

**Texas General Land Office
Coastal Management Project – Cycle 21
Final Report**

**Construction and Enhancement of Artificial
Reefs in the Western Gulf of
Mexico**

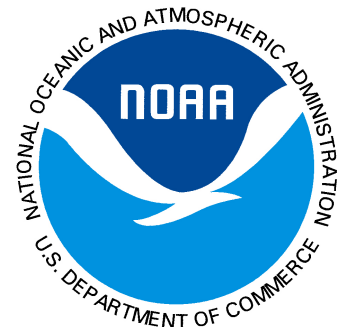
GLO Contract # 17-189-000-9826

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ACRONYMS

CMP	Coastal Management Program
GLO	Texas General Land Office
nm	Nautical Mile (6,280 ft)
RGV.....	Rio Grande Valley Nearshore Reef Site, PS-1105
THC	Texas Historical Commission
TARP	Texas Artificial Reef Program
TPWD	Texas Parks and Wildlife Department
USACOE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
UTRGV	University of Texas – Rio Grande Valley

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Coastal Impact Assistance Program Final Report

Construction of Artificial Reefs in the Gulf of Mexico

EXECUTIVE SUMMARY

The Texas Artificial Reef Program CMP grant extended from 1 October 2016 through 31 March 2019. Two specific tasks were completed included the reefing of 250 fabricated pyramid reefs and 250 fabricated low relief structures. The CMP grant made this work possible and allowed the Texas Artificial Reef Program to direct its efforts in a manner to maximize the deployment of reef materials for further scientific studies.

PART 1.0 INTRODUCTION

1.1 Overview of the Texas Artificial Reef Program

Texas is very active in the creation and enhancement of artificial reefs in the Gulf of Mexico and has one of the strongest reef programs in the nation. The Texas Artificial Reef Program (TARP) is managed by the Texas Parks and Wildlife Department, Coastal Fisheries Division (TPWD). The program's strengths are derived from its flexibility in creating reef sites, the process used for evaluating reef material and placement location, and the support it has received from the leaders and citizens of Texas.

Resource managers have been involved in artificial reef development off the Texas coast for over 60 years. The donation of 12 Liberty Ships in 1975-76 formed the foundation of the current Artificial Reef Program and represented the first successful reef development activity by

TPWD utilizing stable, durable, and complex material. In 1989, the Texas Legislature directed TPWD to develop the artificial reef potential off Texas. The TPWD Artificial Reef Plan was adopted by the Legislature in 1990 creating the TARP (TPWD 1990). The main component of the Texas legislation was to allow the oil and gas industry to donate their obsolete petroleum structures as artificial reefs in the Rigs-to-Reefs Program in lieu of the standard salvage removal option required by federal law.

The mission of the Texas Artificial Reef Program is to enhance and preserve marine habitat in the Gulf of Mexico (TPWD 2010). To do this, TARP has several sub-programs. The Rigs-to-Reefs program negotiates the retention of obsolete petroleum platforms from companies who must remove them from the Gulf and preserves them in place or arranges for them to be towed to existing reef sites. The Ships-to-Reefs program utilizes derelict shrimp vessels, barges, tugboats, and ships as

reefing material. The Nearshore Reefing Program uses materials of opportunity (concrete culverts, bridge material, etc.) and prefabricated materials (limestone pyramids and reef balls) for enhancing reef sites inside Texas state waters (shoreline to 9 nm).

Each subprogram has its own priorities but overall, maintaining and preserving marine habitat is of primary concern. Rigs-to-Reefs projects preserve large amounts of steel that have been encrusted with marine life for years (e.g. average age of a platform before removal is 30 years). These reefs provide excellent fishing opportunities for anglers but most are located 30 – 100 nm offshore. Divers use the platforms also but since the majority are cut at -85ft or deeper, only experienced divers tend to visit them. The Ships-to-Reefs program provides additional diving and angling opportunities around large metal vessels in waters closer to Texas. Some reefs are designed mainly for divers (e.g. Texas Clipper Reef PS-1122) while others are in waters of limited visibility and attract mostly anglers. The Nearshore Reef Program was designed to provide fishing and diving opportunities to the public outside major Texas ports using smaller types of materials due to water depth. Anglers and divers can visit these sites in smaller vessels and return to port in a reasonable period of time. In addition, the program allows the public to reef its own approved materials under the guidance of TARP at these reefs.

The TARP develops new reef sites and enhances existing reefs in the Gulf off the Texas coast. Currently, the program has 92 individual reef sites ranging from 20 – 1650 acres in size and from 5 – 113 nm off the coast. Current reef sites are shown in Figure 1. and can be found at TARP's interactive Google map: <http://www.tpwd.state.tx.us/gis/ris/artificialreefs> or on its internet home page: http://www.tpwd.state.tx.us/landwater/water/habitats/artificial_reef/

To date, the Texas Artificial Reef Program has over 148 obsolete petroleum structures and components in its Rigs-to-Reefs program. Other materials used in the construction of reefs include: the 473-ft *Texas Clipper*, the 371-ft *MV Kraken*, over 23 other vessels and boats, and thousands of other land based materials such as concrete culverts, concrete reef balls, bridge spans and columns, predesigned reef pyramids, and one-ton quarry rock. The Program continues to obtain material and assesses each donation on a case-by-case basis to determine its appropriateness to the program.

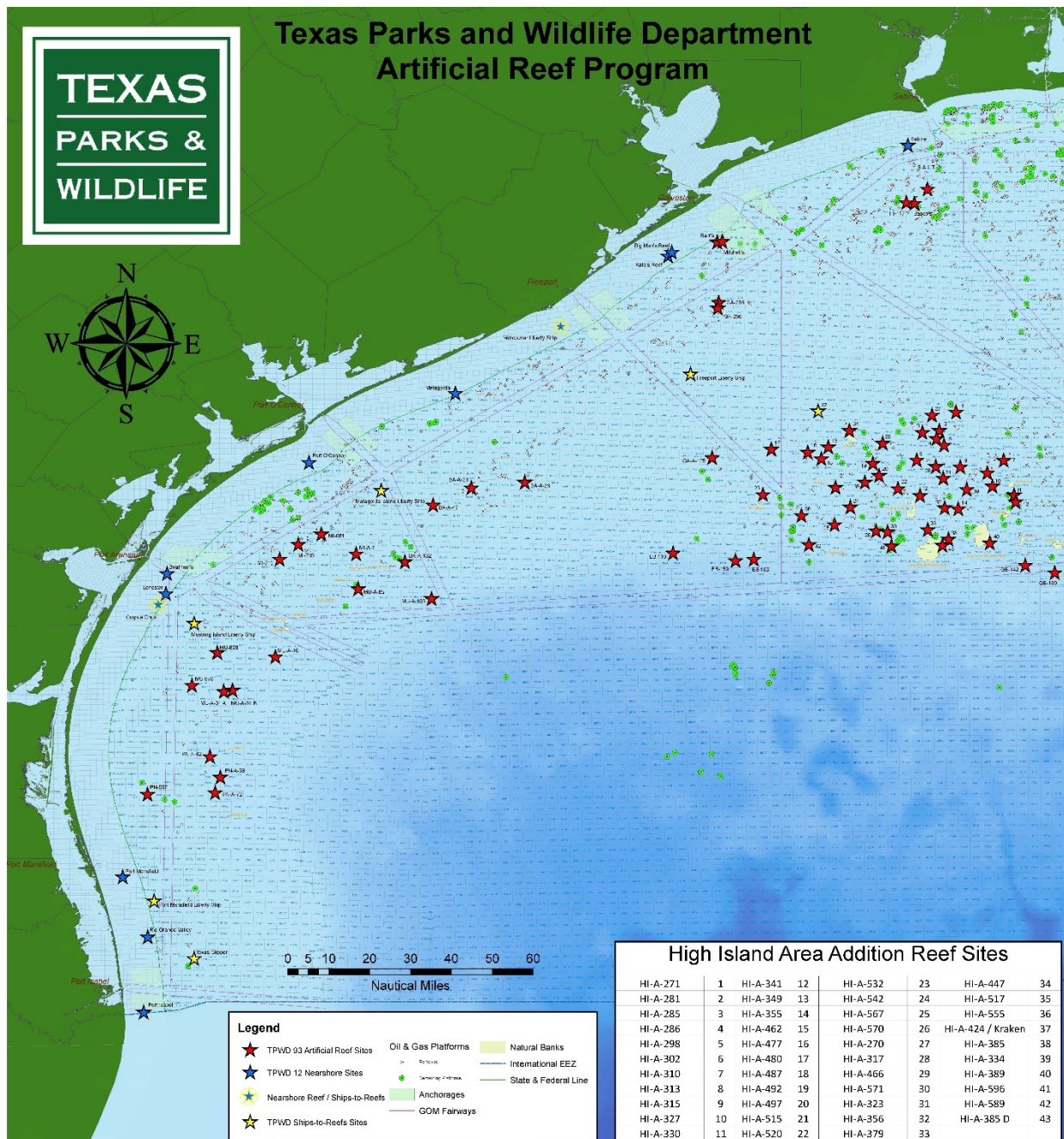


Figure 1. Map of Texas Artificial Reef Sites in the Gulf of Mexico offshore Texas.

1.2 Biological Importance of Artificial Reefs

Artificial reef habitats protect and conserve marine life by providing shelter and substrate for the attachment of sessile organisms. The reef structure and associated sessile organisms, in turn, provide the foundation for complex marine ecosystems and food webs. The food web develops from the numerous invertebrate species communities, comprised of algae, sponges, bivalves, coral, and crabs etc., typically observed on structures at reef sites. Research has shown that marine organisms not only are attracted to artificial structures, but many live and reproduce on them. This is important for reef fishes, such as red snapper (*Lutjanus campechanus*), a highly prized game and commercial fish in the Gulf.

Resident fish species seen on many reef structures that are dependent upon sessile and motile invertebrates as a food source and the structure for protection include blennies (Blenniidae), small grazers such as butterfly fishes (Chaetodontidae) and large grazers such as sheepshead (*Archosargus probatocephalus*). Resident fish species relying on reef sites for cover include the Atlantic spadefish (*Chaetodipterus faber*) and red snapper (*Lutjanus campechanus*). Other fish such as lookdowns (*Selena vomer*), Atlantic moonfish (*Vomer setipinnis*) and creolefish (*Paranthis furcifer*) are frequently seen feeding on macrozooplankton and suspended particulate matter.

In addition, tomtate (*Haemulon aurolineatum*), and various grouper species (Serranidae) are typically found feeding at areas away from the reef at night and returning during the day for cover. Large pelagic predators, such as mackerels (Scombridae) and jacks (*Caranx spp.*), are also present near the reef site in the pursuit

of schools of prey species. Often, divers will see barracuda (*Sphraena barracuda*), almaco jack (*Seriola rivoliana*), hammerhead sharks (*Sphyrna spp.*), and cobia (*Rachycentron canadum*). On occasion sea turtles and marine mammals are observed near artificial reefs.

Adding the numerous invertebrate species observed at reef sites to this mix creates an extensive and productive marine ecosystem at a micro scale.

1.3 Social Benefits of Texas Artificial Reefs

1.3.1 Sport Fishery Benefits

Artificial reefs enhance the fishing opportunities for hook and line anglers targeting fish associated with artificial reefs. There are an estimated 750,000 saltwater recreational anglers in Texas (2018 estimate, 2011 US Fish and Wildlife Service data; last data available). Osburn et al. (1995) found that 73% of all fishing and diving charter boat trips were to artificial substrate habitats. In a 1995 survey, 44% of the total number of trips taken offshore by charter boats (included headboat, party, and diving boats) were to TPWD artificial reefs (Ditton et al. 1995). Trips to artificial reefs accounted for 40% of the total number of trips taken offshore by the survey group (Ditton et al. 1995).

In a study targeting the *Texas Clipper* reef, Malki et al. (2010) conducted an economic assessment of the ship reef and found that from 2008 – 2010 anglers spent an average of \$458.02 per trip, which correlated to an economic impact of over \$1m to the local economy. Through a 2015 study of private boat owners, 57% took 1-5 trips offshore each year and 5% made over 20 trips per year. Over 70% of these boaters made use of artificial structures: 41% went to standing oil and gas platforms, 14% to

TPWD reefed platforms (Rigs-to-Reefs Program), 13% to TPWD reefed Liberty Ships, and 7% to small profile TPWD reef materials (e.g. concrete culvert, reef balls, pyramids, etc.) (Schuett et al. 2016).

With this heavy demand for fishing, the creation of artificial reefs helps meet these demands and aid in increasing optimum yield of finfish and other marine life.

1.3.2 Sport Diving Benefits of Texas Artificial Reefs

Most recreational diving in Gulf of Mexico waters off Texas occurs at the Flower Gardens Banks National Marine Sanctuary, approximately 100 nm to the west of Galveston, Texas. The preferred diving depth for most dive charters is 70-100 ft (Ditton et al. 1999). Artificial reefs, especially those with a 50-ft clearance, can offer various diving opportunities for divers dependent on their level of skill and training. Typical recreational divers may venture down to 120-130 feet, while deeper platform reefs are used by the increasingly popular technical diving community who can exceed depths of 200 feet. A 1999 study utilizing a random sample of 1,059 Texas sport divers indicated that 55% had taken one or more trips to TPWD artificial reefs each year (Ditton and Baker 1999).

