing and Urban Development (HUD) required forms for environmental review; provide all documentation to support environmental findings; consult and coordinate with regulatory agencies to facilitate environmental clearance; and perform or contract any special studies, additional assessments, and permitting.

CEI will provide all responses to comments received during the comment phase of the environmental review, including State/Federal agencies requiring further studies/and or comments from public or private entities during the public comment period and maintain close coordination with local officials, project engineers and other team members.

Site visits will be conducted for each project location with the completion of field observation report. Environmental reviews will also be conducted and cleared in accordance with the National Environmental Policy Act (NEPA) and advise reevaluations per 24 CFR 58.47 when evidence of further clearance or assessment is required. Monthly status reports will be generated as well as participation in weekly or biweekly progress meetings.

CEI routinely provides environmental science consulting services that involve wetland restoration and shoreline protection planning and implementation; wetland delineations, biological evaluations and assessments; NEPA and other regulatory compliance; permitting; mitigation and project monitoring; Phase 1 Environmental Site Assessments; HTRW investigations; mitigation planning, implementation and monitoring; coastal zone management programs; rare, threatened and endangered species surveys; oyster surveys; cultural resources investigations (terrestrial and underwater); and GIS database development, analysis and management. The firm has demonstrated the capability to conduct multiple, large-scale environmental and cultural resources surveys and assessments simultaneously, whether onshore in terrestrial and estuarine environments or offshore in bays, rivers, and deep water.

CEI has a complete array of transportation, sampling and analysis equipment to support a wide range of field and research activities in areas of biology, archaeology, remote sensing, hydrology, and geology in upland, wetland and aquatic environments. The firm maintains an unsurpassed library of historical aerial photographs, maps, Louisiana references and CEI-generated documents assembled over 50 years and is fully capable of all aspects of digital remote sensing, imagery manipulation and interpretation.



<b>Meetings</b>	<b>Frequency</b>	<b>Meeting Type</b>
Kick-Off Meeting	One day/per project	In person (2 CEI)
Team Meetings & Briefings	As needed	Virtual (1 CEI)
Site Reconnaissance	Field investigation	Field inspection (1 day - 1 CEI)/per project
Design Development & Review	As needed	Virtual (2 CEI)
Miscellaneous Calls	As Needed	Telephone
Emails & Written Communications	As Needed	Emails & Attachments
Regulatory Agencies	As needed	Review proposed action, applications, setting, mitigation, responses to questions (1 CEI)

## 4.0 Personnel / Professional Qualifications

### 4.1 Sara A. Hahn, MA



**SARA A. HAHN, M.A.**  
**PRINCIPAL INVESTIGATOR/ARCHITECTURAL**  
**HISTORIAN/HISTORIAN/**  
**PRESERVATION SPECIALIST/ARCHAEOLOGIST**

#### **EDUCATION:**

Master of Arts/2005/Louisiana State University/Anthropology  
Bachelor of Arts/1995/University of Southwestern  
Louisiana/Anthropology

#### **REGISTRATIONS, CERTIFICATIONS and TRAINING:**

##### **Institution**

Archaeological Field School, Poverty Point, LA, 1995  
SCHAC Workshop, 1998  
SCHAC Workshop, 1999  
SCHAC Workshop, 2000  
SCHAC Workshop, 2001  
SCHAC Workshop, 2002  
National Preservation Institute 2005  
National Preservation Institute 2006  
SCHAC Workshop, 2006  
SCHAC Workshop, 2008  
National Preservation Institute 2013  
National Preservation Institute 2013

ATSSA 2015, 2019  
National Preservation Institute 2017

#### **PROFESSIONAL AFFILIATIONS:**

National Trust for Historic Preservation  
Society for Historical Archaeology  
Society for Industrial Archaeology  
South Central Historical Archaeological Conference, Treasurer  
Council for Northeast Historical Archaeology  
Pioneer America Society  
Louisiana Archaeological Society  
Le Comité des Archives de la Louisiane  
Southeastern Archaeological Society

##### **Subject**

Bottles  
Ceramics  
Vernacular Architecture  
Arms and Ammunition  
Archival Research  
Identification of Mid 20<sup>th</sup> Century Structures  
Section 106: An Introduction  
President Pipes: Origin and Distribution  
GIS and Sense of Place  
NEPA Compliance & Cultural Resources  
Section 4(f) Compliance for Historic  
Properties  
Traffic Control Technician Certification  
Section 106: Agreement Documents



## **EXPERIENCE:**

Sara Hahn has worked full-time for CEI since 1996 and currently serves as an Principal Investigator, Archaeologist, Architectural Historian, Historian and Preservation Specialist. She has conducted cultural resources investigations in Alabama, Arkansas, Florida, Louisiana, Mississippi and Texas and is proficient in all phases of fieldwork, proposal and research design development, archival records research, architectural survey and evaluation, determinations of National Register of Historic Places (NRHP) eligibility, historic artifact analyses, drafting, and report writing, editing, and production. Ms. Hahn has conducted numerous cultural resources surveys (e.g., Phase I) and has examined multiple archaeological sites to evaluate their eligibility for inclusion on the NRHP (e.g., Phase II). She has also directed or participated in Phase III data-recovery excavations at a number of archaeological sites and monitored numerous construction projects in archaeologically sensitive areas. While specializing in historic-period cultural resources, with an emphasis on urban environments, Ms. Hahn has also worked on several prehistoric sites.

