UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

MEMORANDUM FOR: FILE

FROM: Christy Fellas, DWH Environmental Compliance Coordinator
NOAA Restoration Center

DATE: April 7, 2022

SUBJECT: Texas TIG Restoration Plan/Environmental Assessment #2 Laguna Vista Rookery Island Habitat Protection Project Covered by Existing NMFS EFH Compliance

Based on my review of project materials including the Biological Evaluation form (Winter 2021) the NOAA Restoration Center (RC) determined that the Laguna Vista Rookery Island Habitat Protection project proposed by the Texas TIG has existing coverage from a previous review of the project during a permit application to the US Army Corps of Engineers (USACE) for permit number SWG-2020-00745.

At the time the permit application was submitted, the project was reviewed by representatives from NOAA's Habitat Conservation Division (HCD) in the Southeast Regional Office and comments and EFH conservation recommendations were provided to the USACE on November 5, 2020. Since that review is already underway, the Texas TIG will rely on the outcome of the USACE's EFH consultation to avoid duplication of consultation on the same project. See the attached letter for more information on the EFH recommendations provided to the USACE. EFH recommendations included in the USACE permit will be carried out by the implementing Trustee.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
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St. Petersburg, Florida 33701-5505
https://www.fisheries.noaa.gov/region/southeast

November 5, 2020 F/SER46:CS/RS

Colonel Timothy Vail, Commander
District Engineer, Galveston District
Department of the Army, Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229

Dear Colonel Vail:

The NOAA's National Marine Fisheries Service (NMFS), Habitat Conservation Division, has reviewed the letter dated October 27, 2020, from the U.S. Army Corps of Engineers (USACE) regarding permit application SWG-2020-00745. The applicant, Audubon Texas, is proposing the following: (1) placement of approximately 2,300 cubic yards (CY) of limestone or clean concrete riprap breakwater within shallow open waters adjacent to approximately 1,700 linear feet (LF) of the 11-acre Laguna Vista Spoil Island's northern shoreline, (2) placement of approximately 700 CY of limestone or clean concrete riprap along approximately 550 LF of the island's southern shoreline, (3) removal of marine debris (old culverts), (4) placement of 5,000 CY of fill material within approximately 1.5 acres of upland habitat, (5) shoreline regrading and planting, (6) use of 300 CY of fill material generated from shoreline regrading for proposed fill activities, and (7) creation of a floatation channel (50 feet wide by 4 feet deep and approximately 1,800 LF long) to allow for barge access for construction of breakwaters. The project purpose is to provide shoreline protection measures to address active erosion and restore colonial and migratory bird habitat that has been lost due to continuous erosion from wind and wave action. The project site is located in the Laguna Madre at the Laguna Vista Spoil Island approximately three miles north-northeast of Laguna Vista, Cameron County, Texas. The NMFS is providing comments and recommendations pursuant to authorities of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

The project site consists of an approximate 11-acre island constructed from the placement of dredge material sometime prior to 1995. Survey efforts conducted in February 2019 revealed approximately 79 acres of submerged aquatic vegetation (SAV) and 0.3 acre of scattered oyster reefs clusters surrounding the island. The island serves as a critical bird rookery in the Central Flyway Migration Corridor used by migratory and colonial nesting birds. The northeastern portion of the island, roughly 4.8 acres, is maintained as an active bird rookery, and the western portion is generally non-vegetated flats used by ground-nesting birds. The northern shoreline of the island is subject to erosive wave energy.

The proposed project is located within tidally influenced habitats of Ecoregion 5 and has been designated as essential fish habitat (EFH) identified by the Gulf of Mexico Fishery Management Council (GMFMC). The primary categories of EFH, which would be affected by the project implementation, are SAV, tidal flats, and algal mats. Based upon our knowledge of the project

area and coordination with other federal and state natural resource agencies, the proposed project area also contains mangrove habitats. Google® Earth Pro software satellite imagery shows the proposed project area to be hydrologically connected to the Laguna Madre, which supports thousands of acres of EFH. It is anticipated that the proposed project will have direct and secondary impacts to SAV, tidal flats, algal mats, and mangrove habitats due to the proposed fill and dredging activities associated with the shoreline protection measures and restoration efforts for the Laguna Vista Spoil bird island. Protection of these high quality EFH and highly dense SAV within Laguna Madre is vital to sustaining the ecological functions of this estuary.