Further, Ditton et al. (1999) estimated that 250,000 divers reside in Texas and annual economic impacts to the state are about \$2 million per year. Approximately 50% of diving activities occurs in salt water. Malki et al. (2010) conducted an economic assessment of the Texas Clipper reef and found that from 2008 – 2010 divers spent an average of \$2,020.07 per trip, which correlated to an economic impact of from \$1.4 – over \$2m to the local economy. The most recent diving survey

found that nearly 20% of scuba diving shops utilizing Texas artificial reefs that the removal of offshore platforms have devastated their business and as a result, 49% do not dive (or dive less) in the Gulf anymore (Braddy et al. 2016). Of those surveyed, 83% of dive shops and dive boat operators would prefer to dive a ship wreck (Ships-to-Reefs Program) over an oil platform (Braddy et al. 2016). Even with the decline in dive trips to Texas waters, the average annual expenditure per diver in Gulf was \$1,173. With an estimated 6,000 diver-trips to TPWD artificial reefs, the economic impact was \$1.2m/year (Braddy et al. 2016).

With the utilization of artificial reefs for diving resources and the steady demand for diving opportunities, artificial reefs are critical in providing diving opportunities.

PART 2.0 PROJECT GRANT AND TASKS

2.1 Project Goals

The goals of the project were the:

- Design, Permitting and Bidding of Mid and Low-Relief Material;
- and, Construction and Deployment of Mid and Low Relief Material.

Reefing materials included: fabricated mid relief pyramids and fabricated low relief structures. All reef materials were inspected to ensure that they were free of hazardous substances and met TARP guidelines for complexity, stability, and durability. The reef materials were added to the newly permitted reef site, Rio Grande Valley Nearshore Reef Site, PS-1105, along the southwestern Texas coast to increase the physical complexity of the reef structure in the Gulf of Mexico.

2.2 Specific Project Tasks

To accomplish the goals of the project, project tasks and projected completion times were established (Exhibit A). TARP applied for the Coastal Management Program (CMP) grant in late 2015 and the approved grant was received by TPWD on 2 February 2016. The contract between TPWD and the GLO was officially signed on 11 December 2016. TARP was granted \$400,000 in award costs, with a \$400,000 match from TPWD.

The grant provided for the creation of TARP new reef site in the southwestern Texas coastal waters, the Rio Grande Valley Reef Site, PS-1105 (RGV). The CMP funds were used for the following phased activities: first, obtaining U.S. Army Corps of Engineers (USACOE) and Texas General Land Office (GLO) permits for the creation of a new reef, the Rio Grande Valley Nearshore

Reef Site, within Texas state waters; second, the bidding and award of reefing contracts for the deployment of materials; and third, the deployment of materials to the new reef sites.

The anticipated time frame for completion of the tasks was originally estimated to be 15 months, but was extended twice. The initial project completion was set at 31 March 2018, but delays in submitting the Request for Proposals (RFP) for the construction and deployment of the mid relief required an extension to 31 December 2018. Due to the initial delay, a second extension was required later to extend the project closeout deadline to 31 March 2019.

Typical reefing contracts exceed \$100,000, and as such, were reviewed by the Texas Procurement and Support Services before they were open to the public for bidding. After a 30-day public notice (in most cases), bids were evaluated, scored and awarded. The entire process from contract draft to award typically took 2.5 – 3 months. Once awards were made, TARP allowed contractors flexibility in completion to compensate for weather delays. Overall, all contracts were completed, and all reefing objectives met by the end of the CMP grant, after the two deadline extensions.

PART 3.0 ACCOMPLISHMENTS BY TASK

3.1 Task 1.0 Design, Permitting and Bidding of Mid and Low-Relief Material

Rio Grande Valley Nearshore Reef (PS-1105)

Description: The Rio Grande Valley Nearshore Reef (PS-1105) was designed at 1650 acres (6,878 ft x 10,450 ft) in size and located approximately 7.4 nm northeast of Port Isabel, Texas in state waters. Water depth is 64 ft (Exhibit B).

Scope of Work: This task was to obtain permits from the Texas General Land Office and the US Army Corps of Engineers (USACOE). TARP also corresponded with the US Coast Guard (USCG) in order to determine if a Private Aid for Navigation (PATON marker buoy) was required. All newly permitted reef sites are required to have an archaeological survey before the permit process can be completed. TARP was also in communication with the University of Texas – Rio Grande Valley (UTRGV) to determine the placement of reef materials within the permitted reef site. Once the site was permitted, TARP would develop the RFPs for the deployment of mid and low relief materials at the newly permitted reef site.

Resolution: The archaeological survey was completed, and the final report was submitted to TPWD by October 2015. While the Texas Historical Commission received the final report of the archaeological survey, the artifact curation form was not submitted. TPWD rectified the situation and the curation form (antiquities permit #7359, Exhibit D) was submitted to the THC 24 March 2017. The USACOE reef site permit was approved on 18 July 2016 (permit #SWG-2015-00746; Exhibit E) and the Texas

GLO surface lease issued on 30 June 2016 (permit #SL20160013; Exhibit F). The USCG confirmed that a marker buoy was required on 22 September 2016 (Exhibit G). Throughout the permitting process, TARP and UTRGV continued to discuss placement of the materials for the deployment.

Milestone: Projected completion: 30 November 2016; Actual completion: 22 September 2016. All requirements, except for the curation form, which was not originally anticipated, were completed ahead of the projected timeline.

CMP Contractual Cost: \$0.

3.1.1 Task 1.0 Design, Permitting and Bidding of Mid and Low-Relief Material

Description: Upon receiving the permits for the Rio Grande Valley Nearshore Reef (PS-1105), drafting the bid package for the construction and deployment of the mid and low relief materials began. The RFP was to include material specifications and a deployment plan and was to be advertised to the public by 28 February 2017, so that an executed contract might be in place no later than 1 March 2017.

Scope of Work: The initial draft of the RFP was created 9 November 2016. The RFP contained two phases. The first phase was the construction and placement of 250 mid relief pyramid structures. The second phase was the construction and placement of 250 low relief reef plates. After many set-backs and revisions, the RFP was placed out for public notice on 16 June 2017, 4 months behind the contracted timeline. All bid proposals were due to TPWD by 6 July 2017.

Resolution: The RFP for the construction and deployment of mid and low relief structures closed on 6 July 2017. Two vendors bid on the RFP. Both of the original bids were over the amount set within the CMP grant. TARP requested a Final And Best Offer (FABO) from both bidders and from that FABO, TARP was able to select a vendor. A purchase order was created on 9 August 2017 for the construction of 250 mid relief pyramids and 250 low relief reef plates. The term end of the purchase order was determined to be 31 August 2018. The initial CMP grant was offered with a Special Award Condition (SAC) attached to it (Exhibit H). Within this SAC, it was determined that a Section 7 consultation with NOAA was required. However, upon providing the USACOE Statement of Findings that was processed during the permit process where NOAA was originally offered a chance to consult, the SAC was removed.

Milestone: Projected completion: 31 December 2016. Actual completion: 9 August 2017. Due to the delay in the submission of the RFP, TPWD requested a 6-month extension on the workplan and grant contract. The new amended deadline for complete project close out was set as 30 September 2018. This amendment was executed 2 August 2017. All requirements, under the amended timeline, were completed on time.

CMP Contractual Cost: \$0.

3.2 Task 2.0. *Construction and Deployment of Mid and Low Relief Material*

Description: The selected construction contractor, Callan Marine, was to deploy mid relief pyramids and low-relief reef plates to the newly permitted Rio Grande Valley Nearshore Reef Site. Mid-relief pyramids consisted of limestone and concrete. The original concept within the grant proposal was to use oyster shell and rock as low relief material. However, due to the current status of oyster stocks in Texas, the cost of oyster shell mixed with rock was more than using pre-fabricated reef materials. The deployment of the reef materials was determined by continuing to collaborate with researchers at the University of Texas – Rio Grande Valley.

Scope of Work: TARP continued to speak with university researchers at UTRGV to finalize the placement of the reef materials (Exhibit I). In March 2017, TARP was notified that a local non-profit group that was working on obtaining and deploying materials at the RGV reef site, missed their provided deployment zone and therefore, the UTRGV deployment zone would need to be shifted to another region of the reef site. This slight mishap caused no delays, as there were no other materials in the reef site and the deployment zone for the CMP 21 materials could be shifted easily. The new deployment zone was the western edge of the reef site. There would be 250 mid relief pyramids placed at the RGV Reef Site and instead of the proposed tonnage of shell and rock, 250 low relief reef plates would be placed within the site.

Once the purchase order from TPWD to Callan Marine was signed on 9 August 2017, the contract manager met with the

contracted vendor on 19 September 2017 to ensure that the scope of the project was understood. Technical specifications of the mid relief pyramids and the low relief reef plates can be found in Exhibits J and K. By December 2017, no progress had been made in construction of reef materials due to hurricane impacts in Florida where many of the primary sub-contractors for the work lived. However, by January 2018, material inspections could begin. On 9 January 2018, 225 low relief reef plates were constructed and another 14 were to be finished by the end of that day. All low relief reef plates would be completed by the end of the week and the mid relief pyramids construction would begin within a few weeks after that. The final material inspections occurred on 10 April 2018. All 250 mid relief pyramids and 250 low relief reef plates were constructed, and the contractor had included a few extras just in case something occurred during deployment (Figures 2-5).

Remediation: No remediation was required. All materials reefed were inspected by TARP and met Artificial Reef Program material guidelines.

Reefing: After the final inspections and the agreed deployment plan finalized, material deployments were slated to begin in August 2018. An initial task to complete before the actual deployments could occur would be to create temporary CMP signage and acknowledgement of funding on TPWD website. By April 2018, TARP created, printed and provided temporary CMP signage for use on the construction contractor's boat during material deployment and posted CMP funding acknowledgement on the TPWD's Artificial Reef Program's website (Exhibits M and N).

The contracted vendors for the construction and deployment of reef materials were staged in the Freeport, Texas region. These were the same vendors contracted for the construction and deployment of reef materials for the CMP Cycle 22 grant for a reef site out of the Galveston, Texas, area. Therefore, TARP was notified in April 2018 and agreed to allow the deployment of reef materials at the CMP 22 reef site to occur before the RGV deployment. Callan Marine ensured that the CMP 21 deployment would happen on time.

In May 2018, TARP was notified that the trucks had begun to move materials from Freeport, Texas to Port Isabel, Texas for staging and deployment. However, not enough trucks showed up initially for the movement of the 500 reef structures, so there was minor delay in the number of structures expected to be in Port Isabel by the end of May. On 11 June 2018, TARP was notified that the trucks were still moving materials down to Port Isabel. Further, the subcontractor had been informed by the US Coast Guard that the original deployment vessel, the Lil Mo, could not be used for these deployments and Callan Marine began to contract a barge and push-boat to complete the RGV deployments.

Even with all the missteps, TARP was notified that deployments would begin by the end of July or early August 2018. The TARP contract manager drove to Port Isabel 31 July 2018 in order to attend the RGV deployment. Deployments began 1 August 2018, but the push boat and barge broke a crane and deployments were halted until repairs could be made. Reef deployments began again on 17 August and were

completed by 24 August 2018. Local TPWD staff oversaw the reef deployments on 23 August and took images of the reef material deployment (Figures 6-8).

The TPWD RFP required a survey of the deployment of reef structures from the contracted company, Callan Marine. A side scan survey was completed and provided to TARP by 19 September 2018 (Exhibit M).

Milestone: Projected completion: 30 September 2018; Actual completion: 19 September 2018. Due to the delays in movement of the reef structures and the breakage to the deployment vessel, TARP sought a second extension to their grant contract. The second amendment was signed by all parties on 16 October 2018 and extended the deadlines for Task 2.0 to be completed by 31 December 2018. A final amendment was signed to extend the timeline for project close out. Final deadlines were moved to 31 March 2019.

Final CMP Contract Cost: \$749,750.00

Callan Marine invoices for construction and deployment of reef materials:

- Construction of 250 low relief reef plates: \$136,750.00 (29 Dec 2017).
- Construction of 250 mid relief pyramids: \$238,125.00 (28 Feb 2018).
- Deployment and survey of all 500 reef structures: \$374,875.00 (10 Oct 2018).



Figure 2. Construction of the low relief reef plates for the Rio Grande Valley Nearshore Reef Site (PS-1105).



Figure 3. Low relief reef plates completed and staged in Freeport for trucking to Port Isabel for deployment preparations.



Figure 4. Mid relief pyramids completed and staged for moving to Port Isabel for deployment preparations.



Figure 5. Close up images of the mid relief pyramids.



Figure 6. Deployment image of the mid relief pyramids being placed in the Rio Grande Valley Nearshore Reef Site (PS-1005) on 23 August 2018.



