The Louisiana Department of Wildlife and Fisheries (LDWF) requires a contractor to supply, deploy, and maintain marker buoys. The LDWF Artificial Reef Program (Program) is required by the U.S. Coast Guard (USCG) to maintain marker buoys (private aids to navigation) around the perimeter of the Program’s Grand Isle 9 Reef (GI-9) located 7 miles offshore at:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***GI-9 Reef*** | ***Latitude NAD83*** | | | ***Longitude NAD83*** | | |
| Center | 29° | 11' | 13.268'' | 089° | 53' | 20.142'' |

The current marker buoy locations are indicated in Table 1. These locations are subject to change; actual locations will be verified and provided by LDWF prior to marker buoy deployment. All marker buoy locations will be within 1 mile of the GI-9 Reef center. Currently, LDWF has five 54/18 type marker buoys (Figure 1) at these locations. All maintenance referenced herein is for the currently installed 54/18 buoys.



Figure 1. Picture of one of the 54/18 marker buoys currently installed at GI-9 Reef.

Table 1: GI-9 Marker Buoys

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ***GI-9 Marker Buoys*** | ***Latitude NAD83*** | | | ***Longitude NAD83*** | | | ***Water Depth*** |
| FR-LA-27 A | 29° | 11' | 37.483'' | 089° | 52' | 59.591'' | ~42-ft |
| FR-LA-27 B | 29° | 11' | 42.133'' | 089° | 53' | 29.609'' | ~39-ft |
| FR-LA-27 C | 29° | 11' | 12.817'' | 089° | 53' | 54.707'' | ~44-ft |
| FR-LA-27 D | 29° | 10' | 57.505'' | 089° | 53' | 20.330'' | ~50-ft |
| FR-LA-27 E | 29° | 11' | 03.445” | 089° | 52’ | 47.836” | ~48-ft |

Unless otherwise stipulated within, the Contractor shall be responsible for all costs incurred in the performance of the contract. These costs shall include, but not be limited to:

a) fuel, oil, and other consumables;

b) all labor, equipment, supplies, fees and permits as may be required;

c) all costs related to the operation of vessels;

d) all costs incurred due to delays of any type not directly attributable to the actions of LDWF, including weather, mechanical failure and equipment malfunction;

e) any mobilization and demobilization expenses to accomplish the scope of the services, the Contractor shall be responsible for identification of and damages to water bottoms, structures, pipelines, etc., to, from, and within the project area.

**Marker Buoy System Deployment**

The Contractor must provide a United States Coast Guard (USCG) compliant buoy, light, and mooring. The buoy, light, and mooring will hereinafter collectively be referred to as a buoy system. The buoy system must meet or exceed all USCG regulations and policies, approval of LDWF, and shall conform to the following specifications:

Marker Buoy:

* USCG compliant
* High visibility solid yellow
* Focal plane of attached light must be at least 8 feet above the surface of the water.
* Internal and/or external radar reflector with a minimum of four vanes evenly spaced at the top of the buoy
* Reflective daymark
* Daymark painted and/or marked with 3” black lettering with identification information as provided.

Light with Synchronization:

* United States Coast Guard compliant
* Self-contained LED solar powered light
* Yellow/amber light
* 24 flashes per minute (flashes every 2.5 seconds)
* No strobes
* 3 mile visibility range minimum
* Synchronized with five other marker buoy lights at GI-9 Reef

Remote Monitoring Unit:

* Remote unit for each buoy system capable of regularly broadcasting current location and alarm if buoy system moves beyond a designated watch circle. Unit must broadcast information to a land-based monitoring station at least twice a day.

Mooring:

* Anchor block(s) for each buoy system must total at least 10,000 lbs.
* Chain and associated hardware must be new marine American Bureau of Shipping (ABS) certified grade R3 or better.
* Mooring assembly’s components shall have a minimum Break Test of 175 kips.

The Contractor shall deploy buoy systems as needed within 45 calendar days of award. The marker buoy system shall be deployed at their respective mooring locations as specified by LDWF. The deployment vessel must be equipped with a Differential Geographic Positioning System (DGPS) with 3 meter horizontal accuracy or better and have a dedicated survey technician positioning the vessel for each marker buoy system deployment. The Contractor shall notify LDWF no less than 72 hours prior to the departure of any buoy deployments.

If requested by LDWF, the Contractor, at its expense, shall accommodate observers on board during deployment operations. Program representatives shall act as observers only and shall not serve, nor be deemed to serve, in any operational or advisory capacity whatsoever. Notwithstanding the above, LDWF’s representatives may advise the Contractor but only at the specific request of the Contractor, its agents, employees, or representatives. In such instances, it is specifically understood that the Contractor shall assume all responsibility for and all liability which may be associated with, any action resulting from the Contractor acting upon such advice, and for any and all consequences arising therefrom.

The Contractor shall provide LDWF with at least 24 hour notice of changes to any previously announced departure.

Deployed buoy systems will become the property of LDWF upon deployment per specifications and payment.

The Contractor shall maintain the buoy system at its deployment location and ensure its operation for the contract period (minimum of 12 months). The Contractor shall be solely responsible for replacement and/or repair of the buoy system due to failure in materials, workmanship or loss during the 12 month period following the deployment date. Replacement and/or repair of a buoy system must be made within 30 days of discovery or notification of non-compliance whichever occurs first. Exceptions to the buoy system guarantee are cases that can be directly attributed to documented vandalism, proven vessel collision, or Force Majeure.