The GMFMC has identified these resources as EFH for larval, post larval, juvenile, and adult red drum; juvenile pink shrimp, white shrimp, and brown shrimp; juvenile goliath grouper; adult gray snapper; and post larval and juvenile lane snapper. The area has also been designated as EFH by NMFS for highly migratory species including, scalloped hammerhead, blacktip, bull, lemon, silky, spinner, tiger, bonnethead, and Atlantic sharpnose sharks. Detailed information on federally managed fisheries and their EFH is provided in the 2005 Generic Amendment of the Fishery Management Plans for the Gulf of Mexico prepared by the GMFMC and in the 2009 Amendment 1 to the Consolidated Atlantic Highly Migratory Species Fishery Management Plan prepared by NMFS as required by the Magnuson-Stevens Act (P.L. 104-297).

In addition to being designated as EFH for various federally managed fishery species, SAV, tidal flat, algal mat, and mangrove habitats all provide nursery, foraging, and refuge habitats for other economically important marine fishery species such as spotted seatrout, flounder, Atlantic croaker, black drum, gulf menhaden, striped mullet, and blue crab. Such estuarine-dependent organisms serve as prey for other fisheries managed under the Magnuson-Stevens Act by the GMFMC (e.g., red drum, mackerels, snappers, and groupers) and highly migratory species managed by NMFS (e.g., billfishes and sharks).

The SAV provides important fishery support functions, including: (1) providing a physically recognizable structure and substrate for refuge and attachment, (2) improving water quality by trapping sediments and assimilating pollutants, (3) preventing erosion, (4) collecting organic and inorganic material by slowing currents, and (5) being a source of nutrients ad detrital matter to adjacent waters[1]. While tidal flats and algal mats look barren, they do support a rich invertebrate population that in turn provides a food source for a variety of marine dwelling species. Blue-green algae fix carbon by photosynthesis and pass it through the food chain, either directly through consumption by primary consumers or indirectly through complex detrital food chains.[2] This primary production by algal flats supports secondary production by species which either consume the algae directly or consume the bacteria and fungi that decompose the algae. Investigations of algal mat habitats suggest that their annual productivity could match or exceed

[1] Zieman, J.C., and R.T. Zieman. 1989. The ecology of the seagrass meadows of the west coast of Florida: A community profile. U.S. Fish Wildl. Serv. Biol. Rep. 85(7.25). 155 pp.

[2] Armstrong, N.E. 1987. The ecology of open-bay bottom of Texas: a community profile. U.S. Department of the Interior Biological Report. 85(7.12). 104 pgs.

those of vascular plants.[3,4] Epibenthic algae and similar organic sources appear to be more productive suppliers of nutrients to the Corpus Christi Bay estuary than in other estuaries that have been studied.[5] Tidal algal flats also support large benthic communities, [6] which are very important food sources for commercially important fisheries.[7,8] Consequently, the loss of tidal flats and algal mats adversely affects the production of wetland-supported federally managed fisheries and other living marine resources of commercial and recreational importance.

Mangroves also play an important role by stabilizing the intertidal fringes of the island and supporting many invertebrates such as snails, crabs, mussels, and amphipods. These invertebrates become a food source for many other managed fisheries. In addition, wetlands in the project area produce nutrients and detritus, important components of the aquatic food web, which contributes to the overall productivity of the Laguna Madre estuary and the Gulf of Mexico.