Figure 7. Deployment image of the mid relief pyramids being placed in the Rio Grande Valley Nearshore Reef Site (PS-1005) on 23 August 2018.



Figure 8. Close-Up Image of the deployment of the mid relief pyramids being placed in the Rio Grande Valley Nearshore Reef Site (PS-1005) on 23 August 2018.

PART 4.0 REFERENCES

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PART 5.0 EXHIBITS

Exhibit A. Original CMP work plan and deliverables, dated 12 December 2016.

Construction and Enhancement of Artificial Reefs in the Western Gulf of Mexico

Project Description: The Texas Parks and Wildlife Department (TPWD) Artificial Reef Program develops and enhances reef sites in the Texas offshore region of the Gulf of Mexico. These sites are designed to enhance natural habitat for fisheries, threatened and endangered species and other marine life and reduce erosion to stabilize area substrate. The TPWD Artificial Reef Program constructs artificial reefs, building important fishery stocks and benefiting the public with increased fishing and diving opportunities. Currently, there are 71 reef sites located six (6) to 100 nautical miles offshore, ranging in size from 32 to 360 acres and across water depths from 36 - 305 feet.

TPWD will use CMP Cycle 21 funds to create an artificial reef habitat at the Rio Grande Valley (RGV) Reef Site. This reef will be the largest site within the TPWD Artificial Reef Program, spanning 1,650 acres. The reef site will vary in depth from 50 to 75 feet, presenting a unique opportunity to create both low relief and mid-to-high relief reef habitats that allow juvenile fish to transition to adulthood. Concrete, limestone, and/or shell will be placed in varying configurations in the northwestern region of the RGV reef site to create low relief habitat for juvenile fish. Larger, more complex materials will be placed across the center region in slightly deeper water to yield mid-relief habitat for larger, adult fish. If funds and time allow, a vessel may be placed in the deepest region of the reef site to create high relief reef habitat. TPWD will conduct monitoring to determine the effectiveness of the reef site.

This project will require coordination between various agencies, including the Texas General Land Office, U.S. Army Corps of Engineers, and U.S. Coast Guard. Other agency partners will provide guidance during the reef planning process (e.g. University of Texas - Brownsville, Texas Shrimp Association, Coastal Conservation Association, regional fishing groups, and city and county agencies. This project will require a Federal Section 404 Permit, a Texas General Land Office surface lease and an archaeological survey. Currently, TPWD is working with the U.S. Army Corps of Engineers to obtain a Section 404 permit. If the permit is not in place by the necessary deadline, TPWD will utilize the Port Isabel Reef Site as an alternate project location.

Special Award Conditions:

1. This project must be completed as described in this work plan.
2. The GLO and/or NOAA must approve any changes to the scope of work and budget requests that increase or decrease the total project cost.
3. In the event the GLO and NOAA determine the project or property is no longer used for its original purpose, the subrecipient shall reimburse NOAA for the federal funds received for the project.
4. CMP and NOAA logos and the appropriate acknowledgment statement must be printed on education/outreach materials, signs, final reports and/or publications, etc.
5. The subrecipient must coordinate with the GLO prior to issuing press releases,

conducting media events, or otherwise engaging in media related communications for this project.

6. Federal funds cannot be expended until the subrecipient provides the construction methodology for the reef structures, the final NHPA analysis document from the Texas Historical Commission, and any additional information requested to satisfy requirements for NEPA and environmental consultation, and receives approval from NOAA.

Statement of Work and Schedule:

Task 1. Design, Permitting and Bidding of Mid and Low-Relief Material - to be completed by 1 March 2017.

- TPWD will solicit contracting services through a Request for Proposal (RFP) in accordance with state and local standards and award a contract to the selected contractor who meets the designated specifications for material as given by TPWD in the RFP.
- The deployment plan charts, material specifications, and bid package must be reviewed and approved by the GLO prior to the RFP being submitted to TPWD contracting.
- The contractor will develop technical specifications for the pyramid reefing materials and a complete set of construction drawings to be submitted with their RFP bid.
- TPWD will award the RFP to a construction contractor following bid tabulation based on technical material drawings submitted with the RFP bid and the ability to manage the deployment.
- The construction contractor will be responsible for the procurement of mid and low-relief reef materials, construction and deployment.

Delays in the RFP process caused TPWD to request an extension through an amendment. Task 1 was therefore extended to end 31 August 2017.

Task 2. Construction and Deployment - to be completed by 31 March 2018

- The selected construction contractor will deploy pyramids and low-relief materials to the reef site.
- Mid-relief pyramids will consist of limestone and concrete. Low-relief materials will consist of oyster shell and rock.
- All reef material will be strategically located across the center of the 1,650 acre reef site. Over 3,000 tons of oyster shell/rock will be strategically placed in the northwestern corner of the 1,650 acre reef site. Approximately 250 mid-relief pyramids will be constructed.

- TPWD will install temporary CMP signage on the construction contractor's boat during material deployment and post CMP funding acknowledgement on the TPWD's Artificial Reef Program's website.

The initial delays in the RFP process caused TPWD to request an extension through an amendment. This amendment set the deadline for Task 2 as 30 September 2018. A second amendment dated 16 October 2018 set the deadlines for Task 2 as 31 December 2018.

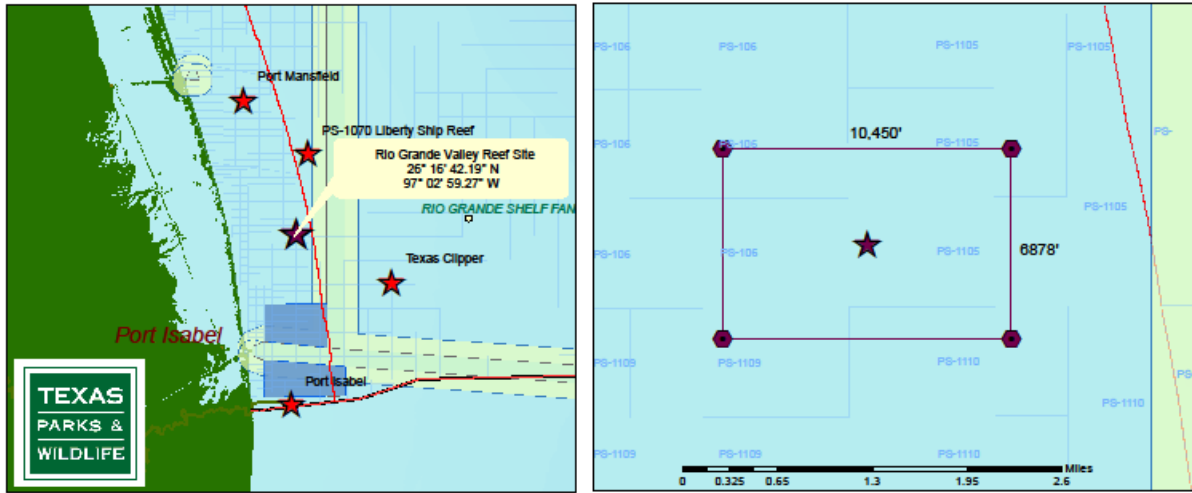
A final amendment dated 11 January 2019, set the project reporting and close-out dates at 31 March 2019.

Deliverables:

1. Permits and required approvals
2. Construction bid package, including material specifications and deployment plan drawings
3. Advertise RFP and bid tabulations
4. Before and after survey of project site
5. Before, during, and after photos of construction and deployment
6. Photos of temporary CMP signage and acknowledgement of funding on TPWD website
7. Monthly progress reports and requests for reimbursement
8. Final report
9. Project closeout form

Exhibit B. Rio Grande Valley Nearshore Reef Site (PS-1105).

Rio Grande Valley Nearshore Reef Site (PS-1105) - 1650 Acres



Coordinates for the Proposed Rio Grande Valley Nearshore Reef Site

	NAD83 Latitude	NAD83 Longitude	TX SP South X	TX SP South Y
Center	26° 16' 42.19" N	97° 02' 59.27" W	1459446.10	16629255.03
NW	26° 17' 17.06" N	97° 03' 55.97" W	1454245.68	16632716.58
NE	26° 17' 15.33" N	97° 02' 01.32" W	1464682.12	16632662.48
SE	26° 16' 07.31" N	97° 02' 02.58" W	1464646.45	16625793.45
SW	26° 16' 09.03" N	97° 03' 57.22" W	1454210.14	16625847.55

Geographic Coordinates (Degrees Minutes Seconds) and State Plane Texas South FIPS_4205 (feet) in NAD83

Water Depth: 64 ft

Estimated Substrate: Sand and Silty-Sand

Nearest Point to Point Distances

- Distance Offshore: 7.4 nm
- Safety Fairways: 3.4 nm
- Anchorage: 7.7 nm
- Oil and Gas Pipelines or Easement: 8.4 nm
- State and Federal Boundary: 1.7 nm
- Obstruction or Platforms: 11.3 nm

Distance from Port Isabel Jetties: 13.9 nm

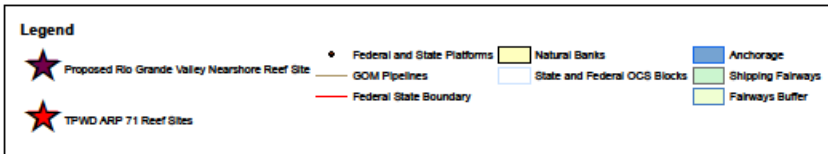


Exhibit C. Texas Historic Commission approval of draft archeology survey of the Rio Grande Valley Nearshore Reef Site (PS-1105). Final approval was given after submission of Antiquities Curation Form submitted.

TEXAS HISTORICAL COMMISSION
real places telling real stories

September 28, 2015

Robert Geachart
Surveying and Mapping, LLC
4801 Southwest Parkway
Building Two, Suite 200
Amarillo, TX 79135

Re: Project review under Section 105 of the National Historic Preservation Act of 1966 and the Antiquities Code of Texas

Dr. Robert Geachart, Marine Archeology and Bathymetry Survey of Proposed Rio Grande Valley Nearshore Reef, Cameron County, Texas.
Antiquities Permit No. 7359, THC Tracking No. 201600169

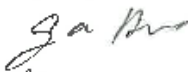
Dear Mr. Geachart:

This letter serves as comment on the proposed federal undertaking from the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission. As the state agency responsible for administering the Antiquities Code of Texas, these comments also provide recommendations on compliance with state antiquities laws and regulations.

The review staff, led by State Marine Archeologist Amy A. Borgens has completed its review. Thank you for submitting a well-prepared, well-illustrated, and detailed draft report. In July and August 2015, Survey and Mapping, LLC (SAM) conducted a marine archaeological remote-sensing survey for a proposed Texas Parks and Wildlife Department artificial reef project that includes portions of State Tracts 106, 1105, 1109, and 1110. As part of the remote-sensing investigation, SAM discovered one magnetic target (Anomaly 1) that has the potential to be associated with a historic shipwreck site. This site was recommended for avoidance by the investigator. The Texas Historical Commission concurs with these findings and the project can proceed as planned under the condition Anomaly 1 is avoided by work activities by a distance of 150 m (492 ft.) from the perimeter of the target. We look forward to the final report.

Thank you for your cooperation in this federal and state review process, and for your efforts to preserve the irreplaceable heritage of Texas. If you have any questions concerning our review or if we can be of further assistance, please contact Amy Borgens at 512-463-9505 or amy.borgens@tbc.state.tx.us.

Sincerely,



for
Mark Wolfe
State Historic Preservation Officer

MW/ab

cc: Dale Shively, TPWD



Exhibit D. Texas Historic Commission and TPWD Artifact Curation Form the Rio Grande Valley Nearshore Reef Site (PS-1105).

TEXAS HISTORICAL COMMISSION

ARTIFACT CURATION FORM

GENERAL INFORMATION

Please Print

Antiquities Permit No. 7359

Principal Investigator Robert Geathart

Agency/Institution/Company Surveying and Mapping, LLC (SAM)

Project Name Marine Archaeology and Bathymetry Survey of Proposed Rio Grande Valley Nearshore Reef
Cameron County, Texas

Location of Project Area Rio Grande Valley Nearshore Reef, Cameron County

Approximate Project Dates July 27 - August 4, 2015

CERTIFICATION OF CURATION

The undersigned verifies that artifacts and documents associated with investigations performed under Antiquities Permit or under federal regulations were delivered to this repository in satisfactory condition and have been accepted for permanent curation.

Signature of Authorized Representative *Aina Dodge*

Please Print

Name of Authorized Representative Aina Dodge

Title Archeology Laboratory Director

Name of Curatorial Facility Texas Parks & Wildlife Department Archeology Laboratory

Date March 24, 2017

Texas Historical Commission
Archeology Division
P.O. Box 12276
Austin, TX 78711 2276
512.463.6096



Exhibit E. USACOE reef site permit for 1650 acre Rio Grande Valley Nearshore Reef (PS-1005).

