

# Artificial Reef Council

March 2015 Meeting

LDWF Headquarters, Baton Rouge, LA

## Attendees:

- Michael Coulon/LDWF/Outreach ([mcoulon@wlf.la.gov](mailto:mcoulon@wlf.la.gov))
- E. Gravouilla/Stone Energy ([gravouillaek@stoneenergy.com](mailto:gravouillaek@stoneenergy.com))
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- Doug Peter/BSEE ([douglas.peter@bsee.gov](mailto:douglas.peter@bsee.gov))
- David Cresson/CCA ([david@ccalouisiana.com](mailto:david@ccalouisiana.com))
- Clint Guidry/LSA ([Tclint@cox.net](mailto:Tclint@cox.net))

1. Mike McDonough introduces himself as the Artificial Reef Coordinator and introduces the first agenda item which is to approve the minutes from the last meeting. A motion is made to approve the minutes and passes unanimously.
2. M. McDonough gives a brief update of the offshore program. The Artificial Reef Program (ARP) is now up to 74 offshore artificial reef sites, Grand Isle SARS is now a nearshore reef site, as of the inshore nearshore plan. 48 of which are reefs within Planning Areas (2 are new since last year), 18 Special Artificial Reef Sites, and 8 deep water reefs. The Program has 351 platform jackets, 8 drill rig legs, 4 armored personnel carriers, 1 jack-up barge and 1 tugboat. We reefed 12 structures in 2014.

The Program's current projects include 2 permitted deepwater reefs and 3 permitted SARS sites. There are 65 proposed projects and 38 of those are permitted. There was a dip in the number of reefs completed in a given year but it seems that it will be rising again in the near future. Structures and their deployment methods were listed: towed structures were largely the removal method while toppled and partial removals were a smaller component. A NOI is being drafted for reefs in the public oyster seed grounds restricting them from oyster harvest. Nearshore reefs include Grand Isle 9, Rabbit Island

Reef, and the Pickets. Maps were available with nearshore planning areas displayed. Currently the Program has 8 deepwater reefs and 2 planning area reefs in 400+ feet of water, which have been partial removals. The tops were brought to other locations or removed entirely. Now there are two proposed deepwater structures; MC-148 and WC-645.

Background was given on the development of the deepwater amendment. July 3, 2003 was the first motion to create the amendment was made to have a minimum water depth of 400 feet to minimize the effects on trawling, clearance of 85 feet to avoid coast guard marking, and 2 miles from safety fairways. It was hoped to have a 300-foot clearance to maintain "optimal biological productivity". LARI recommended that the structure come within 300 feet of the surface but the meeting minutes were not detailed. It was not informed by scientific papers, etc. Artificial reef council minutes were found that the 300 foot depth was eventually changed to 200 feet. The amendment was adopted in 2003.

118 structures have been installed in 400 feet of water or greater. 18 have been removed, 12 were reefed in LA. 2 DW reefs in TX. LA is capturing 10 were reefed in place, two floating structures were reefed in planning areas.

Currently there are 99 standing platforms. 29 fixed structures are in 400-600 feet of water, 16 fixed structures are at 600-800 feet of water, 800-1000 4 structures, 4 fixed and one is a compliant tower. In greater than 1000 feet of water there are many floating structures.

This information is to assist with the information that will be given later on the Lena structure. The main question is that it will not meet the 200 foot minimum requirement.

3. Clint Rayes, with Exxon Mobil, the decommissioning manager began the Lena presentation. The recommendation of Exxon is to decommission the structure in place. TSB offshore assisted with the physical analysis and Dr Benfield assisted with the biological analysis. Lena is South of Venice not far from South Pass. Lena is a guyed tower, one of a kind. Buoyancy tanks are in the upper half with guy wires that radiate out. It was installed in 1983 and designed as a compliant tower in order to conserve steel. Water depth at Lena is 1000 feet. 27 feet out of the water, three levels of 20 foot diameter floats that are each about 120 feet long. 20 5 inch cables radiate out from the structure at a total of 3,000 feet. The cables are 1800 feet away from the structure that anchor with 200 ton anchor weights.

Physical assessment - Jerry with TSB spoke on the three scenarios for decommissioning; reef in place, tow and reef, or complete removal. Total weight of the structure is 57,000 tons. The guy wires are driven through the center of the structure. The guide wires are below the surface at 85 feet to avoid boat traffic. A risk assessment was completed for

four different concepts: vertical reefing in place (unfeasible because of instability when guide wires would be cut), horizontal reefing in place, offsite reefing, total removal. Personal safety, execution, and environmental and ecological risk categories were analyzed. Horizontal reef in place was the least risk involved option.