**Routine Monitoring:**

The Contractor shall provide daily monitoring of the currently deployed 54/18 marker buoy systems via a remote monitoring system. The Contractor shall notify LDWF at least 72 hours before any scheduled maintenance. The Contractor shall also perform in the field maintenance at quarterly and annual intervals.

If requested by LDWF, the Contractor, at their expense, shall accommodate observers on board during the maintenance operations. LDWF shall act as observers only and shall not serve, nor be deemed to serve, in any operational or advisory capacity whatsoever. Notwithstanding the above, LDWF may advise the Contractor but only at the specific request of the Contractor, its agents, employees, or representatives. In such instances, it is specifically understood that the Contractor shall assume all responsibility for and all liability which may be associated with, any action resulting from the Contractor acting upon such advice, and for any and all consequences arising therefrom.

The Contractor shall provide LDWF with at least 24 hour notice of changes to any previously announced departure.

Quarterly maintenance shall include:

* Physical inspections of the emergent section of each buoy system
* Digital images to document condition and repairs
* Verify focal plane of attached light is at least 8 feet above the surface of the water
* Verify each light system is functioning which includes ensuring:
  + Voltage across lamps meets Coast Guard requirements
  + Lens clean and free of abrasions
  + Solar panels are clean & charging battery
  + Light synchronized with other lights
* Remove any extraneous mooring lines or entangled gear on buoy
* Ensure buoy above waterline is visibly yellow
* Ensure location monitoring equipment is functioning
* Field Inspection report (due within **14 calendar days** of inspection) which provides the following information for each buoy system:
  + Date of inspection
  + Items checked, repaired, and status upon completion
  + Comments regarding condition and potential repairs
  + Digital photographic documentation of each buoys condition and repairs, with date stamp in frame

The Contractor shall notify LDWF **immediately** if a buoy is missing or if the light system cannot be field repaired or replaced at the time of the inspection.

Daily Monitoring shall include:

* Maintain daily log of each buoy systems location; provide log to LDWF upon request.
* Immediate notification to LDWF via e-mail following alarm event of buoy outside watch circle.
* Upon request, provide LDWF regularly scheduled e-mail notifications for each buoy system which includes:
  + Date/time of information
  + GPS location

**Annual Mooring Inspection**

Mooring Inspection is in addition to routine maintenance & monitoring and shall include:

* Complete retrieval of each buoy system onboard maintenance vessel
* Complete inspection of the entire mooring system (chain, shackles, swivels, and anchor) for each buoy system
* Digital images to document mooring system condition and repairs
* Replacement of any worn mooring components including but not limited to chain, shackles, and swivels.
* Conducted during the 4th quarter maintenance
* Include mooring inspection logs, repairs, and digital images in the Field Inspection report

**‘Offsite’ Buoys**

Upon discovery that the buoy has drifted from its required location, LDWF may request that the Contractor retrieve and re-deploy the buoy. The Contractor shall be prepared to replace any missing or damaged equipment and any missing or damaged hardware. If the buoy cannot be re-deployed, the Contractor shall retain buoy for repair onshore. The repaired buoy shall be re-deployed during the next scheduled quarterly or annual maintenance. The Contractor must supply labor and new equipment to replace any missing or damaged items discovered during routine maintenance and monitoring. The Contractor shall include itemized costs for replacement equipment.

**Marker Buoy System Replacement & Deployment**

LDWF may request a buoy system replacement after the expiration of the Contractor’s 12 month buoy system guarantee or a documented exception. The Contractor shall provide a lump sum cost for the replacement and deployment of a buoy system at the MC-311 Reef. The buoy system replacement/deployment shall not be performed until LDWF has authorized the services. The Contractor shall guarantee each buoy system and its operation for a minimum period of 12 months.

Should any damage occur, the Contractor must make all reasonable attempts to recover and repair the buoy system, and document these attempts to LDWF. If the buoy cannot be recovered and/or repaired, the Contractor must provide a written justification to LDWF and provide a written request to deploy a new buoy system. LDWF will not pay for the deployment of a new buoy system without the documentation of all reasonable efforts to recover and repair the buoy system being rented.

**Qualifications and Experience**

Bidders must have recent (within the last 5 years) experience in successfully completing a minimum of three offshore marine work projects of a similar nature and scope (the design, manufacture, and deployment of FAD or navigation buoys) as the work described herein. Bidders should submit a list of projects which demonstrate the required experience, including a description of the work performed and references (customers for the projects) with contact names and phone numbers with the bid response or within 5 business days upon written response.

**Non-Mandatory Site Visit**

Bidders are urged to visit the site and take such other steps as may be reasonably necessary to ascertain the nature and location of the work and the general and local conditions which can affect the work or cost thereof. Failure to do so will not relieve bidders from the responsibility for estimating properly the difficulty or cost of successfully completing the contract or constitute grounds for a claim after award. LDWF will assume no responsibility for any understanding or representation concerning conditions made by any of its employees, agents, or consultants prior to the execution of the contract unless included in the contract documents. LDWF contact for this project is Mike McDonough: 225-763-5418 or [mmcdonough@wlf.la.gov](mailto:mmcdonough@wlf.la.gov)

**Bidders should provide the following with bid response or within 5 business days upon written request:**

* Brand/model of buoy
* Specifications and dimensions of buoy system, including drawings
  + Must include dimensions of buoy above and below waterline
* Specifications for the required equipment, including
  + The light
  + GPS
  + Radar reflector
  + Solar panels
* Brand/model of GPS monitoring and reporting system
* Specifications for the differential GPS system on the vessel to be used for deployment and any applicable procedures for use