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April 15, 2021

Col. Timothy R. Vail
Commander
Galveston District
U.S. Army Corps of Engineers
P.O. Box 1229
Galveston, TX 77553-1229
Via Regular Mail and email <a href="mailto:swgpao@usace.army.mil">swgpao@usace.army.mil</a>

Re: Need for Supplemental EIS for Matagorda Channel Dreging

Dear Col. Vail:

This letter is written to the U.S. Army Corps of Engineers on behalf of the Matagorda Bay Foundation. I am writing in my capacity as chairman of the Matagorda Bay Foundation as well as on behalf of the organization and as their environmental lawyer.

This letter constitutes a formal request to the Galveston District of the U.S. Army Corps of Engineers (Corps) to prepare a Supplemental Draft Environmental Impact Statement (SupDEIS) to provide the public with an analysis of the changes that the Corps has made for the dredging plan for the Matagorda Ship Channel between the original publication in 2009 and the modifications that occurred in the last two years.

It is well-established NEPA jurisprudence that changed conditions generate an obligation on federal agencies to issue supplemental environmental impact statements, particularly where the impacts are significant as they are here relative to mercury contamination impacts and potential suffocation of oyster reefs and seagrass beds. These are among the most sensitive of impacts covered by the 404(b)(1) guidelines issued by the EPA and applicable to Corps projects.

According to the new guidelines issued by the Council on Environmental Quality (CEQ), the duty to supplement an EIS is found at 40 CFR 1502.9. The CEQ discussion of their recent rule change is included below and can be found at 85 Federal Register 43328. Here it states the following.

CEQ makes this change in the final rule. As noted in the NPRM, this revision is consistent with Supreme Court case law holding that a supplemental EIS is required only "[i]f there remains 'major Federal actio[n]' to occur, and if the new information is sufficient to show that the remaining action will 'affec[t] the quality of the human environment' in a significant manner or to a significant extent not already considered . . . ." Marsh, 490 U.S. at 374 (quoting 42 U.S.C. 4332(2)(C)); see also Norton v. S. Utah Wilderness All., 542 U.S. 55, 73 (2004). . . . See NEPA Task Force Report, supra note 28, at p. 65.[that a supplemental EIS] may be triggered after an agency executes a grant agreement but before construction is complete because the agency has yet to provide all of the funds under that grant agreement.

The situation with regard to the dredging of the Matagorda Ship Channel falls well within this new guidance and certainly as well within the old rules of the CEQ. As is set out in the attached document, the changes to the proposed action raise several potential significant impact issues, any one of which should trigger a supplemental EIS. And major federal action certainly remains to occur.

For example, mercury contaminants exist within Lavaca Bay and Matagorda Bay. The existence of these contaminants is well known, although current data about the distribution, particularly after our recent spate of hurricanes and tropical storms, is not available. Mercury will be picked up by the dredging, particularly the widening activity, and will be redistributed based on the disposal areas selected. By changing the disposal site design and location, the potential for mercury contamination has been increased as well as redistributed, and the effects of more mercury entering the bay ecosystem and into the food chain of fish and humans must be re-evaluated.

Similarly, it is reasonable to anticipate that the changed disposal locations and design will lead to more sediment being distributed along the western shoreline of Matagorda Bay. In turn, the oyster reefs and sea grass beds that are known to

exist along the western shoreline will be impacted to a much greater extent than indicated in the 2010 FEIS.

These are just two examples of significant impacts potentially resulting from changed conditions and project alterations. A detailed analysis supporting the assertions in this letter is included as attachment A.

Major decisions remain to be made. The Corps should simply do the right thing – the legal thing – and prepare a Draft Supplemental Environmental Impact Statement and send it out to the agencies and to the public for their review. Those of us who use and love Matagorda and Lavaca Bays deserve nothing less.

Sincerely,

Jim Blackburn

Attorney at Law

Chair, Matagorda Bay Foundation

# ATTACHUENT A

April 20, 2021

Col. Timothy R. Vail
Galveston District Commander
USACE Galveston District
P.O. Box 1229
Galveston, TX 77553-1229

Dear Colonel Vail:

The Lavaca Bay Foundation (LBF) and Matagorda Bay Foundation (MBF) believe implementation of the 2019 Matagorda Ship Channel Improvement Project's (MSCIP) Tentatively Selected Plan (TSP) and Dredge Material Placement Plan (DMMP) will result in much greater environmental impacts than those disclosed in the associated National Environmental Policy Act compliance documents. In addition, we believe the environmental mitigation proposed for these projects in these documents is insufficient.