Biological assessment – David Palandro began speaking. 2 ROV surveys conducted in 2013, one was a seven day cruise and the other was an 8-day cruise. The first survey covered top-bottom Lena and the second survey covered the deepest depth stratum of Lena. Video played about biological assessment. Lena supports vibrant ecosystem to 1000 feet depth. ROV footage was taken at 5 depth zones: 0-95, 95-280, 280-520, 520-700, and 700-1000 feet. Biologists at the Marine and Coastal Sciences Center in Woods Hole, MA analyzed 73 hours of footage and still photographs to determine relative abundance, depth distribution, and zonation of life around and on the platform. Animals were IDed to lowest taxonomic level. Fish were counted and identified individually, but invertebrates were estimated as rare, few, common, or abundant. A total of 47 fish species were identified from video and twelve categories were made: amberjacks, almaco jacks and barracudas, groupers, jacks, snappers, porgy and creolefish, sharks, wrasses, reef and tropical fish, plankton-feeding fish, deepwater fish, lionfish and unidentified fish. Fish number and abundance was recorded for each ROV zone at every side of the platform. Highest fish abundance and species was observed at 0-280 feet. At 280-520 feet a transition occurred from a shallower, reef-like fish community to a deeper fish community consisting of fewer species of larger body size. Below 520 feet less species were documented than the higher zones. Amberjacks were only fish present at all depths. Lionfish were at 95-280 depth at north and east sides of the platform. Silky sharks were at 200 feet and 520 feet. Silky sharks are listed as near threatened by IUCN redlist. Inverts attached to the structure were mainly corals (black cup coral), several gorgonians and large hydrozoans were observed at 95 feet to 520 feet. Orange cup coral was observed on all sides of the platform to 250 feet and 400 feet. Lophelia coral was dominant past 700 feet. BOEM considers Lophelia as a sensitive deep-sea coral. This coral creates habitat for barrelfish and squat lobster and starfish. Several small animals that were too difficult to see as well as species that left due to the ROV presence were most likely present. Animals that most likely left were marine mammals, cryptic fish and groupers and migratory fish like tuna and wahoo. Small inverts like worms and crabs were seen although too small to be viewed by ROV. Data collected will help Exxon develop a viable decommissioning project.

An additional ROV survey was ran in September 2013 to observe the 800-1000 feet depth stratum with Dr. Mark Benfield's assistance. Near-field and far-field (2km away)

habitat was observed for fish community, fouling community, distribution of fish and inverts, and compare near and far field. Specifically, they were looking for the implications of reefing Lena horizontally in place. Dr Benfield spoke about the results. He said the survey was developed by Dr. Dave Palandro, Dr. Jennifer Dupont, and Dr Benfield. Relative abundance and composition of fishes in the deepest stratum had to be observed with ROV but they are loud and noisy. They tried to be quiet by clamping the ROV to the side of the platform and shut down the hydraulic pumps so it would be quiet. Red light is hard for fish to see so the ROV was equipped with white, red or no light. High res still camera had a brief pulse of light. In random sequence red light, white light or dark would be used to take pictures every 30 seconds for 10 minutes. Number of fishes per hour divided by number of fish per image was relative abundance measure. This was looking toward the structure. To capture fishes that were possibly hiding in the structure, buckets filled with menhaden were used at the base, 2, and 3 km away from the structures at similar bathymetry. In addition, twelve 100-m long transects moving from the base of the structure away, just above the water bottom. The ROV had lasers and would quantify animals as they came across them with the digital still and photo mosaics. Point-count analysis was used to ID these pictures. The lophelia provides a core-habitat for barrelfish, amberjacks and almaco jacks, snowy groupers, American congers, Darwin slimehead, and striated argentinians. American barrelfish dominate on all sides of the structure, American conger only on N side, SG on N and E side, GA on all sides and slimehead only on N side. No difference with no or red light. Fish avoid the white light. Snowy grouper and barrelfish were throughout the entire 820-1000 feet while the slimehead was at the bottom. Bait buckets pulled out some scorpion fish, reef fishes, misty groupers, and a tiger shark. Shark was 10.5 feet long. 350m is estimated range for tiger sharks so this is the proper depth where it is. Scalers were 14 3/4" apart. Many invertebrates were observed as well as echinoderms and sea anemones. Point-counts of the pictures showed highest abundance was anemones, hydrozoans, and then lophelia. Lophelia was very dense and healthy. It was growing on the structure as well as the rubble. The Lena sites and the far-field sites are very different in fishes and only had the presence of small scorpionid in common. Lena supports barrel fish, jacks, groupers, as well as a deep-water shark while the far field sites had only one moray, a deepwater shark, snake eels and small un-ID-ed fishes. So high abundance and diversity near Lena and low abundance and low diversity at the far-field site. In summary, Lena supports a diverse fouling community of corals, anemones, bryozoans, and inverts and fishes. Lophelia coral supports habitat for commercially and recreationally important species. Snowy groupers, which were present at Lena, are vulnerable to overfishing. They start as females and transition to males around 6 years of age. If they are harvested prior to the transition the numbers of males will be low. Egg fecundity increases with age so the

later they are harvested the better. Some snowy grouper were measured and there are large individuals present.