DEPARTMENT OF THE ARMY PERMIT

Permittee Texas Parks and Wildlife Department

Permit No. SWG-2015-00746

Issuing Office Galveston District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: The proposed artificial reef will consist of pre-fabricated reef structures, obsolete oil and gas production structures, obsolete or surplus vessels, and other approved artificial reef materials. The approved materials will be placed within the confines of a designated 1,650-acre and clustered around a center point. The project will be conducted in accordance with the attached plans, in 3 sheets.

Project Location: The project will be located in the Gulf of Mexico, approximately 14 nautical miles northeast of the Port Isabel Jetties, within Outer Continental Shelf (OCS) Blocks 1105, 1106, 1109, and 1110, Cameron County, Texas.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on 31 December 2021. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
2. When structures or work authorized by this permit are determined by the District Engineer to have become abandoned, obstructive to navigation or cease to be used for the purpose for which they were permitted, such structures or other work must be removed, the area cleared of all obstructions, and written notice given to the Corps of Engineers, Galveston District, Regulatory Division, Corpus Christi Field Office (Corps), within 30 days of completion.
3. The permittee must install and maintain, at the permittee's expense, any safety lights, signs and signals required by the U.S. Coast Guard, through regulations or otherwise, on the permittee's fixed structures. To receive a U.S. Coast Guard Private Aids to Navigation marking determination, no later than 30 days prior to installation of any fixed structures in navigable waters and/or prior to installation of any floating private aids to navigation, you are required to contact the Eighth Coast Guard District (dpw), 500 Poydras St. Suite 1230, New Orleans, LA 70130, (504) 671-2328 or via email to: D8oanPATON@uscg.mil. For general information related to Private Aids to Navigation please visit the Eighth Coast Guard District web site at: <http://www.uscg.mil/d8/waterways/PATON.Home.asp>.
4. The permittee shall establish a 150-meter buffer beyond the positive and negative 5-nT (nanotesla) contours (eastings 694584, northing 2907768, UTM 14N WGS84). No project activities shall occur within this buffered area.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
 - Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
 - Section 404 of the Clean Water Act (33 U.S.C. 1344).
 - Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).
2. Limits of this authorization.
 - a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
 - b. This permit does not grant any property rights or exclusive privileges.
 - c. This permit does not authorize any injury to the property or rights of others.
 - d. This permit does not authorize interference with any existing or proposed Federal project.
3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
 - a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
 - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
 - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
 - d. Design or construction deficiencies associated with the permitted work.
 - e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

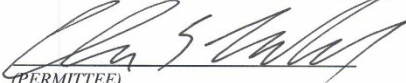
5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

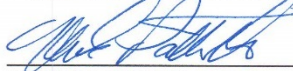
6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.


(PERMITEE)
CHRISTOPHER LEDFORD
TEXAS PARKS AND WILDLIFE DEPARTMENT

7/13/16
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.


(DISTRICT ENGINEER)
→ MATTHEW KIMMEL, SUPERVISOR
CORPUS CHRISTI REGULATORY FIELD OFFICE
FOR COLONEL RICHARD P. PANNELL

18 July 2016
(DATE)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

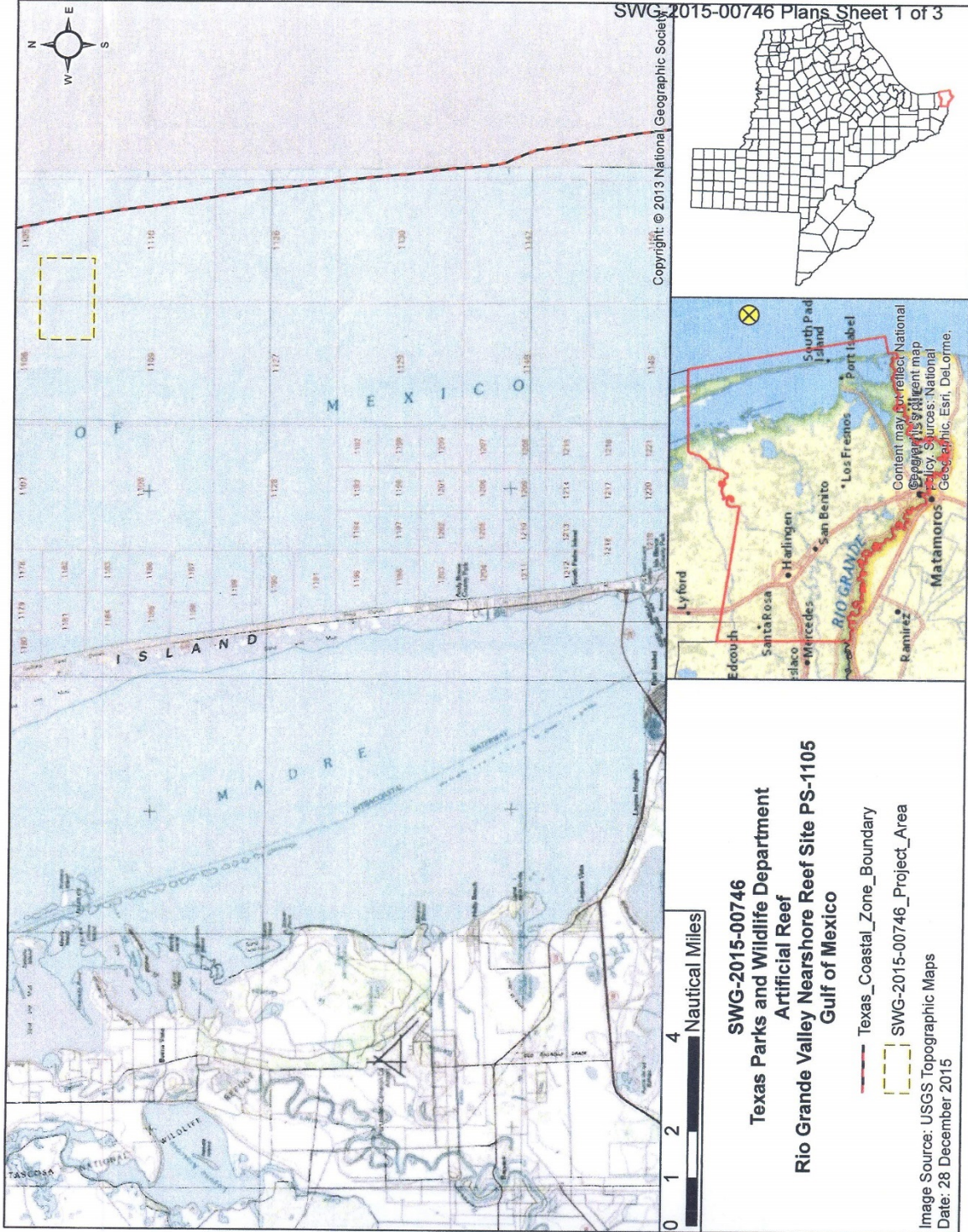
(TRANSFEREE - Typed/Printed Name)

(DATE)

(TRANSFEREE - Signature)

(Mailing Address)

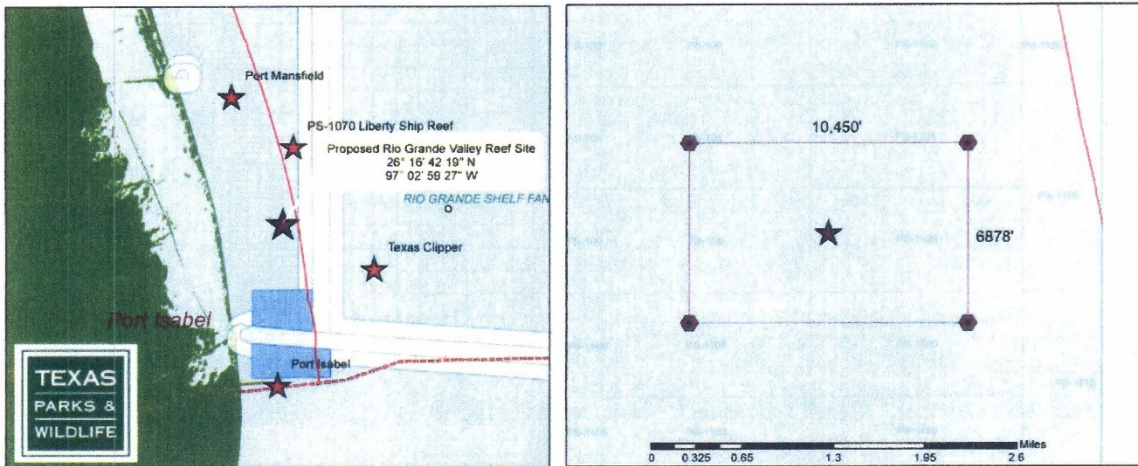
PERMITTED PLANS



OCT 28 2015

PERMITTED PLANS

Proposed Rio Grande Valley Nearshore Reef Site (PS-1105) - 1650 Acres



Coordinates for the Proposed Rio Grande Valley Nearshore Reef Site

	NAD83 Latitude	NAD83 Longitude	TX SP South X	TX SP South Y
Center	26° 16' 42.19" N	97° 02' 59.27" W	1459446.10	16629255.03
NW	26° 17' 17.06" N	97° 03' 55.97" W	1454245.68	16632716.58
NE	26° 17' 15.33" N	97° 02' 01.32" W	1464682.12	16632662.48
SE	26° 16' 07.31" N	97° 02' 02.58" W	1464646.45	16625793.45
SW	26° 16' 09.03" N	97° 03' 57.22" W	1454210.14	16625847.55

Geographic Coordinates (Degrees Minutes Seconds) and State Plane Texas South FIPS_4205 (feet) in NAD83

Water Depth: 64 ft MLLW
Estimated Substrate: Sand and Silty-Sand

Legend

- Proposed Rio Grande Valley Nearshore Reef Site
- TPWD ARP 71 Reef Sites
- Federal and State Platforms
- GOM Pipelines
- Federal State Boundary
- Natural Banks
- State and Federal OCS Blocks
- Anchorage
- Shipping Fairways
- Fairways Buffer

Nearest Point to Point Distances

- Distance Offshore: 7.4 nm
- Safety Fairways: 3.4 nm
- Anchorage: 7.7 nm
- Oil and Gas Pipelines or Easement: 8.4 nm
- State and Federal Boundary: 1.7 nm
- Obstruction or Platforms: 11.3 nm
- Distance from Port Isabel Jetties: 13.9 nm

PERMITTED PLANS

SWG-2015-00746 Plans Sheet 3 of 3

Rio Grande Valley Nearshore Reef Site (PS-1105)

OCT 28 2015

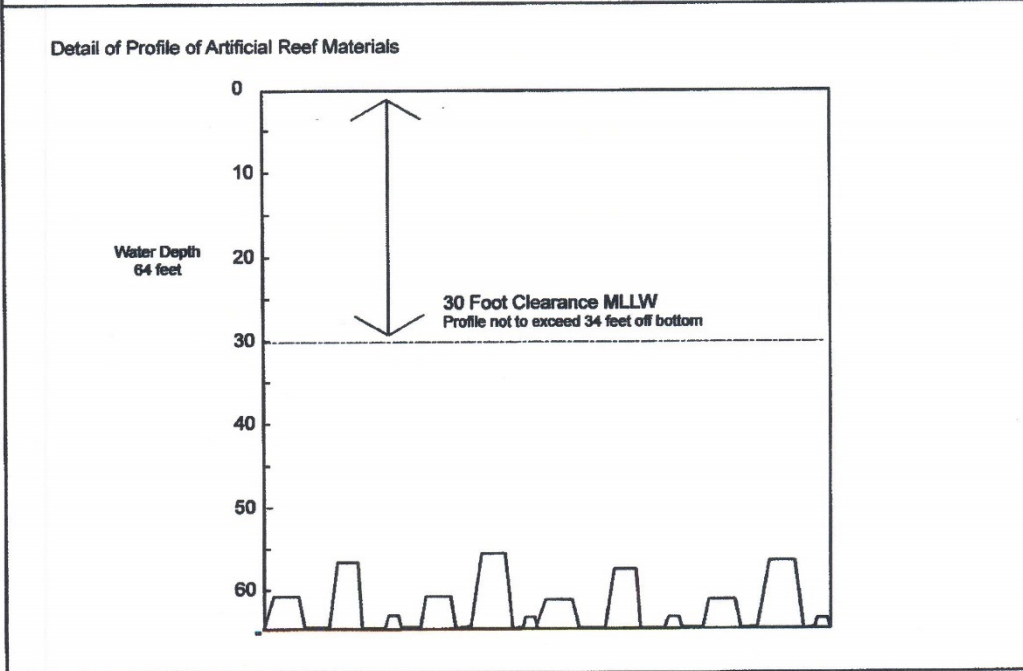
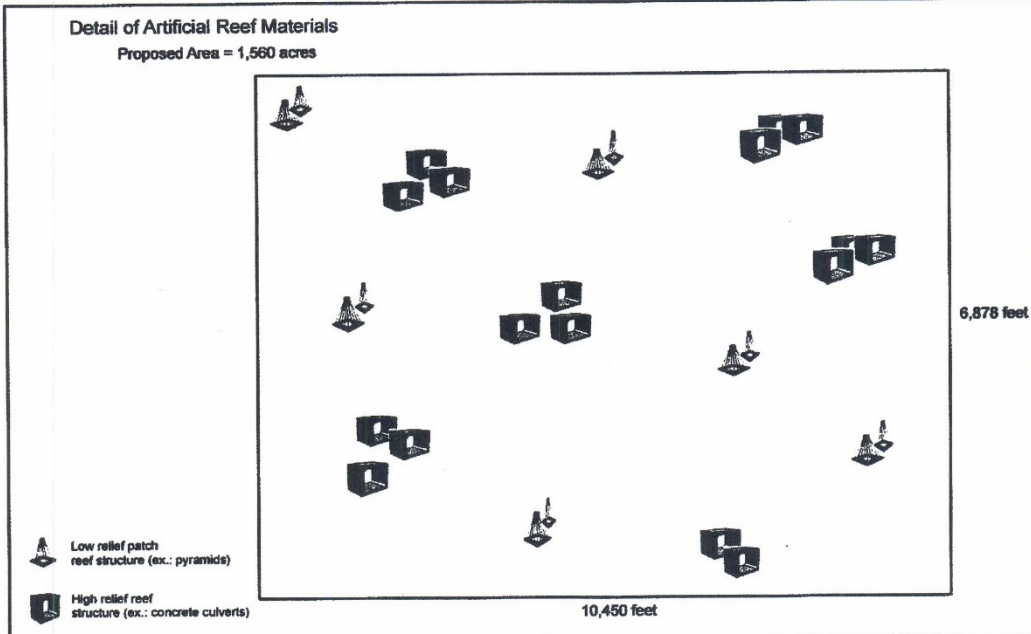