Ms. Hahn is very familiar with the historical and archaeological records housed at the Department of Arkansas Heritage, the Louisiana Department of Culture, Recreation, and Tourism, the Mississippi Department of Archives and History, the Texas Historical Commission, and the Florida Division of Historical Resources, and has used those records to produce many cultural resources reports, as well as environmental documents in compliance with NEPA regulations. She has carried out numerous standing structure/architectural surveys and determined National Register eligibility for both individual structures and districts. Among the over 20,000 structures she has recorded and evaluated in Alabama, Arkansas, Louisiana, Tennessee, Texas and Mississippi are several thousand within the Parkview, Carrollton and New Marigny National Register districts in New Orleans (2006-2008), 521 in the Natchitoches Historic Landmark District in Natchitoches, Louisiana (2011), over 100 bridges for the Louisiana Statewide Historic Bridge Inventory (2013), 25 Cold-War Era National Guard Armories for the Mississippi Department of the Military (2018), 24 World War I and I Airfields and Hangars in Mississippi for the Mississippi Department of the Military (2021) and to date has evaluated over 4,300 properties for the RestoreLA program and determined 793 of those eligible for the NRHP. Ms. Hahn has collaborated on Level I and Level II HABS/HAER Documentation projects for the Louisiana Department of Transportation and Development, and HABS-level photographic documentation of over 700 structures for the Federal Emergency Management Agency (FEMA). She also has experience preparing Section 106 Adverse Effect Documentation and Section 4(f) Statements.

Ms. Hahn served as the southwest Louisiana representative for the Louisiana State Historic Preservation Office's Certified Local Government and Survey and Planning grants ranking panel for almost a decade (2011-2017) and previously, co-directed the University of Southwestern Louisiana archaeological field laboratory at Poverty Point (1995). Her research interests include the international ceramic trade during the nineteenth-century, archival documentation for Louisiana and Mississippi from the colonial period through the early nineteenth century, and bridge architecture and engineering. Ms. Hahn meets the Secretary of the Interior's qualifications for Historian, Architectural Historian, Preservation Specialist and Archaeologist.

## 4.2 Cassandra Hart, MS



**CASSANDRA “SANDI” K. HART, M.S.  
PROJECT SCIENTIST I,  
DIVISION DIRECTOR OF APPLIED SCIENCE,  
SOUTHWEST REGION**

### **EDUCATION:**

Master of Science/2000/Texas A&M University (Corpus Christi)/Biology  
Bachelor of Science/1997/ Texas A&M University (Corpus Christi)/Marine  
Biology

### **REGISTRATIONS, CERTIFICATIONS and TRAINING:**

State	Discipline	Registration Number
US	PADI Open Water Dive Certification	PADI # 2307059669 July 2023
TX	TxDOT Biology Workshop Class Code: ENV460_VIR_96476	Confirmation #: 2741294 August 2023
US	USACE Wetland Delineation Certification	NA / 2014
TX	TXDOT Pre-certifications	2.4.1 Nationwide Permit 2.13.1 Hazardous Materials Initial Site Assessment
US	Academy of Board Certified Environmental Professionals	Certified Environmental Professional

### **PROFESSIONAL AFFILIATIONS:**

Coastal Bend Bays & Estuaries  
Coastal Bend Bays Foundation – Executive Vice President  
Society of Professional Wetland Scientists  
Audubon Society  
Academy of Board-Certified Environmental Professionals  
Environmental Assessment Association  
Leadership Aransas XVII

### **EXPERIENCE:**

Sandi Hart, M.S. has over 20 years of experience in biological and environmental sciences, with emphasis on project management, natural resources permitting and regulatory compliance, solid waste, stormwater planning and permitting, coastal natural resource management, environmental assessments and habitat characterizations, wetland delineations and determinations, mitigation planning and monitoring, and endangered species consultation. Additionally, she has been responsible for numerous informal and formal Section 7 Consultations under the ESA. Her coastal project experience is principally along the



Coastal Bend and South Texas coastal zone, but Mrs. Hart has also worked on projects in Houston, Bay City, Galveston, Dallas, Austin, Brownsville, Rio Grande Valley, and Louisiana. She has completed numerous coastal projects involving USACE Individual/Nationwide/Regional General, and LOP permits, and TxGLO coastal lease and easement acquisitions. Her experience has included wetland restoration/creation/ mitigation, harbors and waterways, gulf pass and jetty systems, bulkhead and breakwaters, pipeline crossings, bridges, transmission lines, flood and drainage control structures, and public park and boating facilities. Additionally, she has worked on many projects involving oil/gas pipelines involving maintenance activities, installation, spills, and remediation actions. She has worked on numerous local government grant supported projects involving coastal natural resource protection, shoreline stabilization, wetlands enhancement and creation, stream restoration, drainage improvements, and served many internal safety committees. Mrs. Hart has experience with projects funded by CBBEP, NOAA, TxGLO-CMP, CIAP, TCEQ-SEP, USDA, and TPWD, specifically in the Coastal Bend area. She also has significant experience coordinating with Texas Coastal Bend and South Texas area natural resource agencies and conservations groups including the TCEQ, TPWD, USFWS, NMFS, EPA, THC, TxDOT, CBBF, Sierra Club, and Audubon Society.

#### 4.3 Paul J. Moses, BS



**PAUL J. MOSES, B.S.  
BIOLOGIST  
SCIENCE SPECIALIST I**

**EDUCATION:**

Bachelor of Science/1993/Louisiana State University/Zoology

**REGISTRATIONS, CERTIFICATIONS and TRAINING:**

State	Discipline	Registration Number/Year
LA	OHSA 10-Hour General Industry Safety	307944932
LA	Wetland Plant Identification	2013
US	Wetland Delineation and Methodologies Training	2013

**EXPERIENCE:**

Paul Moses received scientific training in zoology and applies this knowledge in conducting field investigations and preparing reports for various projects including environmental characterization and impact assessment of activities in wetlands and coastal areas. He has researched threatened and endangered species for EAs and participated in field surveys involving geological, biological, and hydrological sampling. Mr. Moses has extensive experience in monitoring 3-D seismic operations to ensure compliance with established operating procedures for geophysical surveying, drilling and recording operations and education of field crew personnel with regard to environmental precautions they must take. He conducts ground and aerial surveys to assess wetland damage and supervises wetland restoration in damaged areas through vegetation planting and installation of erosion control measures. He has training in conducting wetland delineations according to USACE criteria and in plant identification and has assisted in numerous wetland delineations.

