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Re: Houston Audubon Society comments on **DRAFT FEASIBILITY REPORT & DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE COASTAL TEXAS PROTECTION AND RESTORATION STUDY (FALL 2020) [Coastal Texas Study 2020]**

Houston Audubon Society (HAS) is a 501-C3 organization which has comments and concerns about the **DRAFT FEASIBILITY REPORT & DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE COASTAL TEXAS PROTECTION AND RESTORATION STUDY (FALL 2020) [Coastal Texas Study 2020]** both from the standpoint of how it may affect the environment and how it may affect the bird sanctuaries owned and protected by HAS. Since its formation in 1969 HAS, like other Southeast Texas residents, has experienced the devastating effects of many hurricanes and other severe storms. Future storms could be even more catastrophic. While we believe that actions can be taken to reduce risks and protect our coastal communities, we strongly urge that it be done in a way that works with nature and doesn't sacrifice the natural infrastructure that helps make us more resilient and that we have collectively worked for decades to conserve for future generations. We strongly encourage prioritization of nature-based solutions such as the dune system and additional buffering habitat over the hard structures. Research indicates that natural infrastructure such as dunes and wetlands that form the first line of defense against damaging storms should be a primary, not a secondary element in coastal protection.

The massive expense and possible adverse consequences of the proposed project, some of which are not fully addressed in this Draft Feasibility Report, require better evaluation of possible environmental degradation and of the best ways to enhance natural buffers to storms. The construction of hard infrastructure along the coastline as currently described will not only destroy habitat that is known to bolster the economic and ecological value of the region but also alter the natural movement and flow of sediment and currents in a way that could erode the protection these natural systems provide. The potential harm to Galveston Bay due to salinity changes,

Executive Director Houston Audubon Society comments on **DRAFT FEASIBILITY REPORT & DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE COASTAL TEXAS PROTECTION AND RESTORATION STUDY**
Helen E. Drummond

increased water velocity and flow, and sediment buildup on Bolivar Roads and elsewhere is a serious concern. Loss and alteration of globally important habitat for birds and other wildlife on beaches, wetlands, and riparian areas are minimally addressed in the report. While we see improvements from the previous draft, there are many items of grave concern to our organization.

Specific comments about our concerns are as follows:

1. Houston Audubon opposes the Bolivar Gates system as proposed.

Gate System Comments

The gate system presents many concerns including the restriction of tidal flow, the additional restrictions and cost associated with the long construction process and maintenance after construction and aesthetic degradation of our coast. We also have concerns that this gate system is only intended to alleviate a storm surge from a very specific type of storm. We believe that this gate system will offer no protection for storms like Alicia, Rita or Harvey where no storm surge was present, just enormous amounts of rain.

Construction of the gate system will take many years and since coffer dams will be needed to build many of the gates the channel flow will be restricted, this can have a negative impact on the productivity of the bay. There should be studies on how this reduced flow will impact shrimp, crabs and fish. If there happened to be a storm during construction, the restricted water flow due to the coffer dams could cause increased flooding around the bay.

Can the gates be closed early enough? In the Frequently Asked Questions section of the Texas Coastal Study web page, it says *“It is assumed that the barrier would be closed at low tide in advance of a storm to maximize the capacity of rainwater storage in the bay.”* According to NOAA data before hurricane Ike, water levels started rising on Sept 10. Can the gates be closed 3 days before a storm? What will this do to shipping?

There is no evaluation of the maintenance needs that will require the gates be closed and the potential impact on natural systems or shipping this closure could have. Some gates in Scandinavia are closed twice a day. How many oysters are going to attach themselves to important parts of the gates? How often will they need to be cleaned off to keep mechanisms operational?

Combi-wall Comments

The current Texas Coastal Study calls for a combi-wall to be built from the end of the environmental gates on the Bolivar Peninsula side to the beginning of the earthen levee near the end of Keystone Ave and 23rd street in Port Bolivar. From the North Jetty to the junction with the levee the combi-wall will cross a shallow tidal lagoon which is some of the most heavily used shorebird habitat in Texas. Although the lagoon belongs to the state of Texas, it is one of the

resources that Houston Audubon has been protecting with Bolivar Flats Shorebird Sanctuary for more than 20 years. See attached map.