Exhibit F. Texas GLO reef site surface lease for 1650 acre Rio Grande Valley Nearshore Reef (PS-1105).

ocuSign Envelope ID: E2911A14-D823-4C53-8EE7-6A85F2E1C2E6



TEXAS GENERAL LAND OFFICE
COASTAL SURFACE LEASE NO. SL20160013

STATE OF TEXAS
COUNTY OF CAMERON

§
§
§

KNOW ALL MEN BY THESE PRESENTS:

This Coastal Surface Lease SL20160013, ("Lease"), is granted by virtue of the authority granted in Section 51.121, et seq., TEX. NAT. RES. CODE ANN., 31 TEX. ADMIN. CODE, Chapter 13, Land Resources, et seq., and all other applicable statutes and rules, as the same may be amended from time to time, and is subject to all applicable regulations promulgated from time to time.

ARTICLE I. PARTIES

1.01. In consideration of the mutual covenants and agreements set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the STATE OF TEXAS, acting by and through the Commissioner of the General Land Office, on behalf of the Permanent School Fund of the State of Texas (the "State"), hereby grants to Texas Parks and Wildlife Department, whose address is 1502 FM 517 East, Dickinson, TX, 77539 ("Lessee"), the right to use the surface estate of certain Permanent School Fund land (the "Leased Premises") for the purposes identified in Article V below.

ARTICLE II. PREMISES

2.01. The Leased Premises is described below and further described or depicted on Exhibits A, B, C, and D, attached hereto and collectively incorporated by reference for all purposes:

- 1,650 Acres out of State Tracts 1105-L, 1106-L, 1109-L, and 1110-L, Gulf of Mexico, Cameron County

2.02. LESSEE HAS INSPECTED THE PHYSICAL AND TOPOGRAPHIC CONDITION OF THE LEASED PREMISES AND ACCEPTS SAME "AS IS" IN ITS EXISTING PHYSICAL AND TOPOGRAPHIC CONDITION. LESSEE IS NOT RELYING ON ANY REPRESENTATION OR WARRANTY OF THE STATE REGARDING ANY ASPECT OF THE PREMISES, BUT IS RELYING ON LESSEE'S OWN INSPECTION OF THE PREMISES. THE STATE DISCLAIMS ANY AND ALL WARRANTIES OF HABITABILITY, MERCHANTABILITY, SUITABILITY, FITNESS FOR ANY PURPOSE, AND ANY OTHER WARRANTY WHATSOEVER NOT EXPRESSLY SET FORTH IN THIS LEASE. THE STATE AND LESSEE HEREBY AGREE AND ACKNOWLEDGE THAT THE USE OF THE TERMS "GRANT" AND/OR "CONVEY" IN NO WAY IMPLIES THAT THIS LEASE OR THE LEASED PREMISES ARE FREE OF LIENS, ENCUMBRANCES AND/OR PRIOR RIGHTS. LESSEE IS HEREBY PUT ON NOTICE THAT ANY PRIOR GRANT AND/OR ENCUMBRANCES MAY BE OF RECORD AND LESSEE IS ADVISED TO EXAMINE ALL RECORDS OF THE STATE AND COUNTY IN WHICH THE LEASED PREMISES ARE LOCATED. THE PROVISIONS OF THIS SECTION SHALL SURVIVE THE EXPIRATION OR EARLIER TERMINATION OF THIS LEASE.

ARTICLE III. TERM

3.01. This Coastal Surface Lease No. SL20160013 is for a term of twenty (20) years, commencing on March 1, 2016 and terminating on February 29, 2036, unless earlier terminated as provided herein. The State reserves the right to review, amend, cancel or otherwise modify this agreement at any time during its term upon 30-day written notice to Lessee as prescribed in 3.01. Renewal of this agreement is at the sole discretion of the State, and no right to renew is implied or provided for herein.

SL20160013
srodriq

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CustomerID:C000017894
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ARTICLE IV. CONSIDERATION

4.01. In consideration of the mutual covenants and conditions set forth herein and the public benefits to be derived therefrom, Lessor and Lessee acknowledge that no rental fees shall be assessed for the described use of the Leased Premises while Lessee is not in default of the terms agreed upon herein.

ARTICLE V. USE OF THE PREMISES

5.01. The Leased Premises may be used by Lessee solely for a **1,650 ACRES ARTIFICIAL REEF** and for no other purpose. Lessee is specifically prohibited from modifying the premises in any manner not authorized herein, and from using, or allowing the use by others, of the Leased Premises for any other purpose.

5.02. Lessee shall not use, or permit the use of, the Leased Premises for any illegal purpose. Lessee will comply with, and will cause its officers, employees, agents and invitee to comply with, all applicable federal, State and local laws, ordinances and rules concerning the use of the Leased Premises.

5.03. The State reserves the exclusive right to grant easements, rights-of way and/or other grants of interest authorizing use of the Leased Premises, provided such use does not unreasonably interfere with Lessee's use thereof.

5.04. Lessee shall not grant other rights in or to the Leased Premises to any other person or entity, and any attempt to do so shall be void and of no effect and shall constitute a default by Lessee hereunder.

5.05. State reserves the right to enter upon the Leased Premises at any time with or without prior notice to Lessee to inspect the condition thereof and/or take action authorized by this Lease.

5.06. The Leased Premises are subject to prospecting, production and development of oil, gas and other minerals and other materials of commercial value by the State, its lessees, permittee, licensees or other agents, assigns or representatives. Lessee shall not interfere with such use of the Leased Premises and shall allow any lessee, permit holder, licensee or other agent, assignee or representative of the State and/or the School Land Board the right of ingress and egress over, across and through, and the use of, the Leased Premises for any and all purposes authorized by State.

5.07. Lessee may not charge State's authorized lessees, permit holders, licensees or other agents, assigns or representatives surface damages, or any other fee, for use of the Leased Premises; provided, however, the foregoing shall not limit the liability of any person or entity to Lessee for damages caused to property owned by Lessee.

5.08. Lessee's use of the Premises is subject to and contingent upon compliance with the following covenants, obligations and conditions (the "Special Conditions")

1. Lessee acknowledges that the tract containing the Leased Premises and adjacent state-owned tracts may be leased for mineral and/or wind energy development and that cooperation and possible accommodations may be required to facilitate research, exploration, and development authorized by Lessor under other leases. Lessee will coordinate with such other lessees to plan their respective activities in a manner that will minimize impacts on natural resources and interference on each other. Lessee, as the state agency with primary responsibility for protecting the state's fish and wildlife, may provide recommendations that will protect fish and wildlife resources, as authorized by Parks and Wildlife Code 12.0011 (b)(2) to the US Army Corps of Engineers or other such regulatory agencies that may be processing an application for a permit for the development of minerals or wind energy on the referenced tracts.
2. Lessee shall not place any material that has not been pre-approved by the General Land Office ("GLO") on the Leased Premises without the prior approval of Lessor. Pre-approved materials are reefing materials that meet national and state guidelines for durable, stable, and complex reef materials and are agreed to in advance by Texas Parks and Wildlife Department ("TPWD") and GLO. The initial agreed List of Approved Reefing Materials is attached hereto as Exhibit D and made a part of this agreement by this reference. Materials can be added to the list of pre-approved materials by mutual written agreement between TPWD and

GLO. No less than thirty (30) days prior to placement of any habitat-building structure materials on the Leased Premises, Lessee shall provide Lessor with advance notification of the proposed materials to be placed if they are not listed as pre-approved materials. Lessor will review the proposal to determine whether there will be any unacceptable impacts to mineral or wind energy research, exploration, or development and within thirty (30) days provide written comments or approval or denial of the proposed placement. Lessor will not approve the placement of material containing human remains.

3. The GLO excepts and reserves the right to the full use of the property covered hereby and all rights with respect to the surface and subsurface thereof for any and all purposes, except those granted herein to Lessee, together with a reservation of the rights of ingress and egress and use of said lands by the GLO and its mineral and renewable energy lessees for purposes of exploring for and producing the minerals and renewable energy.

ARTICLE VI. ASSIGNMENTS

6.01. Lessee shall not assign the Premises or the rights granted herein, in whole or part, to any third party for any purpose without the prior written consent of the State, which may be granted or denied in the State's sole discretion. Any unauthorized assignment shall be void and of no effect and such assignment shall not relieve Lessee of any liability for any obligation, covenant, or condition of this Agreement. This provision, and the prohibition against assignment contained herein, shall survive expiration or earlier termination of this agreement. For purposes of this agreement, an assignment is any transfer, including by operation of law, to another of all or part of the property, interest or rights herein granted.

ARTICLE VII. PROTECTION OF NATURAL AND HISTORICAL RESOURCES

7.01. Lessee shall take no action on the premises which results in the discharge of any solid or liquid material. Lessee shall use the highest degree of care and all appropriate safeguards to: (i) prevent pollution of air, ground, and water in and around the Premises, and (ii) to protect and preserve natural resources and wildlife habitat. Lessee shall comply with all applicable rules and regulations of the General Land Office and other governmental agencies responsible for the protection and preservation of public lands and waters. In the event of pollution or an incident that may result in pollution of the Premises or adjacent property which is the result of Lessee's (or Lessee's employees, contractors, invitees and agents) acts or omissions, Lessee shall immediately notify the State, use all means reasonably available to recapture any pollutants which have escaped or may escape, and mitigate for any and all natural resources damages caused thereby.

7.02. LESSEE IS EXPRESSLY PLACED ON NOTICE OF THE NATIONAL HISTORICAL PRESERVATION ACT OF 1966, (PB-89-66, 80 STATUTE 915; §470) AND THE ANTIQUITIES CODE OF TEXAS, CHAPTER 191, TEX. NAT. RES. CODE ANN. IN THE EVENT THAT ANY SITE, OBJECT, LOCATION, ARTIFACT OR OTHER FEATURE OF ARCHEOLOGICAL, SCIENTIFIC, EDUCATIONAL, CULTURAL OR HISTORIC INTEREST IS ENCOUNTERED DURING ANY ACTIVITY ON THE PREMISES, LESSEE WILL IMMEDIATELY CEASE SUCH ACTIVITIES AND WILL IMMEDIATELY NOTIFY STATE AND THE TEXAS HISTORICAL COMMISSION, P.O. BOX 12276, AUSTIN, TEXAS 78711, SO THAT ADEQUATE MEASURES MAY BE UNDERTAKEN TO PROTECT OR RECOVER SUCH DISCOVERIES OR FINDINGS, AS APPROPRIATE.

ARTICLE VIII. INDEMNITY

8.01. TO THE EXTENT ALLOWED BY THE LAW AND THE CONSTITUTION OF THE STATE OF TEXAS, LESSEE SHALL BE FULLY LIABLE AND RESPONSIBLE FOR ANY DAMAGE, OF ANY NATURE, ARISING OR RESULTING FROM ITS OWN ACTS OR OMISSIONS RELATED TO ITS EXERCISE OF THE RIGHTS GRANTED HEREIN. LESSEE AGREES TO AND SHALL INDEMNIFY AND HOLD THE STATE, THE STATE'S OFFICERS, AGENTS, AND EMPLOYEES, HARMLESS FROM AND AGAINST CLAIMS, SUIT, COSTS, LIABILITY OR DAMAGES OF ANY KIND, INCLUDING STRICT LIABILITY CLAIMS, WITHOUT LIMIT AND WITHOUT REGARD TO CAUSE OF THE DAMAGES OR THE NEGLIGENCE OF ANY PARTY, EXCEPT FOR THE CONSEQUENCES OF THE

NEGLIGENT ACTS OR WILLFUL MISCONDUCT OF THE STATE, THE STATE'S OFFICERS, AGENTS, EMPLOYEES, OR INVITEES, ARISING DIRECTLY OR INDIRECTLY FROM LESSEE'S USE OF THE PREMISES (OR ANY ADJACENT OR CONTIGUOUS PSF LAND) OR FROM ANY BREACH BY LESSEE OF THE TERMS, COVENANTS OR CONDITIONS CONTAINED HEREIN. THE PROVISIONS OF THIS SECTION SHALL SURVIVE EXPIRATION OR EARLIER TERMINATION OF THIS AGREEMENT.