The 1996 amendments to the Magnuson-Stevens Act require NMFS, regional fishery management councils, and other federal agencies to identify and protect important marine and anadromous fish habitat. The EFH provisions of the Magnuson-Stevens Act support one of the nation's overall marine resource management goals, i.e., maintaining sustainable fisheries. Critical to achieving this goal is the conservation and enhancement of the quality and quantity of suitable marine and estuarine fishery habitats.

Construction activities will require the creation of a floatation channel to allow barge access to build the breakwater system. The total area of the floatation channel would be a maximum of 2.3 acres and will directly impact approximately 1.4 acres of SAV. The placement of the breakwater system will directly impact an additional 0.56 acre of SAV, bringing the total direct impact to approximately 2.0 acres. In addition to the construction of the breakwater system, the applicant is proposing to regrade the shoreline behind the breakwaters, using the fill from that activity to back fill and plant with native vegetation along the northern shoreline. The NMFS is concerned the applicant has not considered these additional impacts to EFH (in particular SAV) associated with regrading and backfilling activities. The NMFS is also concerned with the timing the SAV surveys took place. As stated earlier, the applicant conducted an SAV survey during the month of February, which is during the colder months and when most seagrass beds

[3] Zedler, J.B., and C.S. Nordby. 1986. The ecology of Tijiuana estuary California: an estuarine profile. U.S. Fish Wildlife Service Biological Report. 85(7.5). 104 pgs.

[4] Zedler, J.B. 1980. Algal mat productivity: comparisons in a salt marsh: Estuaries 3:122-131.

[5] Armstrong, *loc. cit.* 104 pgs.

[6] Harper, D.E., Jr. 1985. A report on the benthic assemblages and general biology of the Bakersport Tract, Ingleside, TX. Report to the U.S. Army Corps of Engineers Galveston District. 18 pgs.

[7] Arntz, W.E. 1980. Predation by demersal fish and its impact on the dynamics of macrobenthos. pp. 121-150 *In*: Marine Benthic Dynamics. K.R. Renore and B.C. Coull, eds. University of South Carolina Press, Columbia.

[8] Mills, E.L. 1975. Benthic organisms and the structure of marine ecosystems. Journal of Fisheries Resources Board Canada. 32:1657-1663.

have senesced. Because seagrass beds senesce during colder months, visual survey efforts would lead one to believe there are not seagrass beds present or the density is low. The NMFS is concerned that seagrass presence has been underestimated because only one survey took place during the winter month. The NMFS is requesting the applicant to provide clarification on survey methodologies used and whether or not core samples were taken to estimate SAV densities. There is a potential for this restoration project to have more impacts to SAV than originally noted.

The applicant is also proposing to fill 1.5 acres of tidal flats to raise the elevation of the southwestern part of the island for upland habitat creation. In addition, the applicant is also proposing to regrade and backfill the southern shoreline for the installation of a revetment. The NMFS is concerned the applicant has not considered the direct and indirect impacts of filling, regrading, and constructing revetment activities will have on EFH (e.g. tidal flats, algal mats, and mangrove habitats). As mentioned above, tidal flats and algal mats are unique habitats with limited distributions in the world because they are found only adjacent to hypersaline lagoons, such as the Laguna Madre of Texas. These habitats, along with mangroves, are known to support benthic invertebrate communities, which are the base of the estuarine food web and support federally managed fisheries. In addition, mangroves help stabilize shorelines with their root system. Due to the importance of these habitats to the ecology of the Laguna Madre, losses to these EFH should be avoided or greatly minimized.

The NMFS recommends any unavoidable impacts to EFH clearly be identified and calculated prior to project authorization, and any in-kind mitigation plan be developed to adequately compensate for the loss of those resources if they cannot be avoided. In addition, NMFS believes the proposed project has the potential to result in a net loss of EFH functions due to the proposed placement of the breakwaters, filling of tidal flats, and installation of a revetment. Additional details and discussions are needed to adequately evaluate total impacts the project will have on EFH within the project site and surrounding areas. Therefore, we recommend the applicant conduct baseline and post-construction monitoring of SAV (during warmer months) within the project site of these habitats and implement in-kind mitigation, if secondary EFH impacts occur following project construction. A restoration plan should be developed and implemented to return the project site to pre-existing conditions.