Ecological analysis of three potential reefing options – reefing in place would preserve the current habitat and become available habitat for lophelia and recreationally important species such as the groupers mentioned earlier. Reefing the structure at a planning area would expand recreational fishing for shallow water, but all lophelia would die and additional invasive cup coral could take over. Taking the structure to land would only benefit by removing invasive species such as orange cup coral and lionfish. Exxon believes there is a compelling biological and physical case to reef Lena in place.

Questions about the structure were asked by the commission and public but the volume was very low.

Clint Guidry, president of the Louisiana shrimp association asked what the original plan was for decommissioning Lena when it was built. Exxon commented that it is possible to remove the structure, there is just more risk associated than other options.

Daryl Carpenter with the Louisiana charter boat association commented that around Lena and the south pass 90s many of the target recreational species are caught there. He feels it is in a prime location and is a very productive and convenient fishing spot. Deep drops are becoming a more common fishing method. He said he wished he could see more vertical relief with Lena, but he supports reefing it horizontally in place. Exxon stated that by reefing Lena with the conductors on the high side it would bring the relief to 120 feet. They believe that the embedment of Lena into the seafloor will be about 20 feet.

Exxon predicts that the outer tip velocity of the structure will be about 10 feet/second. The low side of the structures habitat will not survive once reefed because it will be “squished” but the structure would move so slowly that Dr Benfield believes that the lophelia should survive.

Dr. Twilley mentioned that he was concerned that the sediment plume from the river may affect the area where Lena will be potentially be toppled. Dr Benfield said that he did not see evidence of sediment accumulating on the seafloor or around Lena. The low relief reef and lophelia was sediment free to the bottom of the platform and the visibility was also great.

David Cresson echoed what Daryl said, that it was a critical habitat and he would like to see it reefed in place.

Randy recapped and reiterated that there seemed to be no shrimp conflict and there was support from the recreational and charter representatives.

David Cresson asked Exxon if there could be additional information published about why structures cannot be reefed vertically or left standing. Exxon commented that they would try to get something developed and they may simplify their presentation and get it out to the public.

Dr. Twilley liked the contrast of the standing structure vs what it would look like when it was toppled.

Doug Peter said that LDWF and Exxon have been in consultation with BOEM and BSEE. He said BSEE sponsored a workshop prior to this council meeting to see what the options were. It was BSEE and BOEMs recommendation that they focus on the deepwater area, that it was no consequence what was going on in the upper water column. Therefore, it was requested by BSEE and BOEM that they go back and do a second ROV survey in the deeper water habitat. BSEE and BOEM is not committed to anything here, only provides guidance on the regulatory environment that Exxon Mobil has to go through.

Randy said the current amendment within the artificial reef program has a 200 foot minimum depth so if the council took action today that depth minimum would have to be waived.

Mike McDonough stated that if a deepwater structure came to the program and, upon being reefed, the structure came up to 200 feet, it would meet the requirements of the program and we would permit it and it would not come before the council. The 200 foot requirement is the one thing that the Lena proposal does not meet, so that is why we asked the council to approve or deny. He clarified that currently the program requires a water depth of 400 feet and a minimum clearance of 200 feet.

Randy suggested leaving the 200 foot minimum relief requirement to encourage deeper structures with higher relief in the future, and waive structures on a case-by-case basis.

Dr. D'elia moved that we go forward with the horizontal deepwater reefing as planned and waive the 200 foot minimum depth requirement. It was seconded by Dr. Twilley.

There were no objections or comments.

Mike stated that there were nearshore maps in the back of the room for viewing.

Randy stated that last council meeting there was an inshore nearshore plan that was approved. Mike said that inshore planning areas have been created and nearshore planning areas are in the process of being created. Randy said the inshore plan adopted 13 or 15 inshore planning areas (recently combined to total 11 inshore planning areas) that were expansions of existing artificial reefs. We passed a law a few years ago that would protect those reefs from oyster harvest so they continue to grow. At the next LDWF commission meeting in April we will have a NOI to bless all inshore planning areas to become permanent planning areas. For nearshore, we are trying to ID those planning areas. The maps in the back of the room have potential future nearshore planning areas mapped for comment. The central and western portions of the state are particularly interested in the nearshore reefs because those areas usually have to go many miles to get to deeper water.

Someone asked if the pickets reef is marked. Mike said it is completed and will be buoyed shortly.

Randy said the inshore planning areas will be marked as a need basis. So, if it is a high traffic area we may place a piling with reflectors while other areas may be buoyed but it will be handled on a case by case basis.

Dr. Twilley asked the status of the inshore nearshore plan. Randy and Mike said it is approved. Dr. Twilley asked if a restore council project comes up and they wanted to do reefing in inshore areas, what is the role of the council in the permitting of those situations. Mike said the inshore plan would guide that proposal to the department. If that project were to occur within those planning areas, your role is that the council has already blessed those planning areas. If they were outside of those planning areas we would get input from the various task forces and user groups to present to you and then you would approve or disapprove based on all of that.

The department is currently working on an inshore monitoring plan.

Clint Guidry asked if there was anything keeping us from working on projects such as reefing with CPRA and Randy said no.

Meeting adjourned