Mr. Moses participated in several large vegetation planting projects in the Timbalier Islands chain including the Raccoon and Wine Island revegetation projects for the LA Dept. of Natural Resources. He assisted in the research and installation of bioengineered oyster reefs to protect shore zones and create near shore reef habitats in coastal Louisiana. He has installed numerous tree/brush fences to prevent shore loss in coastal Louisiana.

Field related skills include operation of airboats, small outboard watercraft, ATVs, geographical positioning systems (GPS), and geolink, a computer program to record and transmit field data.



#### 4.4 Kaitlyn O'Shee, MS



**KAITLIN O'SHEE, M.S.  
GIS DATABASE ADMINISTRATOR**

**EDUCATION:**

Master of Science/2018/Mississippi State University/Geosciences  
(focusing on applied meteorology)

Bachelor of Science/2015/Louisiana State University/Geography

**REGISTRATIONS, CERTIFICATIONS and TRAINING:**

State	Discipline	Registration No./Date
Online	ESRI: Introduction to Image Classification	2019
Online	ESRI: Introduction to ArcGIS API for Python	2019
Online	ESRI: Getting Started with Geoprocessing	2019
Online	ESRI: Introduction to Suitability Modeling	2019
Online	ESRI: Displaying Raster Data in ArcGIS	2019
Online	ESRI: Getting Started with Spatial Analysis	2019
Online	ESRI: Finding the Best Regions Using ArcGIS	2019
Online	ESRI: Calculating Density Using ArcGIS	2019
Online	ESRI: Accessing Data in a Portal Using ArcGIS API for Python	2019
Online	ESRI: Editing basics in ArcGIS Pro	2019
Online	ESRI: Getting Started with the Geodatabase	2019
Online	ESRI: Integrating R Scripts into ArcGIS Geoprocessing Tools	2019
Online	ESRI: Using R-ArcGIS Bridge	2019
Online	ESRI: Creating an Origin-Destination Cost Matrix in ArcGIS Pro	2019
Online	ESRI: Map Your Data with ArcGIS Maps For Office	2019
Online	ESRI: Working with NetCDF Data in ArcGIS Pro	2019
Online	ESRI: Solving Spatial Problems Using ArcGIS	2019
Online	ESRI: Preparing to Perform Analysis Using ArcGIS Pro	2019
Online	ESRI: Basics of Raster Data	2019
Online	ESRI: Creating Vector Tiles in ArcGIS Pro	2019
Online	ESRI: Creating and Sharing Animation in ArcGIS Pro	2019
Online	ESRI: Displaying Raster Data Using ArcGIS Pro	2019
Online	ESRI: Classifying Imagery Using ArcGIS	2019
Online	ESRI: Performing Line of Sight Analysis	2019

Online	ESRI: Creating Optimized Routes Using ArcGIS Pro	2019
Online	ESRI: Performing Viewshed Analysis in ArcGIS Pro	2019
Online	ESRI: Finding the Closest Facilities Using ArcGIS Pro	2019
Online	ESRI: Processing Raster Data Using ArcGIS Pro	2019
Online	ESRI: Generating Service Areas Using ArcGIS Pro	2019
Online	ESRI: Labeling Features Using ArcGIS Pro	2019
Online	ESRI: Sharing 3D Content Using Scene Layer Packages	2019
Online	ESRI: Optimizing Routes for Efficient Fleet Management	2019
Online	ESRI: Integrating Data in ArcGIS Pro	2019
Online	ESRI: Automating Workflows Using ArcGIS Pro Tasks	2019
Online	ESRI: Building Models for GIS Analysis Using ArcGIS	2019
Online	ESRI: Working with Full Motion Video in ArcGIS	2019
Online	ESRI: Performing Unsupervised Pixel Based Image Classification	2019
Online	ESRI: Referencing Data to Real-World Locations Using ArcGIS	2019
Online	ESRI: Georeferencing Raster Data Using ArcGIS	2019
Online	ESRI: Performing Supervised Pixel-Based Image Classification	2019
Online	ESRI: Working with Geodatabase Domains and Subtypes in ArcGIS	2019
Online	ESRI: Survey123 for ArcGIS: Author a Survey On the Web	2019
Online	ESRI: Creating Map Products	2019
Online	ESRI: Introduction to Surface Modeling Using ArcGIS	2019
Online	ESRI: Performing Supervised Object-Based Image Classification	2019
Online	ESRI: Getting Started with Mapping and Visualization	2019
Online	ESRI: Performing Accuracy Assessment for Image Classification	2019
Online	ESRI: Getting Started with Data Management	2019
Online	ESRI: Symbolizing Map Layers	2019
Online	ESRI: Introduction to Space-Time Analysis	2019
Online	ESRI: Transforming Data for a Simple Suitability Model	2019