While the applicant stated they avoided and minimized the environmental impacts by looking at multiple alternatives, including nearshore limestone breakwater with and without fill option, offshore breakwater with and without fill option, and limestone shoreline revetment, no details were provided in the PN that justified their preferred alternative. The NMFS would like the applicant to consider placing the breakwaters outside of SAV further away from the island to avoid and minimize impacts to SAV. It is unclear if this alternative was evaluated. It would appear by placing breakwaters further away from the island wave actions would be reduced on the northern side of the island eliminating land erosion. It would also benefit all EFH within the breakwater system by creating a more stable environment and allowing for additional recruitment of EFH.

Currently, the applicant is not proposing to mitigate for these proposed impacts. The applicant has stated because this is a restoration project, the benefits of the project are expected to

outweigh any unavoidable impacts to SAV. While this restoration project clearly benefits colonial and migratory nesting birds and their nesting habitats, the NMFS does not agree the project, as a whole, will offset impacts to EFH (in particular SAV) as proposed. The proposed placement of the breakwater system is located in very shallow waters near the island's perimeter, which does not support enough suitable habitat to offset SAV losses. However, the NMFS does agree that regrading and planting will improve the EFH within those areas by stabilizing the shoreline with native plants, but these EFH improvements complement algal mat and tidal wetland habitats only and do not replace the loss of resources associated with impacts to SAV or tidal flat habitats. The NMFS believes the restoration project as proposed has the potential to result in a net loss of EFH functions. Therefore, the NMFS recommends the Department of the Army authorization for this project not be authorized as currently proposed. Since the proposed project will adversely impact EFH, the USACE is required by the Magnuson-Stevens Fishery Conservation and Management Act to consult with NMFS and provide an EFH assessment. A complete EFH assessment should include all activities associated with this project including a description of measures to avoid, minimize, mitigate, or offset the adverse impacts to the proposed activities on EFH. Upon receipt and review of the USACE's EFH assessment, NMFS reserves the right to provide additional EFH Conservation Recommendations, if necessary.

Section 305(b)(4)(A) of the Magnuson-Stevens Act requires NMFS to provide EFH conservation recommendations for any federal agency action or permit that would result in adverse impacts to EFH. Therefore, the NMFS HCD recommends the following to ensure the conservation of EFH and associated fishery resources:

EFH Conservation Recommendations

1. The applicant should revise the proposed plans to avoid and minimize impacts to EFH to the maximum extent practical while still accomplishing the project purpose. For example, an alternative analysis such as placing the breakwater system on the outer perimeter of the seagrass beds should be considered to avoid and minimize impacts to SAV, while still meeting the shoreline protection goal and benefiting all EFH located within the breakwater system. This would remove the need to create a floatation channel thus minimizing impacts to EFH even further.

2. The NMFS encourages the applicant to consider conducting additional SAV surveys during the active growing season (warmer months). Surveys conducted during winter months may grossly underestimate the density and presence of SAV, thus underestimating total direct impacts. These surveys could serve as the baseline before the project commences. Post-construction monitoring of SAV within and surrounding the project site is necessary to determine if additional in-kind mitigation is necessary; if secondary EFH impacts occur following project construction, then a compensatory mitigation, monitoring, and contingency plan should be developed to offset the additional ecological losses.

3. The applicant should provide clarification on the survey methodologies used during their SAV surveys in February 2019 and whether or not core samples were taken to estimate SAV

presence. The applicant should provide a detailed account for all unavoidable direct and indirect impacts to EFH (tidal flats, algal mats, mangroves, and SAV).