ARTICLE IX. DEFAULT, TERMINATION AND EXPIRATION

9.01. If, following 30 days prior written notice from the State specifying a default or breach, Lessee fails to pay any money due hereunder or is in breach of any term or condition of this Agreement, the State shall have the right, at its option and its sole discretion, to terminate this Agreement and all rights inuring to Lessee herein by sending written notice of such termination to Lessee in accordance with ARTICLE XI of this Agreement. Upon sending of such written notice, this Agreement shall automatically terminate and all rights granted herein to Lessee shall revert to the State. Such termination shall not prejudice the rights of the State to collect any money due or to seek recovery on any claim arising hereunder.

9.02. If Lessee fails to remove its personal property from the Leased Premises within the time specified in Section 9.01 above, or if Lessee fails to remove improvements placed or constructed on the Leased Premises by or behalf of Lessee pursuant to a notice by the State to do so pursuant to Section 9.01. above, then State may, at its sole option, remove and dispose of such property (with no obligation to sell or otherwise maintain such property in accordance with the Uniform Commercial Code), at Lessee's sole cost and expense, or the State may elect to own such property by filing a notice of such election pursuant to Section 51.302, et seq., TEXAS NATURAL RESOURCES CODE ANNOTATED. If the State elects to remove Lessee's property and dispose of it pursuant to this section, then in such an event Lessee shall be obligated to reimburse the State for the reasonable costs of such removal and disposal within ten (10) days of State's demand for reimbursement. **THE TERMS OF THIS SECTION SHALL SURVIVE EXPIRATION OR EARLIER TERMINATION OF THIS LEASE.**

9.03. In addition to the above, Lessee shall pay and discharge any and all taxes, general and special assessments, and other charges which during the term of this Agreement may be levied on or assessed against the Premises or the Improvements constructed thereon, provided such taxes result from Lessee's use of this easement. Lessee shall pay such taxes, charges, and assessments not less than five (5) days prior to the date of delinquency thereof directly to the authority or official charged with the collection thereof. Lessee shall have the right in good faith at its sole cost and expense to contest any such taxes, charges, and assessments, and shall be obligated to pay the contested amount only if and when finally determined to be owed.

9.04. **TO THE EXTENT ALLOWED BY THE LAW AND THE CONSTITUTION OF THE STATE OF TEXAS, LESSEE AGREES TO AND SHALL PROTECT AND HOLD THE STATE HARMLESS FROM LIABILITY FOR ANY AND ALL SUCH TAXES, CHARGES, AND ASSESSMENTS, TOGETHER WITH ANY PENALTIES AND INTEREST THEREON, AND FROM ANY SALE OR OTHER PROCEEDING TO ENFORCE PAYMENT THEREOF.**

ARTICLE X. HOLDOVER

10.01. If Lessee holds over and continues in possession of the Premises after expiration or earlier termination of this Agreement, Lessee will be deemed to be occupying the Premises on the basis of a month-to-month tenancy subject to all of the terms and conditions of this Agreement, except that as liquidated damages by reason of such holding over, the amounts payable by Lessee under this Agreement shall be increased such that the Consideration payable under Section 4.01 of this Agreement and any other sums payable hereunder shall be two hundred percent (200%) of the amount payable to the State by Lessee for the applicable period immediately preceding the first day of the holdover period. Lessee acknowledges that in the event it holds over, the State's actual damages will be difficult, if not impossible, to ascertain, and the liquidated damages herein agreed to be paid are reasonable in amount and are payable in lieu of actual damages and are not a penalty. Lessee further acknowledges that acceptance of hold over Consideration does not imply State consent to hold over.

91-02-9

10.02. The tenancy from month-to-month described in Section 10.01 of this Agreement may be terminated by either party upon thirty (30) days written notice to the other.

10.03. The Consideration due after notice of termination has been given is to be calculated according to Section 10.01 hereinabove on a pro rata basis. If upon notice of termination by the State, Lessee pays Consideration in excess of the amount due and payable and the State accepts such payment, the acceptance of such payment will not operate as a waiver by the State of the notice of termination unless such waiver is in writing and signed by the State. Any such excess amounts paid by Lessee and accepted by the State shall be promptly refunded by the State after deducting therefrom any amounts owed to the State.

ARTICLE XI. NOTICE

11.01. Any notice which may or shall be given under the terms of this Agreement shall be in writing and shall be either delivered by hand, by facsimile, or sent by United States first class mail, adequate postage prepaid, if for the State to the Director of the Permanent School Fund Income Division, addressed to 1700 North Congress Avenue, Austin, Texas 78701-1495, FAX: (512) 463-5304, and if for Lessee, to Texas Parks and Wildlife Department, 1502 FM 517 East, Dickinson, TX 77539. Any party's address may be changed from time to time by such party by giving notice as provided above, except that the Premises may not be used by Lessee as the sole notice address. No change of address of either party shall be binding on the other party until notice of such change of address is given as herein provided.

11.02. For purposes of the calculation of various time periods referred to in this Agreement, notice delivered by hand shall be deemed received when delivered to the place for giving notice to a party referred to above. Notice mailed in the manner provided above shall be deemed completed upon the earlier to occur of (i) actual receipt as indicated on the signed return receipt, or (ii) three (3) days after posting as herein provided.

ARTICLE XII. INFORMATIONAL REQUIREMENTS

12.01. A. Lessee shall provide written notice to the State of any change in Lessee's name, address, corporate structure, legal status or any other information relevant to this Agreement.

B. Lessee shall provide to the State any other information reasonably requested by the State in writing within fifteen (15) days following such request or such other time period approved by the State (such approval not to be unreasonable withheld).

ARTICLE XIII. MISCELLANEOUS PROVISIONS

13.01. With respect to terminology in this Agreement, each number (singular or plural) shall include all numbers, and each gender (male, female or neuter) shall include all genders. If any provision of this Agreement shall ever be held to be invalid or unenforceable, such invalidity or unenforceability shall not affect any other provisions of the Agreement, but such other provisions shall continue in full force and effect.

13.02. The titles of the Articles in this Agreement shall have no effect and shall neither limit nor amplify the provisions of the Agreement itself. This Agreement shall be binding upon and shall accrue to the benefit of the State, its successors and assigns, Lessee, Lessee's successors and assigns (or heirs, executors, administrators and assigns, as the case may be); however, this clause does not constitute a consent by the State to any assignment by Lessee, but instead refers only to those instances in which an assignment is hereafter made in strict compliance with Article VI above, or in the case of a deceased natural person Lessee, refers to the instances previously referred to in this sentence and also circumstances in which title to Lessee's interest under this Agreement passes, after the demise of Lessee, pursuant to Lessee's will or the laws of intestate succession. The words "hereof," "herein," "hereunder," "hereinafter" and the like refer to this entire instrument, not just to the specific article, section or paragraph in which such words appear.

13.03. Neither acceptance of Consideration (or any portion thereof) or any other sums payable by Lessee hereunder (or any portion thereof) to the State nor failure by the State to complain of any action, non-action or default of Lessee

shall constitute a waiver as to any breach of any covenant or condition of Lessee contained herein nor a waiver of any of the State's rights hereunder. Waiver by the State of any right for any default of Lessee shall not constitute a waiver of any right for either a prior or subsequent default of the same obligation or for any prior or subsequent default of any other obligation. No right or remedy of the State hereunder or covenant, duty or obligation of Lessee hereunder shall be deemed waived by the State unless such waiver be in writing, signed by a duly authorized representative of the State.

13.04. No provision of this Agreement shall be construed in such a way as to constitute the State and Lessee joint ventures or co-partners or to make Lessee the agent of the State or make the State liable for the debts of Lessee.

13.05. In all instances where Lessee is required hereunder to pay any sum or do any act at a particular indicated time or within an indicated period, it is understood that time is of the essence.

13.06. Under no circumstances whatsoever shall the State ever be liable hereunder for consequential damages or special damages. The terms of this Agreement shall only be binding on the State during the period of its ownership of the Premises, and in the event of the transfer of such ownership interest, the State shall thereupon be released and discharged from all covenants and obligations thereafter accruing, but such covenants and obligations shall be binding during the Agreement term upon each new owner for the duration of such owner's ownership.

13.07. All monetary obligations of the State and Lessee (including, without limitation, any monetary obligation for damages for any breach of the respective covenants, duties or obligations of either party hereunder) are performable exclusively in Austin, Travis County, Texas.

13.08. The obligation of Lessee to pay all Consideration and other sums hereunder provided to be paid by Lessee and the obligation of Lessee to perform Lessee's other covenants and duties under this Agreement constitute independent, unconditional obligations to be performed at all times provided for hereunder, save and except only when an abatement thereof or reduction therein is expressly provided for in this Agreement and not otherwise. Lessee waives and relinquishes all rights which Lessee might have to claim any nature of lien against, or withhold or deduct from or offset against, any Consideration or other sums provided hereunder to be paid to the State by Lessee. Lessee waives and relinquishes any right to assert, either as a claim or as a defense, that the State is bound to perform or is liable for the nonperformance of any implied covenant or implied duty of the Grantor not expressly set forth in this Agreement.

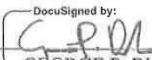
13.09. In the event any provision of this Lease is more restrictive than any administrative rule promulgated by the General Land Office and/or the School Land Board, this Lease shall control.

ARTICLE XIV. ENTIRE AGREEMENT

14.01. This Lease, including any exhibits to the same, constitutes the entire agreement between the State and Lessee; no prior written or prior oral contemporaneous oral promises or representations shall be binding. The submission of this Lease for examination by Lessee or the State and/or execution thereof by the Lessee or the State does not constitute a reservation of or option for the Leased Premises and this Lease shall become effective only upon execution of all parties hereto and deliver of a fully executed counterpart thereof by the State to the Lessee. This Lease shall not be amended, changed or extended except by written instrument signed by both parties thereto.





IN TESTIMONY WHEREOF, witness my hand and the Seal of Office.

