

Coastal Mapping & Sciences, LLC

“Working today towards tomorrow’s coast.”

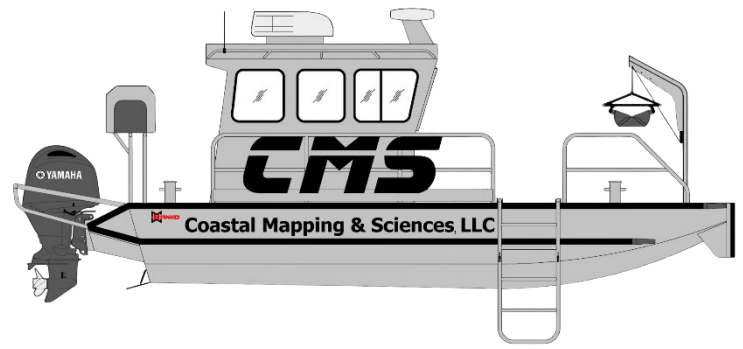
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Capability Statement

Founded in 2019, Coastal Mapping & Sciences, LLC (CMS) is a leading environmental consulting firm based in southeast Louisiana, specializing in coastal science, hydrographic surveying, and environmental monitoring. CMS works with federal agencies, state programs, academic institutions, non-profit organizations, and private clients to deliver high-quality data collection, rigorous analyses, and advanced mapping that improve understanding of environmental change and coastal systems. With experience across domestic and international projects, CMS consistently provides reliable, science-driven insights that support effective management, restoration, and long-term resilience of coastal and aquatic environments. From project design through field deployment and data delivery, CMS provides end-to-end solutions backed by experienced staff, specialized equipment, and proven workflows.

Coastal Sciences

- Water Quality Monitoring (Surface and Porewater)
- Long Term Monitoring Stations
 - LiCOR, YSI, In-Situ, Campbell Scientific, HOBO
- Topographic, Elevation, and Hydrologic Surveys
- Biological and Fisheries Sampling
- Sediment and Benthic Sampling
- Vegetation Surveys (Aquatic and Terrestrial)
- GPS Services

GIS & Mapping

- GIS Analysis
- Custom Map Building and Interactive Maps
- Data Creation and Editing,
- Image Stitching, Mosaics, and Georeferencing
- Land Change Analysis

Hydrographic & Marine

- Marine Technician Services
- Multibeam and Single-beam Surveys
- Side-Scan Sonar Surveys
- Magnetometer and Sub-bottom Profiler Surveys
- Bottom Composition and Aquatic Habitat Surveys
- Acoustic Surveys, Fisheries Biomass and Reef Surveys
- Oyster Reef Surveys
- ASV/USV Surveys, ROVs, and Underwater Cameras
- Marine Debris Location and Removal

Company Info

EIN: 83-4412872

DUNS: 100645976

CAGE Code: 9DBT1

Unique Entity ID: WVHZEHLT9U8

Certifications: Small Business, SEBD, Hudson Initiative

Safety: BOSIET, MMC, and USCG OPUV

NAICS Codes:

Primary:

541620 Environmental Consulting Services

Secondary:

541370 Surveying and Mapping Services

541690 Scientific and Technical Consulting

483114 Coastal Passenger Transportation

813312 Envi., Cons., and Wildlife Org.

Scientific Research Vessel: R/V Iris

26ft Hanko's Deck Boat

- Dual Yamaha 200hp Outboards
- Climate Controlled Cabin
- Furuno Navigation and Radar
- Starlink
- Davit, Winch, and Capstan
- Raw Water Pump and Dive Ladders

Work Boats:

- 21ft Hanko's
- 18ft Gator Trax
- 15ft Mark's Airboat with GM 454

Projects & Experience

Louisiana Barrier Island Comprehensive Monitoring Program (BICM3) (2024 – 2026)

Client: Pontchartrain Institute for Environmental Sciences (PIES), University of New Orleans (UNO)

Scope: Coastal surface sediment sampling and analysis from Hewes Point to Sabine Pass in support of the state's monitoring effort, including ponar and grab sample collection, laboratory characterization, and geodatabase development.