4. Should the Department of the Army authorization permit unavoidable impacts to EFH, then a mitigation and monitoring plan should be developed which fully compensate for all EFH impacts in accordance with the 2008 Mitigation regulations. We also request the EFH mitigation plan be coordinated with NMFS prior to the issuance of a permit. To avoid additional mitigation for temporal impacts, the NMFS recommends the authorization include a special condition requiring the implementation of the mitigation plan concurrent with the restoration of the bird island.

5. An EFH assessment should be provided to the NMFS as required for an EFH consultation. A complete assessment should include all activities associated with this project including a description of measures to avoid, minimize, mitigate, or offset the adverse impacts of the proposed activities on EFH.

Please be advised the Magnuson-Stevens Act and the regulation to implement the EFH provisions 50 CFR Section 600.920(k) require the USACE to provide a written response to our EFH conservation recommendations within 30 days of receipt. USACE response must include a description of measures to be required to avoid, mitigate, or offset the adverse impacts of the proposed activity. If your response is inconsistent with our EFH conservation recommendations, you must provide a substantive discussion justifying the reason(s) for not implementing our recommendation(s). If it is not possible to provide a substantive response within 30 days, the Galveston District should provide an interim response to NMFS, to be followed by the detailed response. The detailed response should be provided in a manner to ensure that it is received by NMFS at least 10 days prior to the final approval of the action.

We appreciate your consideration of our comments. If you wish to discuss this project further or have questions concerning our recommendations, please contact Charrish Stevens at (409) 766-3699, or by email at charrish.stevens@noaa.gov.

Sincerely,

Virginia M. Fay

Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division

cc:
F/SER4, Dale, Scarpa
File

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, GALVESTON DISTRICT
5151 FLYNN PARKWAY, SUITE 306
CORPUS CHRISTI, TEXAS 78411-4318

December 11, 2020

Corpus Christi Regulatory Field Office

SUBJECT: SWG-2010-00745; Essential Fish Habitat Recommendations

Ms. Virginia M. Fay
Assistant Regional Administrator
National Marine Fisheries Service, Southeast Regional Office
Habitat Conservation Division
263 13th Avenue S
St. Petersburg, Florida 33701-5505

Dear Ms. Fay:

We have received your Essential Fish Habitat Recommendations for Department of the Army Permit Application SWG-2020-00745. The applicant, Audubon Texas, is proposing placement of approximately 2,300 cubic yards (CY) of limestone or clean concrete riprap breakwater within shallow open water adjacent to approximately 1,700 linear feet (LF) of the 11-acre Laguna Vista Spoil Island shoreline. The applicant also proposes placement of approximately 700 CY of limestone or clean concrete riprap along approximately 550 LF of the island's southern shoreline. In addition, the applicant proposes removal of an old culvert, placement of 5,000 CY of fill material within approximately 1.5 acres of upland in the island's interior (above the mean high water line), and shoreline restoration and planting. The project purpose is to provide shoreline protection measures to address active erosion and restore colonial and migratory bird habitat that has been lost due to continuous erosion from winds and wave action. Minor shoreline regrading of in-situ material could generate fill material of up to 330 CY total for project use (80 CY for revetment and 250 CY for planting).

Construction activities would require creation of a flotation channel to allow barge access. The footprint of the channel would be approximately 50 feet wide by 4 feet deep, extending approximately 1,800 LF and generating 15,000 CY of dredged material. The total area of the channel would be a maximum of 2.3 acres and could affect up to 1.4 acres of submerged aquatic vegetation. The project site is located in the Laguna Madre at the Laguna Vista Spoil Island approximately 3 miles north-northeast of Laguna Vista, Cameron County, Texas.

The evaluation process for this application is continuing. We will inform you, in writing, of our decision regarding these recommendations at least 10 days prior to any final decision on this action. If you have any questions, please contact me at the letterhead address or by telephone at 361-814-5847 ext. 1002. You may also e-mail me at Matthew.L.Kimmel@usace.army.mil if you prefer.

Sincerely,

Matthew L. Kimmel

Matthew Kimmel
Regulatory Project Manager

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