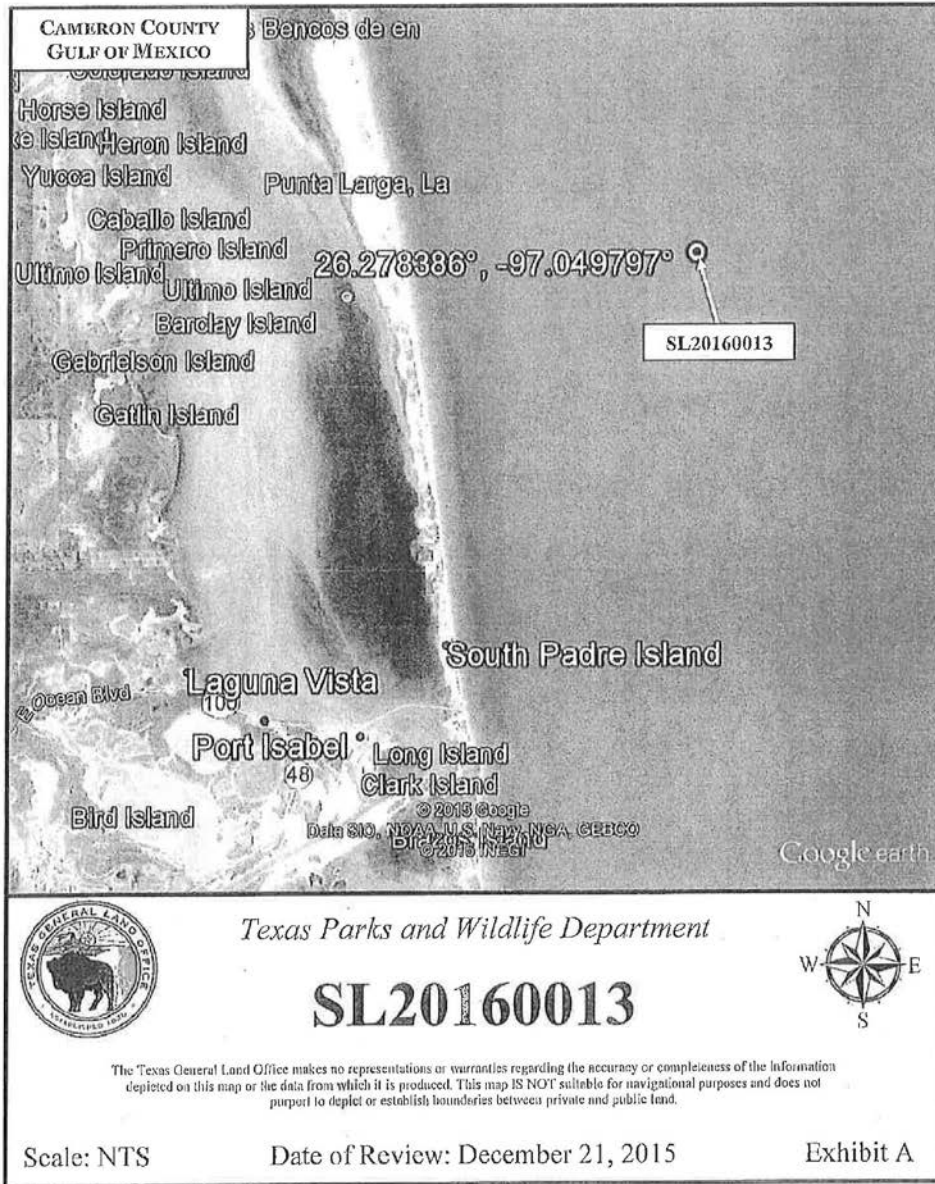
LESSOR:
THE STATE OF TEXAS

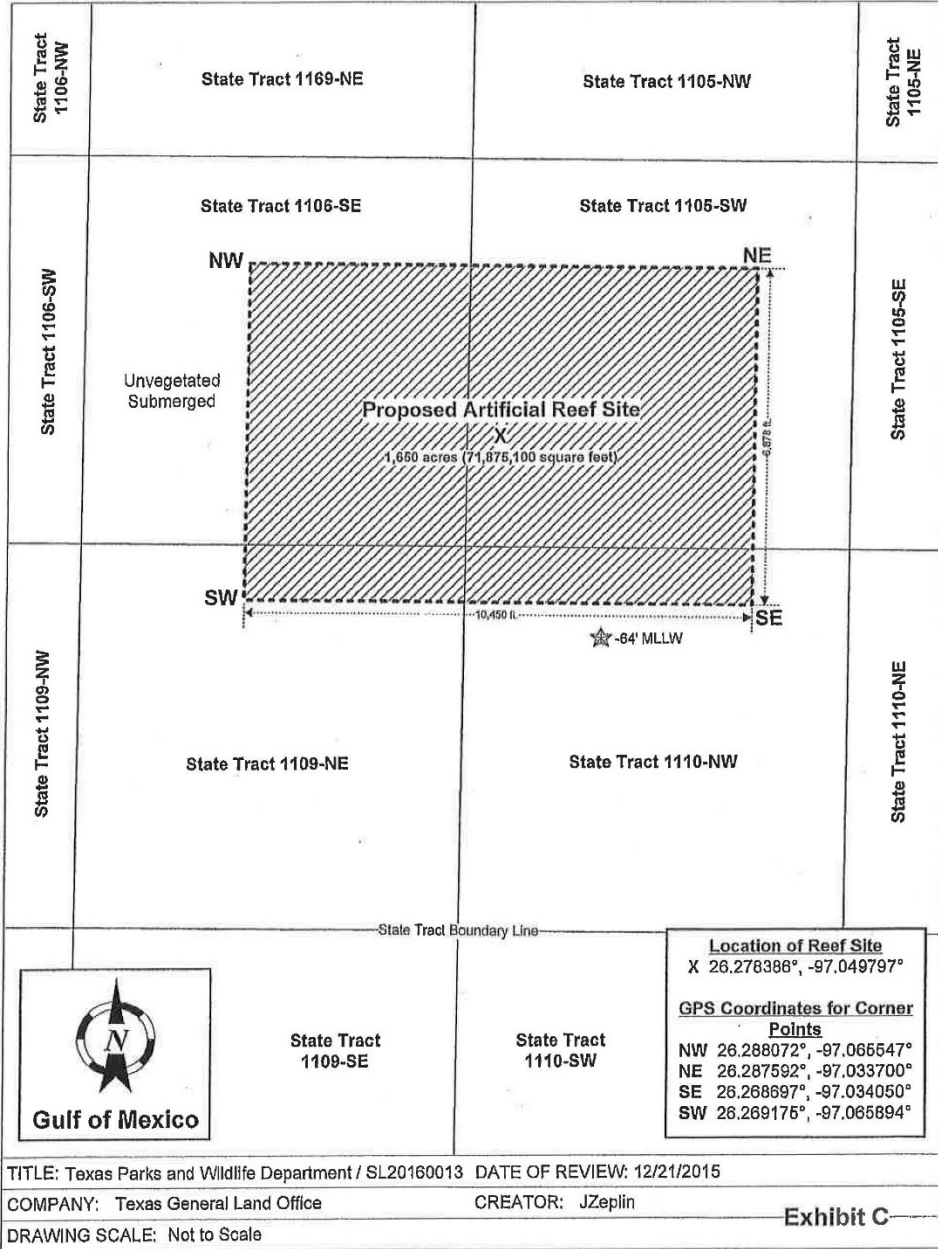
By: 
DocuSigned by:
GEORGE P. BUSH
Commissioner, General Land Office

Date: 6/30/2016

APPROVED:

Contents: 
Legal: 
Director: 
Executive: 





97-02-5

Exhibit D

**List of Materials for Use in
Construction of Artificial Reefs in Texas State Waters of the Gulf of
Mexico**

**Pre-Approved by
Texas General Land Office and Texas Parks and Wildlife Department**

June 2009

The following materials are suitable for use in creating or enhancing Artificial Reefs in Texas state waters of the Gulf of Mexico. This list is based on *Guidelines For Marine Artificial Reef Materials*, 2nd Edition, Gulf States Marine Fisheries Commission, Number 121, January 2004.

The strategy in using these materials involves their complexity for marine habitat, stability, and durability. All materials must meet the clearance requirements. Materials are modified and placed in a reef site so that this requirement is not exceeded. Specific clearance requirements and distance from shipping lanes, safety fairways, and anchorages is established by the US Army Corps of Engineers and US Coast Guard as set in each individual reef site permit.

Pre-approved materials include:

I. FRABRICATED MATERIAL

- Designed structures composed of concrete and/or steel (with exception of Eternal Reefs)
- Concrete rubble of various sizes but with a combined minimum weight of 500 lbs
- Concrete culverts
- Concrete bridge spans, bents, columns
- Steel pipe and steel structures of various sizes

II. NATURAL ROCK

- Quarry block (typically over 1 ton in size)

III. OIL AND GAS STRUCTURES

- Petroleum platform legs (jackets)

IV. VESSELS

- Steel-hulled vessels (environmentally cleaned to standards as set in National *Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs*, US Environmental Protection Agency and US Maritime Commission, May 2006)

Exhibit G. USCG approval on PATON marker buoy for Rio Grande Valley Nearshore Reef (PS-1105).

DEPARTMENT OF HOMELAND SECURITY
U.S. Coast Guard
PRIVATE AIDS TO NAVIGATION APPLICATION
WATERWAYS MGMT (dpm)
OMB Approval: 1625-0011
Expiration Date: 12/31/2017

(See attached instructions and copy of Code of Federal Regulations, Title 33, Chap. 1, Part 66)

RECEIVED
AUG 26 2016
16042

1. ACTION REQUESTED FOR PRIVATE AIDS TO NAVIGATION: A. ESTABLISH AND MAINTAIN B. DISCONTINUE C. CHANGE D. TRANSFER OWNERSHIP

2. DATE ACTION TO START: 08/29/2016 TO

3. AIDS WILL BE OPERATED: A. YEAR-ROUND B. TEMPORARILY UNTIL

4. NECESSITY FOR AID (Continue in Block 8) Artificial Reef PS-1105

5. GENERAL LOCALITY

6. AUTHORIZING PERMIT FOR THIS STRUCTURE OR BUOY USAGE: PERMIT AND PERMIT (Valid Permit Number) SWG2015-746

FOR DISTRICT COMMANDERS ONLY

LIGHT LIST NUMBER	NAME OF AID	NO. OR LTR PERIOD (7a)	LIGHT		POSITION (7e)	DEPTH OF WATER (7f)	CANDELA (7g)	FOCAL PLANE HEIGHT (7h)	STRUCTURE		REMARKS (See instructions) (7i)
			FLASH PERIOD (7b)	FLASH LENGTH (7c)					COLOR (7d)	TYPE COLOR AND HEIGHT ABOVE GROUND (7j)	
1445	ER-DX-156 SPECIAL LIGHTED Buoy	2.5	.03	Yellow	26 16' 32.705" N 97 02' 19.938" W	64'		10'			10' yellow lighted spar buoy. 30' clearance maintained
APPROVED											

8. ADDITIONAL COMMENTS
1650 acre artificial reef site (10450 x 6878ft). Buoy marks reef containing decommissioned vessels and prefabricated material

9a. NAME AND ADDRESS OF PERSON IN DIRECT CHARGE
Chris Ledford

10a. NAME AND ADDRESS OF PERSON OR CORPORATION AT WHOSE EXPENSE THE AIDS WILL BE MAINTAINED
Texas Parks and Wildlife Dept
1502 F.M. 517 East
Dickinson, TX 77539

9b. TELEPHONE NO. (281) 534-0113

9c. EMAIL ADDRESS chris.ledford@tpwd.texas.gov

10b. THE APPLICANT AGREES TO SAVE THE COAST GUARD HARMLESS WITH RESPECT TO ANY CLAIM OR CLAIMS THAT MAY RESULT ARISING FROM THE ALLEGED NEGLIGENCE OF THE MAINTENANCE OR OPERATION OF THE APPROVED AIDS).

10c. DATE 08/25/2016

10d. SIGNATURE AND TITLE OF OFFICIAL SIGNING
Artificial Reef Specialist

FOR USE BY DISTRICT COMMANDER

SERIAL NO. CLASSIFICATION OF AIDS(S) CHART LNM DATE APPROVED SIGNATURE (By direction)

I ILM 39/16 9/22/16

CG-2554 (02/15)

JOE W. VAUTERS, CHIEF
PRIVATE AIDS TO NAVIGATION

TO RETAIN THIS APPROVAL YOUR CLASS _____ PRIVATE AIDS TO NAVIGATION MUST BE SELF INSPECTED AND MAINTAINED IN ACCORDANCE WITH 33 CFR PART 89. A REPORT SHALL BE MADE ANNUALLY TO THE EIGHTH COAST GUARD DISTRICT, WATERWAYS BRANCH, PRIVATE AIDS TO NAVIGATION SECTION VIA EMAIL. TO: DEOAMPATTON@USCG.MIL OR MAIL TO: EIGHTH COAST GUARD DISTRICT (DPW), 500 PONDRIAS STREET, NEW ORLEANS, LA 70130.

ANY CHANGES IN BLOCKS 1 THRU 10 SHALL IMMEDIATELY BE REPORTED TO THE EIGHTH COAST GUARD DISTRICT, WATERWAYS BRANCH, PRIVATE AIDS TO NAVIGATION SECTION VIA EMAIL TO: DEOAMPATTON@USCG.MIL OR MAIL TO: EIGHTH COAST GUARD DISTRICT (DPW), 500 PONDRIAS STREET, NEW ORLEANS, LA 70130.*

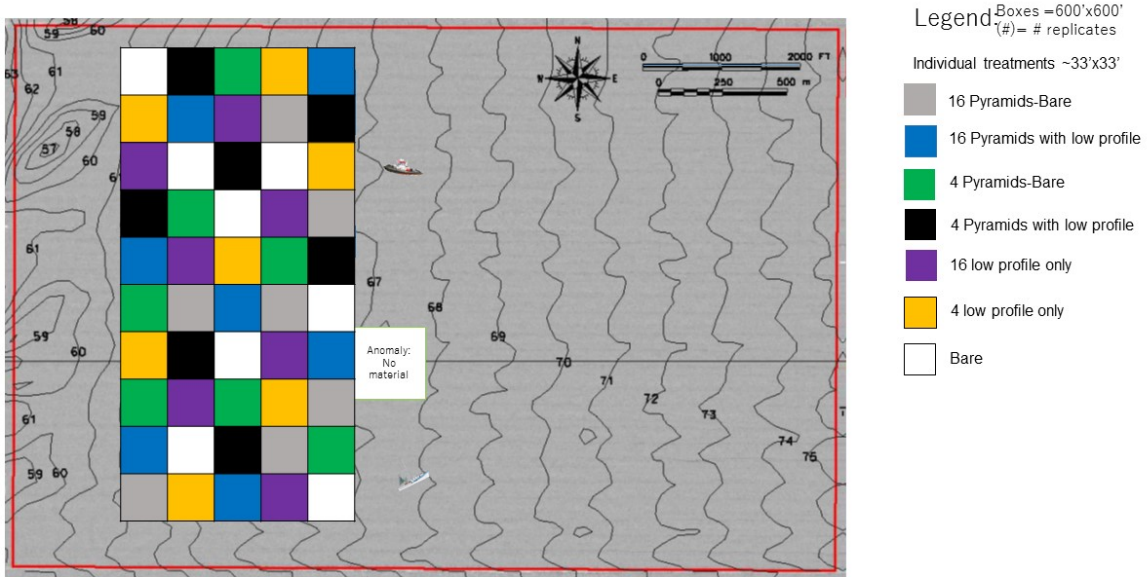
THE UNITED STATES SHALL IN NO CASE BE HELD LIABLE FOR ANY DAMAGE OR HARM TO THE STRUCTURE, EQUIPMENT OR PERSONNEL HEREIN ATTRIBUTED WHICH MAY BE CAUSED BY THE RESULT FROM A FUTURE OPERATIONAL ERROR OR BY THE IMPROVEMENT OF NAVIGATION, OR FOR OTHER PURPOSES AND NO CLAIM FOR LIABILITY TO COMPENSATION SHALL ACCRUE FROM ANY SUCH DAMAGE.