Therefore, we respectfully request that you convene an Interagency Coordination Team (ICT) to address these problems, similar to that convened for the Houston-Galveston Navigation Channel (HGNC) Expansion Project in the early 1990s. We explicitly request that it include local interests, in addition to government agency staff and subject matter experts.

Furthermore, we request the USACE conduct a Supplemental Environmental Impact Statement (SEIS) to study the cumulative effects of the 2019 FREIS and DMMP on water quality, habitats and other natural resources in the project area (Matagorda and Lavaca Bay), and on storm surge risk to our communities. We request that input from the ICT guide the development of this SEIS. Specifically, we request the ICT and SEIS reconsider the following potential impacts of the proposed project:

- Salinity increases (oysters, wetlands)
- Suspended solids increases (oysters, seagrasses)
- Dredged material quality- mercury.
  - Acceptability of dredge material testing
  - Age of test data
  - Detections of mercury in bulk sediment chemistry tests
  - · Bioaccumulation testing
  - Mercury in elutriate/Water quality criteria (including chronic)
  - Sample representativeness-Sample collection from proposed dredging sites near superfund site.
- Effects of salinity increases and suspended solids increases on oysters

- Oyster impact assessment and mitigation- Better estimation of oyster habitat distribution, area, quality. Need for more and better proposed mitigation.
- Potential for transport of dredged material into tidal lakes and bayous (Boggy Bayou, Broad Bayou, Powderhorn Lake, Old Town Lake), potentially degrading hydrology
- Potential for dredged material to alter quality of western shorelines (beaches, etc)
- Potential impacts on seagrasses
- Potential impacts on sea turtles in the bays
- Potential impacts on recreational and commercial fisheries
- Potential impacts on tourism
- Potential increase in storm surge risks to people, communities, infrastructure

See Attachment 1 for more details regarding these concerns.

We appreciate the opportunity to provide comments on the Matagorda Ship Channel Improvement Project. We hope to partner with USACE on this proposed ICT, to identify solutions that reduce natural resource impacts, protect public health and interests, and facilitate economic growth in our area.

For additional information or questions please contact William Balboa at <u>bbalboa@matbay.org</u>, or 361-781-2171.

Sincerely,

William Balboa

William Balboa Executive Director

Matagorda Bay Foundation

Dr. Paul Bunnell

Dr. Paul Bunnell President

Lavaca Bay Foundation

WB:JW

Attachment

# Attachment 1 Detailed Descriptions of Concerns

2019 Matagorda Ship Channel Improvement Project's (MSCIP) Tentatively Selected Plan (TSP) and Dredge Material Placement Plan (DMMP)

#### **Previous Involvement**

The MSCIP is not new to most of us at LBF and MBF. Most members of both groups were aware of, or participated in, various stages of the preparation of the 2009 FEIS.

#### **Basis of Comments**

Our comments are based on reviews of project documents that we were able locate online at USACE websites and other internet sources. Our comments regarding concerns about DMMP sites and locations refer to information in 2009 FEIS, 2019 FREIS and a USACE PowerPoint presentation to LBF on March 11, 2020.

#### Our Maps and Tables

Our habitat and resource maps were created using ArcGIS and include oyster data from Texas Parks and Wildlife Department, Coastal Fisheries Division, Fisheries Independent Data collection efforts, and anecdotal information from biologists and residents. Oyster data are X, Y coordinates of all TPWD oyster dredge samples collected from 1986 to 2018 that include shell and/or live oysters. Other habitats are digitized representations and approximate the extent of habitats of concern.

#### **Possible Future Additional Comments**

Due to the project's expedited timeline we felt compelled to draft a response in an equally expeditious manner. Therefore the comments, questions and concerns listed below represent many of the collective concerns of LBF and MBF but should not be considered an all-inclusive list. We reserve the right to add to our list of concerns as the project moves forward.

#### **Our Philosophy**

We do not oppose economic growth in our region, but we do feel strongly that organizations who will profit from these projects should compensate for losses and damages to natural resources and the economies that rely upon them. We hope to see the guiding principles of the USACE Engineering with Nature initiative (https://ewn.el.erdc.dren.mil/about.html) applied to this project.

#### **Our Specific Requests**

We request the USACE conduct a Supplemental Environmental Impact Statement to study the cumulative effects of the 2019 FREIS and DMMP on the habitats and other natural resources in the project area (Matagorda and Lavaca Bay). We also request the USACE require the creation of Interagency Coordination Teams for this and all future projects of this scope. If we hope to be effective in the management of our ecosystems, we must include representation of local interests as well as resource agency staff, academics, and subject matter experts.