Highlights: Builds on sediment monitoring to support Louisiana's barrier island restoration planning and long-term sediment trend analysis, with integration into state sediment inventory databases.

Louisiana Deltaic Estuaries Marine Biodiversity Observation Network (MBON) (2022 – 2027)

Client: Department of Oceanography & Coastal Sciences, Louisiana State University (LSU)

Scope: Multi-year ecological monitoring program assessing biological and environmental responses to sea-level rise across Louisiana's deltaic estuaries through coordinated field sampling, benthic and sediment collection, water quality monitoring, hydrographic surveying, and environmental DNA (eDNA) analysis.

Highlights: Expands Louisiana's long-term coastal monitoring network; provides baseline and post-restoration data to support adaptive management and resilience planning.

Coastal Wetland Field Campaign – Plant–Soil Interactions Group (CoBRA Project, 2025 – 2026)

Client: Environmental Sciences Division, Oak Ridge National Laboratory (ORNL)

Scope: Provided field and technical support for coastal wetland research campaigns in the Wax Lake Delta and Terrebonne Basin, including soil coring, porewater sampling, and the installation and maintenance of scientific instrumentation for plant–soil biogeochemical studies.

Highlights: Supported ORNL's national CoBRA program by advancing understanding of wetland soil–plant interactions and environmental gradients in deltaic ecosystems.

Aquatic Vegetation Mapping – Worcester, MA (2025)

Client: City of Worcester, Department of Sustainability & Resilience

Scope: Comprehensive mapping of aquatic vegetation, water depths, and submerged habitat across five freshwater waterbodies using side-scan sonar, single-beam sonar, rake-toss sampling, and GIS analysis and mapping.

Highlights: Produced detailed maps, reports, and GIS deliverables to support management planning.

Hydrographic and Geophysical Surveys for Environmental Litigation Projects (2023 – 2026)

Client: Jones, Swanson, and Huddell, LLC

Scope: Performed integrated hydrographic and geophysical surveys to identify, map, and characterize both buried and exposed infrastructure and environmental features across multiple private and public sites using multibeam, single-beam, side-scan sonar, sub-bottom profiler, and marine magnetometer systems coupled with RTK and DGPS positioning.

Highlights: Produced high-resolution datasets and interpretive maps illustrating subsurface and surface features to support environmental assessments and legal investigations.

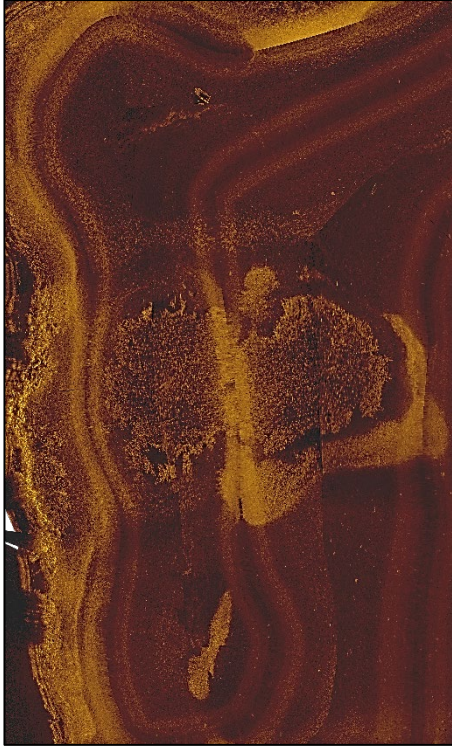
Wetland Ecology, Biogeochemistry, and Carbon Flux Monitoring & Research Support – Twilley Lab (2024 – 2026)

Client: Department of Oceanography & Coastal Sciences, Louisiana State University (LSU)