Bolivar Flats Shorebird Sanctuary is comprised of 1205+ acres of coastal prairie, wetlands, and beach adjacent to a large system of shallow lagoons, mud flats and salt marsh which it protects. The sanctuary and adjacent habitat are critical for thousands of resident, migrating, and wintering birds. 75+ species of birds have been observed using the mud flats and adjacent marshes; including federally endangered Piping Plovers, and federally threatened Red Knots and Black Rails. Reddish Egrets and White-faced Ibis, both listed as Threatened in Texas are also regular inhabitants of the area. Bolivar Flats Shorebird Sanctuary is a nationally and internationally famous birding destination whose importance to birds has been recognized by the National Audubon Society and BirdLife International with their designation of it as a *Globally Important Bird Area*, the highest established designation. It is a site of *International Importance in the Western Hemisphere Shorebird Reserve Network*. There is a significant and growing contribution to the local economy that is made by the thousands of birdwatchers that visit the area each year. Regionally, it is also a popular and productive fishing and crabbing site visited by many recreational fishermen.

From the diagrams and text in the feasibility study it appears that building the combi-wall and the 500 ft of scour pad on each side of the wall will destroy a large tidal lagoon protected by the sanctuary. Until the exact location of the wall is determined it is impossible to tell how many acres of mud flat, oyster reefs and salt marsh will be loss and it is hard to believe that any mitigated habitat could be as productive. So many birds use this area that Houston Audubon has sponsored a webcam that continually monitors area bird activity. The webcam is used by bird enthusiast from around the globe and can be accessed here <https://houstonaudubon.org/birding/cameras/bolivar.html>. The impact on bird populations by the potential destruction of this valuable habitat should be minimized. Yet the impact to this area has not been thoroughly studied nor the necessary mitigation contemplated.

We are also concerned about what kind of damage might occur on the Gulf side of the combi-wall if there is a storm surge. Waves reflected by the combi-wall have the potential to damage the North Jetty and scour areas much further away than 500 ft. The North Jetty is a very popular fishing, crabbing and birding site and in the Texas Coastal Study there doesn't appear to be a plan for people to continue to have access to the North Jetty.

It looks like the popular boat ramp at the end of 16th street in Port Bolivar will be blocked or destroyed by construction of the combi-wall. In the Texas Coastal Study there is a plan to move the boat ramp and a map showing a proposed new location close to the ferry landing. During the summer of 2020, this area was used for disposal of dredged material from the ferry landing; therefore, this area would not be a good location for a boat ramp because of its instability.

The beach between the 16th street boat ramp and Fort Travis are very popular with families as the water is shallow and a good area for children to play. Will this beach be destroyed by the

building of the combi-wall? It appears to have some water circulation near Fort Travis, but the quality of that water needs to be evaluated for safety. If this beach is destroyed what is the plan to mitigate for that destruction?

Earthen Levee Comments

The 3.03 miles of earthen levee proposed to be built across Houston Audubon's Bolivar Flats Shorebird Sanctuary from the end of the beach at Biscayne to the end of the combi-wall will be possible only with the condemnation and subsequent destruction of approximately 122 valuable acres of coastal prairie and wetlands habitat. These areas have been conserved at great expense from federal and private matching dollars. Construction of the levee will create an appalling amount of habitat damage in the sanctuary. Construction of the levee has the potential to introduce invasive exotic plants to the sanctuary unless care is taken to make sure equipment and fill is clean and uncontaminated before it enters the property. There are many unknowns. How will heavy equipment access the sanctuary for construction? Will an access road be needed next to where the levee is being constructed? How many dump truck loads of material will be brought from burrow sites? How will wetlands be protected during construction?

From this language used in the feasibility study, "*Levee maintenance items included yearly mowing of levees, semi-annual visual inspection of the levees; periodic establishment of turf, maintenance of access roads, and ramps*" it sounds like the plan is for the Army Corp of Engineers or non-federal sponsor to purchase or take this property. Surely Houston Audubon wouldn't be expected to maintain the levee.

"The non-federal sponsor will have the responsibility of acquiring all necessary real estate interests for the project and ensuring that relocation of utilities and facilities is accomplished. Where necessary, voluntary relocations and acquisitions will be pursued, and eminent domain would only be imposed by a local sponsor as a last resort."

"Condemnation authority is a necessary prerequisite for serving as a non-federal sponsor. GLO does not have condemnation authorization. Another entity will need to be involved (Legislature will need to create/designate an entity that has condemnation authority or change GLO's abilities)."

Fortunately, the importance of Beacon Bayou to area drainage has been recognized in the Texas Coastal Study and appropriate plans have been made. Unfortunately, it appears the levee will be built on top of the pond just south of the Rettilon Road intersection which drains some of Highway 87.