Online	ESRI: Preparing Data for a Suitability Model	2019
Online	ESRI: Creating a Simple Suitability Model	2019
Online	ESRI: ArcGIS Pro Basics	2019
Online	ESRI: Image Processing with ArcGIS	2019
Online	ESRI: GeoPlanner for ArcGIS: Evaluating Plans	2019
Online	ESRI: Building the Foundation for Green Infrastructure Planning	2019
Online	ESRI: Linear Referencing Using ArcGIS	2019
Online	ESRI: Creating Python Scripts for Raster Analysis	2019
Online	ESRI: Locating Suitable Regions	2019
Online	ESRI: Labeling Map Features	2019
Online	ESRI: Creating a Space-Time Cube	2019
Online	ESRI: Transforming Data for a Weighted Suitability Model	2019
Online	ESRI: Creating a Weighted Suitability Model	2019
Online	ESRI: Python Scripting for Map Automation	2019
Online	ESRI: Terrain Analysis Using ArcGIS Pro	2019
Online	ESRI: Working with Annotation in ArcGIS	2019
Online	ESRI: Introduction for Green Infrastructure	2019
Online	ESRI: Creating a Map Layout	2019
Online	ESRI: Using Raster Data for Site Selection	2019
Online	ESRI: Detecting Objects with Deep Learning	2019
Online	ESRI: ArcGIS Pro: Essential Workflows	2019

## **PROFESSIONAL AFFILIATIONS:**

LaURISA (Louisiana Chapter of Urban and Regional Information Systems Association)

- Board member seated as Treasurer (2020-2022)
- Young Professional Liaison (2022-2023)

## **EXPERIENCE:**

Ms. O'Shee is a GIS Specialist whose responsibilities include geodatabase development and management, historical aerial/map research and georeferencing, as well as data creation. She is proficient in ArcMap, ArcGIS Pro, Survey 123, Pathfinder Office, Global Mapper, QGIS, and Paint.net for image manipulation. She has participated in a wide variety of projects during her time with the company, including but not limited to wetland delineation/permitting, cultural resource identification, and several projects focusing on sonar, bathymetry contours, and magnetic anomalies. Kaitlin has lead CEI into expanding their survey capabilities by using ESRI's Survey 123 software. This endeavor has involved custom java script, database management, and report creation to help CEI achieve established goals.

Prior to joining CEI, Ms. O'Shee completed her Master's capstone project with Mississippi State heavily concentrating in GIS applications to identify areas of new development in East Baton Rouge Parish between 1996 and 2016. The purpose of her study was to identify newly built sections in flood prone areas over the course of Baton Rouge's historically high growth period using satellite imagery and a supervised classification system.

#### 4.4 Mark Schexnayder, MS



**MARK SCHEXNAYDER, MASTER of SCIENCE  
SENIOR VICE PRESIDENT, SENIOR SCIENTIST, FISHERIES  
MANAGER, BIOLOGIST**

**EDUCATION:**

Master of Science/1987/ Southeastern Louisiana University/Marine Biology  
Bachelor of Science//1983/Southeastern Louisiana University/Botany

**REGISTRATIONS, CERTIFICATIONS and TRAINING:**

State	Discipline	Registration No./Date
US	Professional Association of Diving Instructors	

**PROFESSIONAL AFFILIATIONS:**

Society of Wetland Scientists  
American Fisheries Society  
Society for American Military Engineers

**EXPERIENCE:**

**2024 – present**

**Senior Vice President/Planner/Principal**

Business Development and government liaison for CEI Applied Science, Coastal Restoration and Cultural Resource Divisions. Living shorelines design, planning and implementation utilizing patented, bioengineered structures to provide habitat niche for commercial and recreationally important estuarine species. Riverine restoration and removal of legacy structures to enhance safe public and fish access to spawning habitats. Development of public lands to enhance recreational use and value. Developed funding and working on the Recreational Use Scoping Study with the Regional Planning Commission, coordinating Federal, State and local support to build a Visitors Center for Bayou Sauvage National Urban Wildlife Refuge. Green Infrastructure and stormwater management in underserved communities.

**2020 – 2024 – Batture, LLC.**

**Senior Environmental Scientist/Business Development**

Habitat and water quality consultation and monitoring for regional green Infrastructure projects, coastal and river restoration project planning and implementation. Works with State, Federal and local governments to develop grants for coastal and riverine restoration and engineering with Nature solutions. Led monitoring for Living Shoreline project in St. Tammany Parish. Coordinated NAWCA grant for purchase of Couba Island for New Orleans City Park.



**2016 - 2018 Louisiana Department of Wildlife and Fisheries****Director, Fisheries Habitat Division**

Coordinate the Shrimp, Crab, Finfish and Oyster Task Forces, and represents the Department on such. Implement commercial fisheries recovery programs including sustainability, seafood certification, seafood traceability and various management policies and activities. The division also acts as a liaison to Federal and local government and NGOs regarding endangered and threatened species interactions with our fisheries and other user groups. The division also coordinates sea turtle and marine mammal stranding and rescues and management of Elmer's Island Fisheries Management Area. This division is also involved in the State and Trustee Implementation Group (TIG) strategic framework development teams for DWH restoration activities.

**2012 – 2016 Louisiana Department of Wildlife and Fisheries****Deputy Assistant Secretary, Office of Fisheries**

Policy advisor to Secretary and Assistant Secretary and administrative oversight over LDWF Office of Fisheries. Liaison to industry and elected officials across the state on natural resources issues. Oversight over Office of Fisheries and Statewide activities. Represent LDWF on intrastate and interstate panels such as Louisiana Shrimp Task Force, Louisiana Oyster Task Force, Louisiana Crab Task Force, Gulf States Marine Fisheries Commission and Gulf of Mexico Fisheries Management Council.

