For Immediate Release

Palacios Marine Agricultural Research (PMAR) and BCarbon Announce Joint Program to Construct Living Shorelines Around Matagorda and San Antonio Bays

For more information, please contact:
Dr. Joe Fox (jfox@pmartexas.org),
Dr. Larry McKinney (lmckinney@pmartexas.org),
Jim Blackburn (jim.blackburn@bcarbon.org), and
Lalise Mason (lalise.mason@bcarbon.org)

HOUSTON - January 11, 2024. The Palacios Marine Agricultural Research (PMAR) organization from Corpus Christi, Texas, and BCarbon, a Houston-based carbon registry, today announced a joint program to secure commitments to construct almost 70 miles of living shoreline to protect about 23,500 acres of coastal wetlands in the Matagorda and San Antonio Bay systems.

This project is based upon an earlier study by BCarbon that identified 25 sites in the Point Comfort Area, Texas mid-coast, where sea level rise is likely to cause significant loss of wetland acreage due to increased erosion and drowning of vegetation. By constructing living shorelines, wetlands can be protected from erosion: barriers trap sediment within the marsh, helping it keep up with the sea level rise that is predicted to essentially destroy Texas's coastal wetlands. An example of a living shoreline is shown in Figure 1.

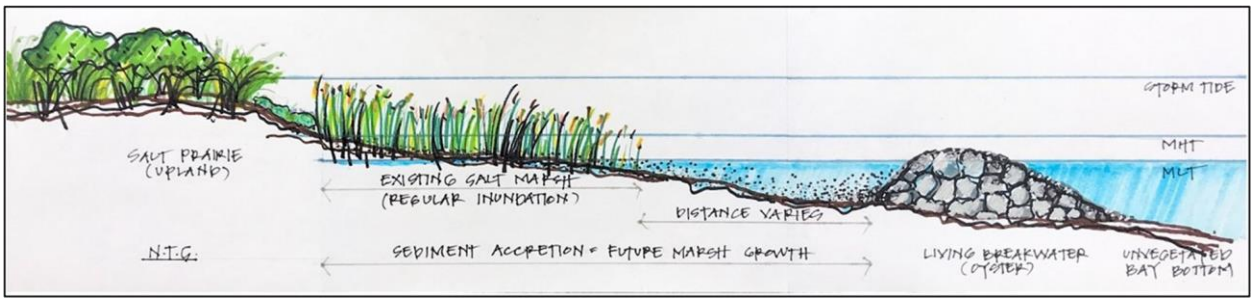

Figure 1. A living shoreline is constructed of rock or concrete about fifty to one hundred feet from the marsh edge, thereby offering protection from daily wave action that threatens the marsh with edge erosion, which can be significant once the wetland dies and the root structure loses its traction. Image by Lalise Mason for BCarbon.

The basic concept of this Protocol, developed by a stakeholder subcommittee at BCarbon, is that the cost to construct these shorelines can be recaptured, fully or partially, by claiming and selling carbon protection and removal credits to companies seeking to reduce their carbon footprint. These credits are based on the well-known ability of marshes to capture carbon dioxide from the air and store it in the soil. Carbon stored in the wetland soil is released by wetland destruction and erosion; however, it can be protected by the living shoreline, allowing the marsh to continue to function and permitting carbon credits to be issued.

A defining aspect of this project is that an effort will be made to find buyers for the carbon credits before projects are initiated, thereby bringing in the buyer as a partner in project development. It is also important to note that marsh protection benefits the Texas fishery, which relies on coastal marshes as nurseries for juvenile white and brown shrimp, crabs, flounder, and numerous smaller finfish. For companies choosing to participate, this will be a win-win from both a carbon and fishery standpoint.

PMAR will play a key role in providing oyster spat for these living shorelines, which are hoped to turn into oyster reefs over time. The success of oyster spat seeding will be boosted by technologies developed by PMAR to seed pieces of the living shoreline before deployment, aiding in spat "set" and success.

According to Dr. Joe Fox, Executive Director of PMAR, "PMAR is committed to the need to protect these important wetlands coastwide, but we felt it imperative to get started in our own backyard. The BCarbon study identified 25 potential sites and we will likely discover more. Each one has a cost for development and resulting cost of the carbon credits. We are committed to working with both landowners and large coastal industries in making this project into one for the Matagorda and San Antonio Bay communities and invite our local industry to jump in and roll up their sleeves and help us."

Dr. Larry McKinney, a board member of PMAR and former head of the Harte Research Institute in Corpus Christi, is focused on the importance of wetland protection. "The Texas coast has well over a million acres of highly vulnerable coastal wetlands that are essential to the fishery of Texas and hold millions of tons of carbon in their soils. It is imperative that we try to protect these wetlands from sea level rise, and there is no other program besides this living shoreline project concept that offers any hope for these important nursery and carbon storage areas. We see it as our duty as coastal citizens to do all we can to protect these wetlands."

Jim Blackburn, CEO of BCarbon, concurs, stating, "BCarbon was created to make a difference in the Texas coast, and we believe that we can make a difference. Each of us can participate in addressing climate change and in ecological protection, and the nature-based carbon credit market holds the key to realizing these possibilities. With the help of PMAR, we will move forward to implement an important first step in this process."

Lalise Mason, the principal coastal landscape designer working with BCarbon, offers, "We at BCarbon have developed an extensive data base of wetland areas, erosion potential, soil carbon content, sea level rise modeling and other key factors and have identified 25+ mid-coast project sites that should yield significant wetland protection at a reasonable cost. Of key importance to me, as a longtime Texas birder and Emeritus board member of the International Crane Foundation, is the potential to protect Whooping crane wintering habitat. This includes traditional wetland territories that have been used for decades, handed down from generation to generation of cranes, and also coastal wetlands that are being newly exploited by the gradually expanding Texas flock. No one entity seems to be focused on this wetland loss as a key

issue to the future of the Texas coast, and our team is on it. We and intend to address it and make a difference."

About PMAR: *PMAR is an agricultural non-profit 501(c)(3) organization. PMAR is dedicated to restoring ecosystem health, habitat, and productivity along the Texas coast, with a major focus on oyster productivity, recruitment, and reef restoration.*

About BCarbon: *BCarbon is 501(c)(3) non-profit organization dedicated to research and implementation of nature-based and other carbon credits and ecological conservation on the Texas coast, throughout Texas and the United States and the world.*

###