Has there been any study of how the reflection of storm surge off the hardened side of the levee would impact the adjacent wetlands? Beacon Bayou is close to the levee in several places such that reflected wave energy has the potential to scour the bayou and thus destroy more adjacent wetlands.

There doesn't appear to be any gate/opening proposed for Rettilon Road which will make much of Houston Audubon's land difficult to access and also makes the beach in this area impossible to access.

The area for the earthen levee is documented nesting habitat for the federally Threatened Black Rail and many more nesting marsh and prairie species. Any work that is conducted in this area should be restricted to the non-nesting season (September to March 15) and a thorough understanding of the habitat requirements for this species should be completed prior to initiating the project. The Black Rail is poorly understood, and the immediate Texas coast is the stronghold for the recovery of this species.

Bolivar Auxiliary Control Center Comments

The Feasibility study shows the Bolivar Auxiliary Control Center being placed adjacent to or on Houston Audubon property in Bolivar Flats Shorebird Sanctuary, which is habitat protected for birds and other wildlife. We suggest that the Control Center be placed near the ferry landing on the land owned by the Texas Department of Transportation or in Fort Travis, which is owned by Galveston County, where it would overlook the gate structure and would be more easily accessed in storm conditions.

Mitigation Comments

One of the proposed mitigation sites in the feasibility study is Horseshoe Lake in Port Bolivar. This 326-acre lake is in the middle of Houston Audubon's 680-acre Horseshoe Marsh Bird Sanctuary, a wetland prairie complex that surrounds the lake and was established to protect the productivity of Horseshoe Lake. The lake's productivity is shown by the large number of birds that use the lake and the number of fishermen and crabbers that use the lake and its outfall area. Horseshoe Lake's productive wetlands also provide nursery grounds and forage for fish and other sea life. A study done in 2008 found 41 species of fish in the lake. This shallow tidal lake has many oyster reefs on its bottom. Depositing dredged material in the lake will destroy the oyster reefs and most likely damage the salt marsh surrounding the lake resulting in the need for additional mitigation.

The potential to destroy the lake's important productive habitat needs to be carefully studied prior to any action.

2. Houston Audubon approves of the concept of environmental enhancements contained in the plan. Beach nourishment, dune enhancement and marsh restoration are all good examples of people working with nature rather than against it. We have concerns that adequate sand sources may not be available for this massive restoration, but we applaud these improvements from the previously presented plan. Given what we believe will be a tremendous amount of habitat degradation and destruction in one of the rarest habitats in Texas, the coastal prairie, we strongly advocate for the environmental enhancements to commence at the beginning

of the project timeline and completed before habitat effects are inflicted on the vanishing coastal prairie and marshes.

We have concerns that the tiered NEPA process that allows for Environmental Impact Assessment and Cost Analysis operating concurrent with Project Construction introduces significant risks to the integrity of this current Coastal Study as presented at this time. We strongly encourage further assessment and identification of appropriate and adequate sand sources to provide the installation of the dune complex and natural beach slope along the entire 70+ miles of Galveston Island and Bolivar Peninsula prior to beginning construction on the Bolivar Roads Gate System. As has been stated throughout this process, the gate system and coastal protection are a complete package with limited, or no significant benefit to one or the other being completed alone. We have concerns that if sand resources cannot be identified, or the costs for installation rise to a point where less costly options are enacted, the current proposed plan will devolve to a clay-core dune system, or a concrete barrier system. Neither of these alternatives are options that Houston Audubon would support, and this current public comment period may be our only opportunity to express these concerns.

3. Houston Audubon approves of efforts to raise and harden structures that may be in harm's way. Raising and making residential, commercial, and industrial infrastructure more able to handle storms, wind and surge is something that can be done without damaging the environment and at a fraction of the cost of the entire Texas Coastal Study.

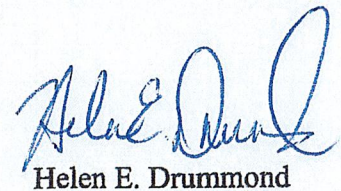
Houston Audubon recognizes the complexity and challenges associated with protecting communities from damaging coastal storms. We commend the Corps of Engineers for recognizing the need to reduce risks associated with these storms and urge the application of lessons learned regarding the importance of building a strategy around the use of natural solutions in lieu of integrating natural elements as secondary and tertiary complements to a strategy that focuses on hard infrastructure that alters the natural function and balance of the coastal ecosystem.

If you have any questions regarding these comments, please contact us.

Sincerely,


Sam Smith

HAS Board President


Helen E. Drummond

Executive Director

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