**2011 – 2012 Louisiana Department of Wildlife and Fisheries****Administrator, Office of Fisheries**

Chief Administrative Officer for the LDWF Office of Fisheries. Direct line supervision of five Division Directors and budget administration for the office of approximately 280 professional biologists, technicians, support staff for statewide management of freshwater and saltwater fisheries for the State of Louisiana. Policy advisor to Secretary and Assistant Secretary.

**2010 2011 Louisiana Department of Wildlife and Fisheries****Director, Fisheries Oversight Division**

Directed activities of the division that handles commercial fisheries programs include sustainability, seafood certification, seafood traceability and various management policies and activities. The division also handles multi-million-dollar grant/loan programs to assist the commercial and recreational industries recover from hurricanes as well as oil spill damages.

**2000 - 2010 LSU AgCenter/Louisiana Sea Grant Marine Advisory Program****Regional Coastal Advisor/Parish Director/Special Assistant to the Chancellor**

Regional Coastal Advisor for Jefferson, St. Charles, St. John and portions of Orleans Parishes. Work with local groups and individuals to bring science-based solutions to local fisheries and environmental issues. Specific projects include the development of artificial fishing reefs in Lake Pontchartrain, development of the Louisiana Marine Fisheries Museum, and working with local seafood processors to produce and market value added products and make salable products from their wastes. Also works with fishing guides and nature-based tourism industries to expand their businesses and improve their teaching message. Direct all LSU AgCenter Parish activity including Horticulture, Nutrition and Youth Education and 4H. Coordinated Hurricane Katrina recovery programs and volunteers under LSU AgCenter Chancellor's office.

## **1998 – 2000 Louisiana Department of Wildlife and Fisheries**

### **Shellfish Programs Manager**

Coordinator of the State's marine shellfish (shrimp and crab) programs. Responsibilities include coordinating statewide collection of samples and other technical data on shellfish resources and using these data to make management recommendations to the Louisiana Wildlife and Fisheries Commission. Prepare budgets for programs, news releases, and technical reports. Liaison between other states, federal and local agencies as well as the public and media. Coordinated the Louisiana Select Council on Shrimp Management and Louisiana Shrimp Industrial Panel. Administered NOAA Federal Disaster Grant for Lake Pontchartrain Shrimp Fishery.

## **1997 - 1998 Louisiana Department of Wildlife and Fisheries**

### **Director, Marine Lab/Research Programs Manager**

Laboratory Director, LDWF Marine Biological Laboratory located on Grand Terre Island. Prepared budget and supervised the operations and personnel of the lab. A major project of the Laboratory was a state-wide age and growth study of the commercially and recreationally important finfish species. The Laboratory also coordinated with universities, federal and other state agencies on restoration projects, estuarine monitoring, public health (mercury sampling), as well as other Department activities. Supervised Assistant Lab Director, professional biologists and technicians. Served on Jefferson Parish Marine Fisheries Advisory Board.

## **1993 - 1997 Louisiana Department of Wildlife and Fisheries**

### **Marine Fisheries Biologist Project Coordinator**

Regional coordinator of Marine Fisheries Divisions' Coastal Study Area 3. Prepared budget, supervised office and sampling crews, and participated in biological monitoring activities such as shrimp and finfish sampling, oyster growth, mortality assessment and monitoring of Hackberry Bay oyster seed grounds and private leases. Analyzed data, prepared reports, and made fisheries management recommendations to the LWF Commission. Conducted natural resource damage assessment including oil spill and fish kill investigations and mitigation. Supervised the collection and tracking of commercial fisheries landings. Prepared federal grant applications for fisheries projects in the area. Worked with other state and federal agencies and universities designing and monitoring coastal restoration projects and fisheries research in Barataria Basin. Supervised professional biologists, fisheries technicians, port agents and student workers.

## **1990-1993 Louisiana Department of Wildlife and Fisheries**

### **Marine Fisheries Biologist Project Leader**

Assisted regional coordinator of Marine Fisheries Divisions' Coastal Study Area 3. Supervised sampling crews and participated in biological monitoring activities such as shrimp and finfish sampling, oyster growth, mortality assessment and monitoring of Hackberry Bay oyster seed grounds and private leases. Analyzed data and prepared reports. Conducted natural resource damage assessments including oil spill and fish kill investigations. Monitored marine aquaculture operations. Coordinated Louisiana Sheepshead Management Plan and Pompano Management Plan. Supervised the data collection and tracking of commercial fisheries landings in a five-parish area. Supervised professional biologists and fisheries technicians and student workers.



**1988-1990 La. Department of Wildlife and Fisheries**

**Senior Field Biologist (Marine)**

Supervised finfish monitoring activities in CSA 3. Responsible for one region of the statewide finfish monitoring program, including monthly seine and trammel net samples, bimonthly gillnet samples, and analyzing data and writing reports. Other activities included fish tagging, creel surveys, monitoring commercial landings and mariculture operations, and natural resource damage assessment.

**1987-1988 La. Department of Wildlife and Fisheries**

**Field Biologist (Marine)**

Same as above.

**1985-1987 La. Department of Wildlife and Fisheries**

**Marine Fisheries Specialist III**

Part of statewide finfish monitoring project in the Terrebonne Basin (CSA 5) including collecting and data entry for all gill net, trammel net and seine samples and fish tagging.