LIGHT EMITTING DIODE (LED) OBSTRUCTION LIGHTS SHALL HAVE A MINIMUM INTENSITY RATING OF 125 CANDELA RATING FOR A 5 NM LIGHT, 25 CANDELA RATING FOR A 3 NM LIGHT AND 1 CANDELA RATING FOR A 1 NM LIGHT. MANUFACTURERS ARE REQUIRED TO PROVIDE PROOF OF MINIMUM INTENSITY RATINGS TO THE U.S. COAST GUARD AND CUSTOMER UPON REQUEST.

Exhibit H. Special Award Condition (SAC) Funding Restriction 306A-1 for the CMP cycle 21 Rio Grande Valley Nearshore Site (PS-1105).

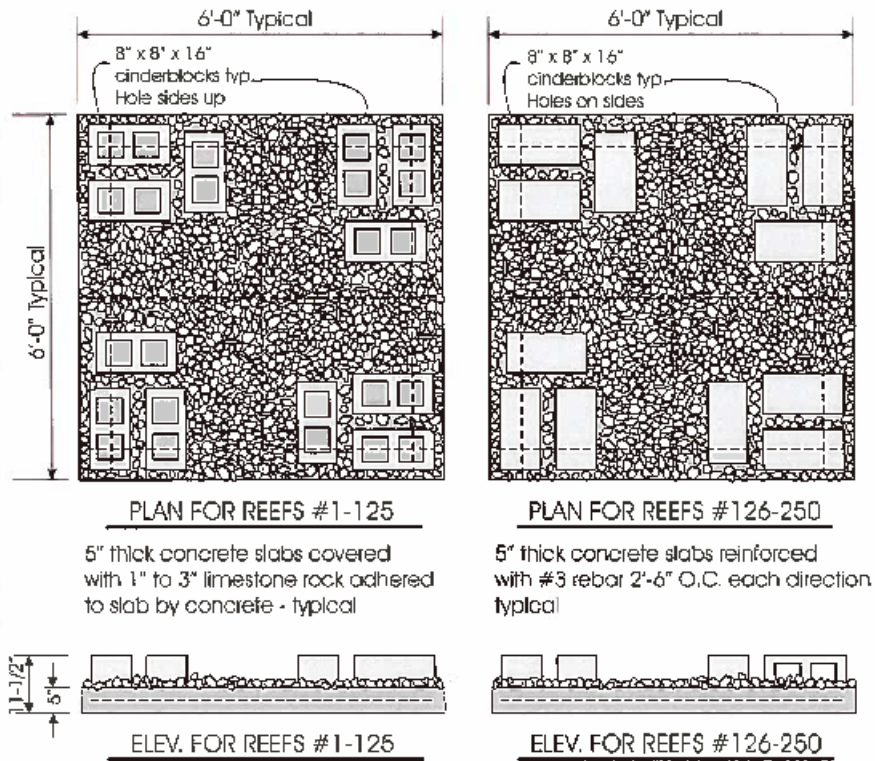
U. S. DEPARTMENT OF COMMERCE		Award Number	
Award Action Request		NA16NOS4190174	
Recipient Name GENERAL LAND OFFICE, TEXAS		Request Type Satisfy Specific Conditions Document ID: 2679462	
Street Address 1700 N CONGRESS		Award Period 10/01/2016 - 09/30/2019	
City, State, Zip Code AUSTIN TX 78701-1436 USA		Total Award Funding Federal: \$2,640,000.00 Non-Federal: \$2,125,000.00	
Program Office NOS Office for Coastal Management (OCM)		Program Officer Kristin Ransom 228-688-1966 Kristin.Ransom@noaa.gov	
CFDA Number and Project Title 11.419: Texas Coastal Management Program - Cycle 21			
Special Award Condition Funding Restriction for Task 306A-1 Task 306A-1: Construction and Enhancement of Artificial Reefs in the Western Gulf of Mexico was not sufficiently defined for NOS to perform an environmental compliance review by the time the final award file needed to be submitted to obligate funds. The Recipient is not authorized to expend federal funds in the amount of \$400,000 for 306A-1 until the recipient provides to NOAA the construction methodology, final NHPA analysis document from the Texas Historical Commission, and any additional information requested to satisfy requirements for NEPA and environmental consultation, and receives approval from NOAA. NOAA will review these tasks for compliance with NEPA and environmental compliance once the applicant has submitted the final documentation to determine if additional information is necessary and what level of NEPA documentation applies.			
Justification The GLO received the construction methodology, deployment plan charts and materials specifications for reef construction from Texas Parks and Wildlife Department. The GLO also received the final NHPA analysis document from the Texas Historical Commission and all required permits.			
Award Action Request Status Approved			
SUBMITTED BY Melissa Porter		DATE 07/12/2017	
APPROVED BY Evelyn F Nabbah		DATE 09/05/2017	

Exhibit I. University of Texas - Rio Grande Valley approved deployment plan for the mid relief pyramids and low relief reef plates at Rio Grande Valley Nearshore Reef Site (PS-1105).



Element Size ~6000' X 3000' (with 600' buffer north and south)

Exhibit J. Technical specifications for the low relief reef plates to be deployed at Rio Grande Nearshore Reef Site (PS-1105).



LOW RELIEF ARTIFICIAL REEF



03 JULY 2017

Exhibit K. Technical specifications for the mid relief pyramids to be deployed at Rio Grande Nearshore Reef Site (PS-1105).

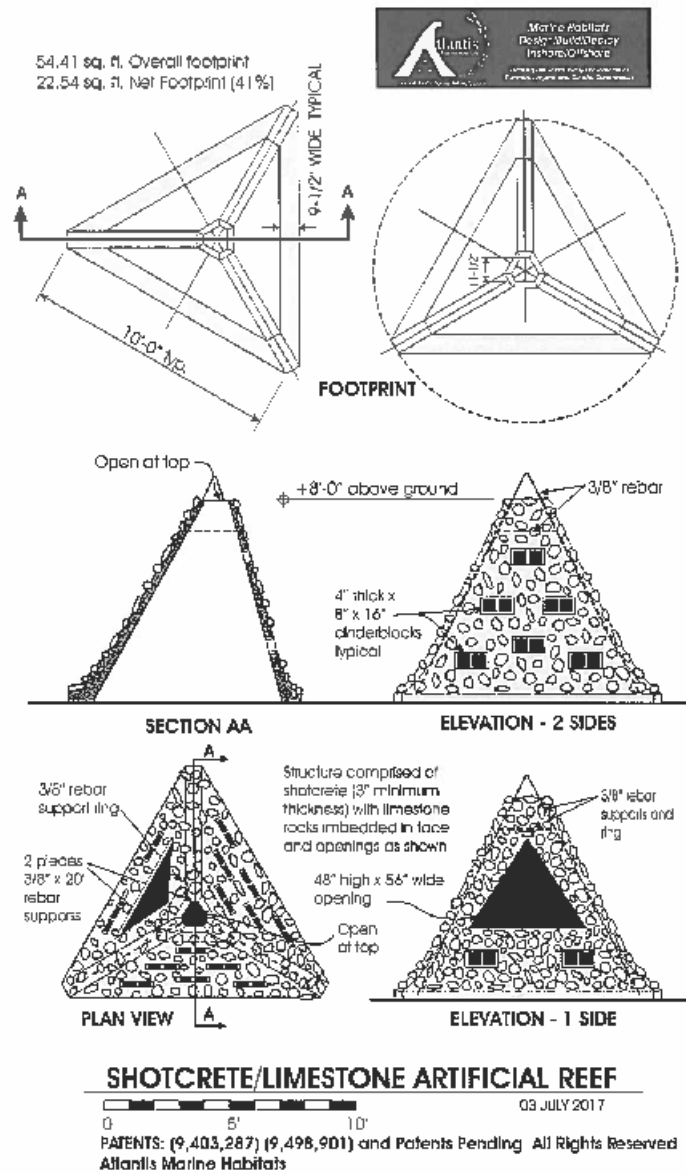


Exhibit L. Purchase Order contracting Callan Marine to construct and deploy reef structures at the Rio Grande Nearshore Reef Site (PS-1005).

PURCHASE ORDER

Date 09-AUG-17 Purchase Order No 500927 Page: 1

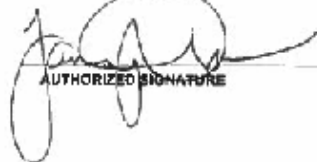
<p style="text-align: center;">AGENCY TO INVOICE</p> <p>Texas Parks & Wildlife Accounts Payable Department 4300 Smith School Rd. Austin, TX 78744 United States</p> <p>PHONE : (512) 389-4833</p>	<p style="text-align: center;">VENDOR</p> <p>CALLAN MARINE LTD PO BOX 17917 GALVESTON, TX 77552-7917 United States</p> <p>Payee ID No : <u>146255</u></p>
--	--

<p style="text-align: center;">DESTINATION OF GOODS IF DIFFERENT THAN ABOVE</p> <p>See Specifications for Shipping Addresses</p> <p>TX United States</p>	<p>FREIGHT TERMS: <u>Prepaid & Allowed</u></p> <p>PAYMENT TERMS: <u>NET 30</u></p> <p>FOB: <u>Destination</u></p> <p>DUE DATE: _____</p> <p>CONTRACT TERM FROM: <u>09-AUG-17</u> TO: <u>08-AUG-18</u></p>
---	---

SPECIAL INSTRUCTIONS :

ITEM	DESCRIPTION	QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENSION
1	<p>Manufacture and Deploy 250 Predesigned Artificial Reef Units at Rio Grande Valley Nearshore Reef (PS-1105)</p> <p>Service must be provided in accordance with the following documents, incorporated by reference: (a) this Notice of Award and/or Purchase Order; (b) Solicitation 802-17-39430; (c) Contractor Bid/Proposal. Contract Term: August 09, 2017 through August 08, 2018. Contract may be renewed for up to one (1) additional one (1) year period</p>	250.00	EACH	1,905.00	476,250.00
2	<p>Manufacture and Deploy 250 Predesigned Low Relief Reef Units at Rio Grande Valley Nearshore Reef (PS-1105).</p>	250.00	EACH	1,094.00	273,500.00
TOTAL :					749,750.00

STATE and CITY SALES TAX EXEMPTION CERTIFICATE: The undersigned claims an exemption from taxes under Chapter 20, Title 122A, Revised Civil Statutes of Texas, for purchase of tangible personal property described in this order, purchased from contractor and/or shipper listed above as this property is being acquired for the exclusive use of the State of Texas. This purchase is in compliance with agency and state contract management guide.


AUTHORIZED SIGNATURE

8/10/17
DATE

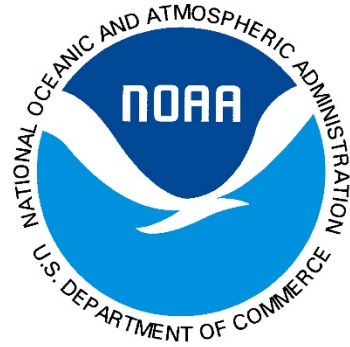
DUNHAM, TAMMY L.
PRINTED NAME

Director
TITLE

512385-4722
PHONE NUMBER

Exhibit M. Language drafted and uploaded to the TPWD Artificial Reef Program's website.

Exhibit N: Deployment banner drafted and displayed during the deployment of the reef structures at the Rio Grande Nearshore Reef Site (PS-1105).



CONSTRUCTION OF THIS MATERIAL WAS MADE POSSIBLE BY A GRANT UNDER THE COASTAL ZONE MANAGEMENT ACT OF 1972, AS AMENDED, AND AWARDED BY THE OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE, AND APPROVED BY THE TEXAS LAND COMMISSIONER AND THE TEXAS COASTAL MANAGEMENT PROGRAM.

THIS PROJECT IS FUNDED BY A TEXAS COASTAL MANAGEMENT PROGRAM GRANT APPROVED BY THE TEXAS LAND COMMISSIONER PURSUANT TO NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION AWARD NO. NA16NOS4190174 AND NA17NOS4190139.

Exhibit O. Side-scan survey showing final placement of reef structures within the UTRGV deployment area at the Rio Grande Valley Nearshore Reef Site (PS-1105).