#### Concerns

- Salinity increases (oysters, wetlands)
- Suspended solids increases (oysters, seagrasses)
- Dredged material quality- mercury.
  - Acceptability of dredge material testing
  - Age of test data
  - · Detections of mercury in bulk sediment chemistry tests
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- Oyster impact assessment and mitigation- Better estimation of oyster habitat distribution, area, quality. Need for more and better proposed mitigation.
- Potential for transport of dredged material into tidal lakes and bayous (Boggy Bayou, Broad Bayou, Powderhorn Lake, Old Town Lake), potentially degrading hydrology
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- Potential impacts on seagrasses
- Potential impacts on sea turtles in the bays
- Potential impacts on recreational and commercial fisheries
- Potential impacts on tourism
- Potential increase in storm surge risks to people, communities, infrastructure

#### 2019 Dredge Material Management Plan (DMMP)

The proposed DMMP for the in-bay reaches of the project described in the 2019 FREIS TSP (Figure 1) are a dramatic departure from recommendations made in the 2009 FEIS (Figure 2). The current 2019 "least cost" plan excludes Multi-Use Placement plans (beneficial use) identified in the 2009 FEIS and recommends relocating dredge material placement from existing placement areas east of the channel to new, unconfined open bay disposal areas west of the channel. The rationale for relocating placement to the west side of the channel is to prevent or reduce the migration of material from placement areas into the channel. Section 4.4 of the 2013 USACE Regional Sediment Management Studies of Matagorda Ship Channel and Matagorda Bay System, Texas recommends relocating dredge material placement areas to the west side of the channel to "reduce shoaling due partly to sediment migrating from existing placement areas into the channel." Concerns about the composition and fate of dredge materials is also captured in Section 4.6.6 of the 2018 Draft Engineering Appendix "Due to the very fluid nature of the material in MSC, the channel side of the PAs are more like 1500 to 2500 feet from the channel toe, "and Section 4.11.10 of the 2019 FREIS recommends operational placement areas (OP1-OP10) "located further away from the channel than New Work PAs to avoid maintenance material from shoaling back into channel". These statements illustrate USACE concerns about the composition of material, and likelihood of material migrating from either NP or OP sites into the channel, or elsewhere. We could not find references in USACE documents that identified the processes or physical factors responsible for historical shoaling in the channel, but we believe wind and wave energy propagated by prevailing southeasterly

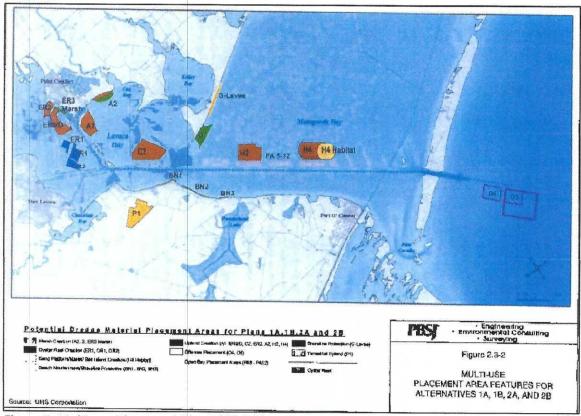


Figure 1. Multi-use Placement Plan 2009 FEIS

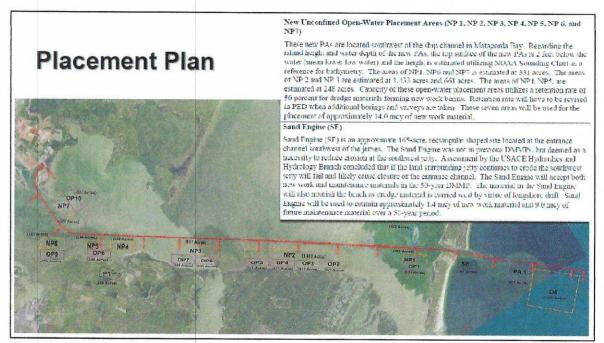


Figure 2. Least Cost Alternative Dredge Material Placement Plan 2019 FREIS

winds are probable factors. We believe these same forces will act on proposed NP and OP dredge materials and transport sediment towards habitats, tidal inlets, and landscapes along the western shoreline of Lavaca and Matagorda Bays

The western shores of Matagorda and Lavaca Bays are ecologically diverse landscapes comprised of more than 8000 acres of combined wetlands, tidal lakes, oyster reef, bars/swales, seagrasses/submerged aquatic vegetation, and shell beach habitats (Figure 3., Table 1.). All of these biologically important features provide vital services as nursery, nesting, and foraging areas for ecologically and economically valuable finfish, invertebrates, migratory and resident avian species, and coastal wildlife. Wetlands, seagrasses, oyster reef and other habitats also provide valuable ecosystem services to bay ecology and society and improve water quality, protect shores, sequester carbon, and provide society with seafood and a place to recreate and recharge.