#### 4.5 Jennifer Smith, BS



##### **JENNIFER S. SMITH, B.S.**

##### **DIRECTOR, APPLIED SCIENCE AND PLANNING DIVISION PROJECT SCIENTIST II, PLANNER II**

##### **EDUCATION:**

Bachelor of Science/2002/ Louisiana State University/Wildlife and Fisheries/concentration in Aquaculture

##### **REGISTRATIONS, CERTIFICATIONS and TRAINING:**

<b>State</b>	<b>Discipline</b>	<b>Registration No./Date</b>
USA	OSHA 1910.120 40 Hr HAZWOPER	Certificate- 2007
LA	LDWF Boater Safety Certification	NASBLA Certificate – 2002
USA	NOAA Small Boat Component Course	Certificate - 2018
LA	Wetland Delineation Training Wetland Training Inst.	Certificate – 2007

##### **PROFESSIONAL AFFILIATIONS:**

The Coalition to Restore Coastal Louisiana (CRCL) Volunteer Member

##### **EXPERIENCE:**

Jennifer has twenty-one years of experience as an environmental scientist, 10+ years of which she served as a project manager in multi-discipline environmental settings. She is currently the Director for the Applied Science and Planning Division of CEI working on project development, field crew scheduling, equipment and project logistics, client liaison, field lead on vegetative monitoring projects, and director of all environmental programming. Mrs. Smith has training in conducting environmental site assessments – Phase I ESAs and wetland delineations following U.S. Army Corps of Engineers criteria. She assists business, industry, private clients, and government entities in preparing permit applications and coordinating with regulatory agencies to assist in securing permits for industrial, commercial, and residential development projects; energy and petroleum transmission line projects; legacy lawsuit ecological assessments; state roadway projects; and government funded wetland assessment, mitigation, and restoration projects. Mrs. Smith has completed permitting and regulatory requirements for multiple coastal restoration projects for state and federal agencies. She has performed NEPA compliance for several state and federally funded projects for coastal restoration construction throughout the Gulf Coast. Mr. Smith is an expert in the native flora of the Southeastern United States as she worked on the Coast-wide Reference Monitoring Systems (CRMS) project for 10 years. She has experience in performing Biological Assessments for threatened and endangered species and habitat analysis for mitigation compliance. Mrs. Smith has also conducted Storm Water Pollution Prevention Plans (SWPPP) for construction sites and transmission line corridors.



#### 4.6 Karen Wicker, PhD



**KAREN M. WICKER, PH.D.**  
**SENIOR VICE PRESIDENT AND SENIOR SCIENTIST**  
**GEOGRAPHER**

**EDUCATION:**

Doctor of Philosophy/1979/Louisiana State University/Geography  
(Marine Science Minor)

Master of Science/1975/Louisiana State University/Geography

Bachelor of Arts/1970/Mary Washington College of the U. of  
VA/American Studies

**REGISTRATIONS, CERTIFICATIONS and TRAINING:**

State	Discipline	Registration Number
LA	Effective Presentations	LANtec, LLC/2016
LA	Project Manager Training	LANtec, LLC/2016
LA	National Environmental Policy Act (NEPA) & Transportation Decision Making (2019)	NHI Course 142005

**PROFESSIONAL AFFILIATIONS:**

Society of Wetland Scientists

**EXPERIENCE:**

**Karen Wicker, Ph.D.**, Senior Vice President and Senior Scientist, coordinates CEI's research programs; supervises research and support personnel; and develops and participates in specific research and planning projects, regulatory compliance projects, including NEPA documents, and advisory services related to wetland restoration and management. She has more than 45 years of experience in characterizing environments, especially coastal and wetland areas, for database development, planning, land use and habitat management and wetland restoration and impact assessment. Dr. Wicker has extensive experience in identification and quantification of temporal and spatial distribution of land use, habitats, physiographic features, and causative factors associated with landscape changes in the Northern Gulf Coast Region. She is certified as an expert witness in state and federal courts in Louisiana in these areas of expertise regarding navigability and ownership of water bottoms.

Since 1992, Dr. Wicker has directed CEI's participation in preparation of more than thirty environmental impact statements (EIS), environmental assessments (EA), or environmental inventories (EI) for projects including railroads, bridges, highways, parking garages, US Coast Guard Stations, national wildlife refuge and National Heritage Area. Prior to 1992, she prepared baseline and impact analyses on land use and vegetation for seven LADOTD highway and bridge projects, three geothermal well drilling projects in Louisiana and Texas, and a city drainage plan. This work required an understanding of the National Environmental Policy Act (NEPA)-process and the compliance guidelines developed by the government

agencies (FHWA, LA Dept. of Transportation & Dev., Surface Transportation Bd., and US Fish & Wild. Ser., US Coast Guard, National Park Service, and US EPA).

She directs and provides quality control on the preparation of environmental documents and regulatory compliance applications such as wetland delineations; mitigation plans; HTRW studies; ESA-Phase 1; biological assessments; threatened and endangered species surveys; and applications for Sec. 404 and Sec. 10 permits, state Coastal Use Permits, and Water Quality Certifications. She directs preparation of Plans of Operations for Seismic Surveys on federal lands and supervises environmental compliance monitoring of geophysical survey operations.

Dr. Wicker directed and/or participated in numerous special studies to assess environmental impacts of human actions other than infrastructure development. She researched and participated in field investigations to map and verify landform and habitat conditions and changes within the Matagorda Bay area, TX to assist prediction of delta development associated with the Corps' plan to divert freshwater and sediment near the mouth of the Colorado River, TX. Dr. Wicker directed the MMS-funded project to assess the environmental impacts of OCS-related activities (pipelines, navigation canals, and production facilities) on wetlands and barrier beaches along the northern Gulf of Mexico from south TX to the FL Panhandle. She directed a project to assess the environmental impacts of various wetland management techniques used on the Rockefeller Wildlife Refuge, Cameron Parish, LA. Dr. Wicker directed a project to develop a wetland management program for St. Bernard Parish, LA, which included an assessment of the impacts of the Mississippi River Gulf Outlet Canal on adjacent wetlands and measures to mitigate the impacts. She directed two projects that mapped habitats (564 7.5" maps) in coastal LA and MS for 1956 and 1978 and utilized data developed in these studies to assess the impact of OCS pipelines and oil and gas activities on coastal wetlands regarding land loss and habitat change. These databases were utilized also in developing comprehensive coastal restoration plans for Louisiana.