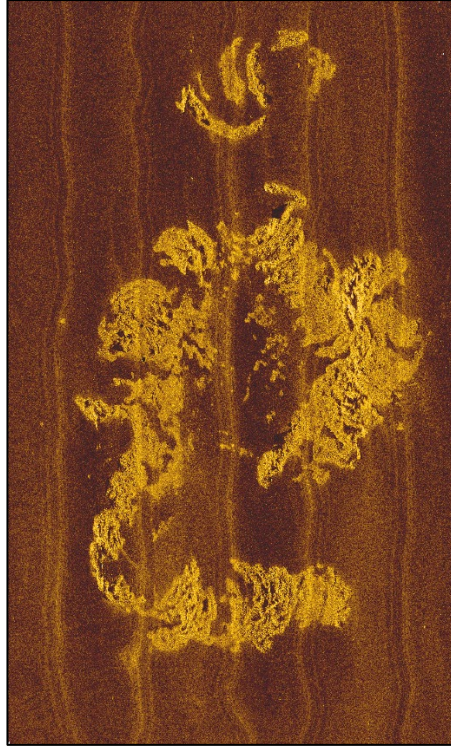
Scope: Provided field and technical support for long-term coastal wetland research focused on carbon dynamics, systems ecology, and biogeochemical processes. Work includes porewater chemistry, water-level monitoring, sediment and soil coring, belowground biomass sampling, and the installation, calibration, and maintenance of LiCOR eddy covariance flux towers measuring CO₂ and methane, along with associated meteorological and auxiliary sensors.

Highlights: Provides high-resolution data on wetland carbon exchange, biogeochemical processes, and ecosystem function to support climate and resilience research.

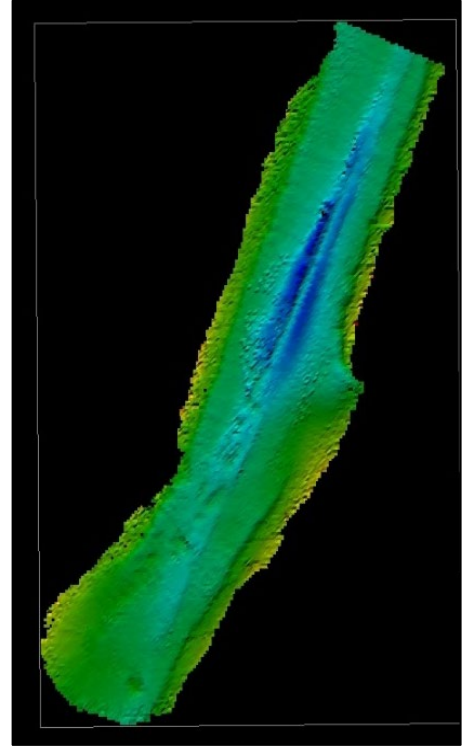
Project Examples & Technical Capabilities



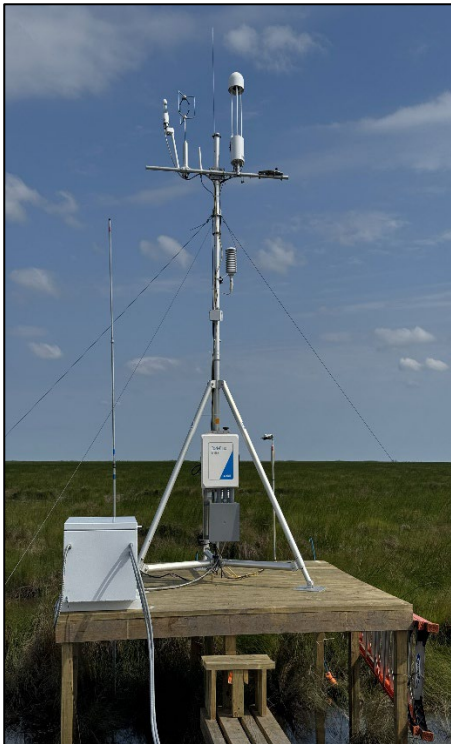
Side-scan sonar mosaic of submerged aquatic vegetation (SAV) used for habitat mapping and management planning.



Side-scan sonar mosaic of natural reef structure supporting benthic habitat characterization and restoration assessments.



Multibeam bathymetric survey of pipeline infrastructure for environmental and geotechnical investigations.



Installation of LiCOR eddy covariance flux tower for continuous CO₂ and methane monitoring in coastal wetlands.



Autonomous surface vehicle (ASV/USV) conducting high-resolution hydrographic and acoustic surveys in shallow waters.



CMS field platforms (R/V Iris and airboat) conducting coastal science field operations, including sediment and environmental data collection in shallow and marsh environments.