Dr. Wicker assisted St. Bernard Parish and Plaquemines Parish in developing their initial coastal zone management programs and in updating their programs. In 2003, she directed an EPA-funded project consisting of a hazardous and archaeological survey and benthic sampling of proposed sand borrow sites in offshore lease blocks for restoration of two barriers islands sites in Terrebonne Parish, Louisiana.

Dr. Wicker assists landowners in assessing impacts of oil and gas activities and state and federally funded activities, such as restoration and flood control projects or shell dredging, on private lands and prepares position papers identifying the impacts and/or mitigation actions to be taken on private property. She also develops and obtains permits for mitigation projects in coastal wetlands and assists landowners in development and maintenance of lease and oil and gas well maps.

#### 4.7 Walker B. Wilson, MS



**WALKER B. WILSON, M.S.  
PROJECT SCIENTIST II, PLANNER II  
WILDLIFE BIOLOGIST**

**EDUCATION:**

Master of Science/2005/Louisiana State University/Wildlife  
Bachelor of Science/2001/Louisiana State University/Wildlife and Fisheries,  
Minor in Chemistry  
Bachelor of Science/1999/Louisiana State University/Zoology

**REGISTRATIONS, CERTIFICATIONS and TRAINING:**

State	Discipline	Registration No./Date
USA	Traffic Control Technician Training	The Association of General Contractors of America / 2023
USA	Pesticide Application Workshop	LSU AgCenter / LDAF / 2022
USA	EPA National Wetlands Condition Assessment Training	Great Lakes Environmental Center, Inc. / 2021
USA	Sea Turtle Nest Survey Volunteer Training	Padre Island National Seashore / 2019 – 2024
USA	UTV Training	Padre Island National Seashore / 2019 – 2022
USA	Sea Turtle Cold Stun Volunteer Training	Padre Island National Seashore / 2019 – 2024
USA	Observer / Spotter Training	Powersafe / 2020
USA	Substation Specific Computer / Web-based Training	Powersafe / 2020
USA	T & D Baseline Computer / Web-based Training	Powersafe / 2020
USA	Active Shooter Awareness Training	Powersafe / 2020
USA	T & D Annual Specific Training	Powersafe / 2020
USA	Human Performance Understanding the Basics	Powersafe / 2020
USA	Public Assistance (PA) Program Eligibility	FEMA Emergency Management Institute / 2019
USA	PA Delivery Model Orientation	FEMA Emergency Management Institute / 2019
USA	Overview of FEMA's Environmental and Historic Preservation (EHP) Review	FEMA Emergency Management Institute / 2019
USA	EHP Considerations / Compliance for PA Grants	FEMA Emergency Management Institute / 2019
USA	Understory Restoration Workshop	Longleaf Alliance / 2017
USA	Wetland Delineation Workshop	Wetland Training Institute, Inc.



	LA / 2015	
USA	Graminoid Workshop	Native Ventures / Summer 2015
USA	Advanced Wetland Photo/Imagery- Interpretation	University of Louisiana Lafayette Fall 2012
USA	Introduction to Wetland Remote Sensing and Mapping	University of Louisiana Lafayette Fall 2012
USA	Marsh Burning Certification	LDAF, LSU and ULL Fall 2012
USA	Sedge and Rush Identification Workshop	Louisiana State University / Spring 2012
USA	Grass Identification Workshop	Louisiana State University / Summer 2011
USA	40-Hour HAZWOPER Training	National Environmental Trainers, Inc. / 2010
USA	Louisiana Boater Education	Louisiana Department of Wildlife and Fisheries / 2009
USA	Native Plant Identification Workshop #1	Louisiana State University / Summer 2009
USA	NAUI Open Water II and Nitrox Certified	
USA	Alabama Riparian Reference Reach and Regional Curve Workshop	Alabama Department of Environmental Management / 2008
USA	Marine Mammal Observation Training	
USA	Federal Energy Regulatory Commission (FERC), Regulatory Overview and Guidance Seminar, Atlanta, GA	
USA	FERC, Environmental Compliance Seminar, Atlanta, GA	
USA	Wetland Identification and Delineation	Wetland Resources Environmental Consulting, AL / 2006
USA	404 Permit Training	Certificate from TxDOT and Galveston USACOE

## PROFESSIONAL AFFILIATIONS:

The Wildlife Society  
 Botanical Society of America  
 Society of Wetland Scientists  
 Louisiana Association of Professional Biologists

## EXPERIENCE:

Mr. Wilson is a senior wildlife biologist with experience in the areas of environmental compliance and biological investigations, primarily wildlife biology, ecology, botany, wetlands, and biological assessments. He has over 20 years of professional experience investigating the ecology of a wide variety of flora and fauna in the southeastern United States. Additionally, he has been accepted by the court as an expert in the fields of biology, ecology and wetland delineation. Mr. Wilson's project responsibilities

and experience include remote sensing and image interpretation; jurisdictional wetland delineations and determinations; oil spill assessment monitoring; litigation support; protected species surveys; wetland and wildlife management plans; migratory bird surveys; wading bird rookery surveys; herpetofauna surveys; mammal surveys; site assessments; vegetation surveys; mussel surveys; operating air boats and outboard engine boats; operating all-terrain vehicles; collecting water samples for lab analysis; and collecting soil samples for lab analysis using augers, push cores and vibro-core machines.

Mr. Wilson's projects have ranged from multi-state projects to small, site-specific areas. He has performed field surveys across the southeastern United States and trained and managed biological teams to complete complex jobs. His project experience has given Mr. Wilson insight into research methodology and ecology in the southeast.

## 5.0 Insurance



### CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

11/25/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Ross & Yerger Insurance, Inc. 100 Vision Drive, Suite 100 Jackson MS 39211		<b>CONTACT NAME:</b> Tyler Thames <b>PHONE (A/C, No, Ext):</b> 601-968-0252 <b>E MAIL:</b> tthames@rossandyerger.com <b>FAX (A/C, No):</b>	
<b>INSURED</b> Coastal Environments, Inc. 1260 Main St. Baton Rouge LA 70802-4657		<b>INSURER(S) AFFORDING COVERAGE</b> INSURER A: Homeland Ins Co of NY INSURER B: AGCS Marine Ins Co INSURER C: Certain Underwriter at Lloyd's INSURER D: INSURER E: INSURER F:	
		<b>NAIC #</b> 34452 22837	

#### COVERAGES

CERTIFICATE NUMBER: 1266137988

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> 2,500 GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:	Y	7930010220012	12/1/2024	12/1/2025	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY		7930010210012	12/1/2024	12/1/2025	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$		7930010230012	12/1/2024	12/1/2025	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 \$
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below:	Y/N N/A				PER STATUTE OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
A C B	Professional/Pollution Maritime Employers Liab Equipment Floater		7930010220012 B0507HY2400089 SML93063382	12/1/2024 12/1/2024 12/1/2024	12/1/2025 12/1/2025 12/1/2025	1M/1M 1,000,000 \$75K/Item-250K Occ

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)  
 Blanket Additional Insured applies to General Liability and Auto Liability when required by written contract. General Liability Blanket Additional Insured includes Products/Completed Operations when required by written contract. General Liability and Auto Liability are Primary & Noncontributory when required by written contract. General Liability and Auto Liability include Blanket Waiver of Subrogation where required by written contract. Umbrella Liability is written on a Follow-Form basis. All coverages are subject to policy terms, conditions and exclusions.

#### CERTIFICATE HOLDER

#### CANCELLATION

	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE 

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ACORD 25 (2016/03)

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## 6.0 Required Price Consideration

### PRICE CONSIDERATION WORKSHEET:

<u>Position</u>	<u>\$/HR</u>		<u>HRS</u>		<u>TOTAL</u>
Senior Project Manager	<u>163.00</u>	x	10	=	<u>1630.00</u>
Environmental Scientist II	<u>98.00</u>	x	20	=	<u>1960.00</u>
Environmental Scientist I	<u>93.00</u>	x	20	=	<u>1860.00</u>
GIS Analyst	<u>131.00</u>	x	15	=	<u>1965.00</u>
Administrative/ Clerical	<u>61.00</u>	x	10	=	<u>610.00</u>
Total Comparative Price					<b><u>8025.00</u></b>

## 6.1 Fee Schedule



# COASTAL ENVIRONMENTS, INC.

Schedule of Fees and Terms – 1  
Interim April 2025

### Hourly Rates

Principal	\$187/hr	Arch – Project Archaeologist II	\$110/hr
Senior Scientist/Senior Planner	\$187/hr	Arch – Project Archaeologist I	\$93/hr
Project Scientist II/Planner II	\$163/hr	Arch – Historian	\$110/hr
Project Scientist I/Planner I	\$139/hr	Arch – Lab Director	\$93/hr
Science Specialist II	\$98/hr	Arch – Lab Supervisor	\$85/hr
Science Specialist I	\$93/hr	Arch – Crew Chief	\$85/hr
GIS Manager	\$135/hr	Arch – Archaeologist III	\$77/hr
Senior GIS Specialist	\$131/hr	Arch – Archaeologist II	\$67/hr
GIS/CADD/IT Technician	\$99/hr	Arch – Archaeologist I	\$61/hr
Desktop Publishing Specialist I	\$116/hr	Research Associate	\$67/hr
Arch – Principal Investigator II	\$169/hr	Research/Admin Asst.	\$61/hr
Arch – Principal Investigator Underwater	\$138/hr	Facilities Manager	\$88/hr
Arch – Principal Investigator Remote Sensing	\$138/hr	Facilities Technician	\$67/hr
Arch – Principal Investigator I	\$128/hr	Technician II	\$88/hr
Arch – Project Archaeologist Underwater	\$125/hr	Technician I	\$61/hr

### Reimbursable Direct Expenses

Affiliated Consultant	Rate/Hour	Lodging	Actual Cost
Supplies	Actual Cost	Per Diem	\$68/Day
Photos	Actual Cost	Black/White Copies in Office	\$0.10/Page
Boat Rental (Includes Fuel)	Rate/Day	Ltr/Lgl Color Copies in Office	\$1.00/Page
Field Equipment Usage	Rate/Day	11X17 Color Copies in Office	\$2.00/Page
Plotting Equipment Usage	\$5.00/ Sq Ft	Reproduction Contracted	Actual Cost
Mileage	\$0.70/Mile	Handling Fee on Expenses	10%

### Payment Terms:

Our fee for services will be according to the above fee schedule, subject to change to accommodate reasonable cost of living adjustments and merit increases. Billing will be monthly on the basis of completion of work and payment will be due within 30 days of date of invoice. In the event that payment is not made within 30 days, the account will be considered delinquent. A delinquent account will accrue interest at 12% per annum and may be transferred to an agent for collection. Legal fees associated with collection of delinquent accounts are to be paid by the client.