We believe the current DMMP with proposed placement locations and unconfined open bay dredge disposal will cause permanent harm to important natural resources and landscapes within the project area.

#### **Oysters**

The current DMMP proposes to locate NP areas a minimum of 1500 -2000 feet westward of the new channel, and OP even closer to shore (2019 FREIS Section 4.11.10). The footprint of placement areas NP3-NP6 and operational placement areas OP5-OP9 are located on or in very close proximity to Gallinipper and Indian Point reefs and other oyster resources documented by TPWD oyster sampling (Figure 4), and Google Earth imagery of commercial oyster harvest (Figure 6).

Placement areas NP4, NP5 and OP 8 are located in a narrow section of the bay where the distance between ship channel and Gallinipper Point is approximately 3500 feet. Locating NP4. NP5 and OP 8 areas using USACE proposed 2000 ft channel offset would place the disposal area in an area where oyster reef is abundant, and oyster impacts inevitable if the plan is implemented.

The cumulative effects of routine maintenance activities and proposed OP sites are of particular concern due to the frequency of maintenance dredging, and composition of material produced during maintenance cycles. Damages and impacts from sediment deposition and reduced water quality will likely be an ongoing process as waves erode material from placement areas, resuspend sediments, increase turbidity, and cover live oysters and oyster cultch material. The 2019 FREIS section 5.3.3.3 states, "Water column turbidity would increase during project construction and maintenance dredging that could affect survival or growth of oysters. Heavy concentrations of suspended sediment can clog gills and interfere with filter feeding and respiration. Turbidity from the recommended plan should be temporary and local. The location of oyster populations can gradually shift in response to natural and man-made modifications in the bay system. Therefore, it is likely oyster reefs affected by implementation of the recommended plan could adjust to new conditions over time." We concur with the USACE assessment of sediment and turbidity effects on oyster health but disagree that these effects are transient in nature. We believe the following statement in section 5.3.3 is misleading - "The location of oyster populations can gradually shift in response to natural and man-made modifications in the bay system. Therefore, it is likely oyster reefs affected by implementation of the recommended plan could adjust to new conditions over time." While it is true that some research suggests oyster reefs may relocate in response to natural or man-made changes, the

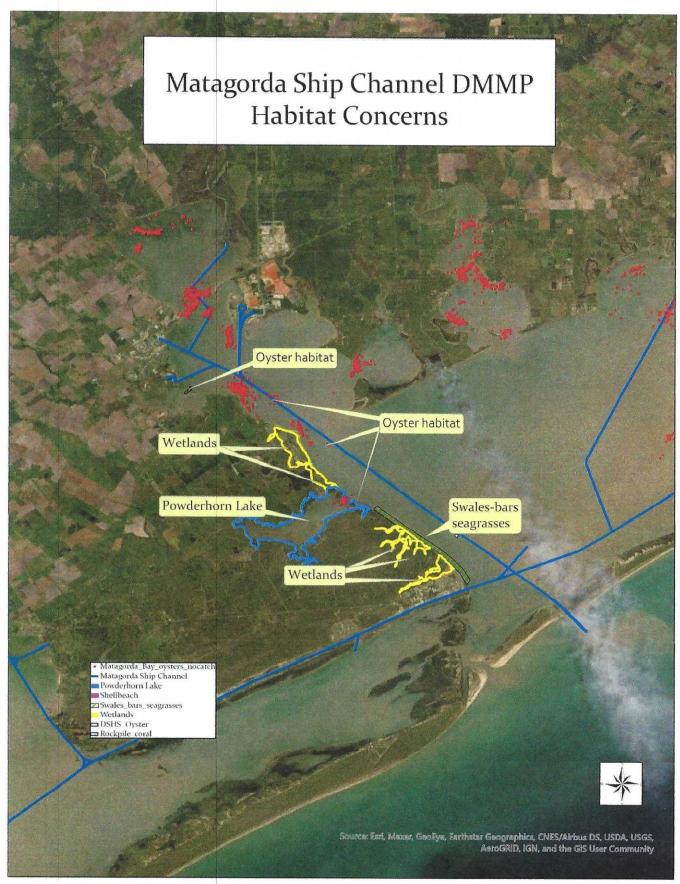


Figure 3. DMMP habitat concerns. Matagorda Bay Foundation

Table 1. Estimated habitat extent\*

	Name	Acres
Estuarine wetland	Boggy Bayou	447
Estuarine wetland	Broad Bayou	99
Estuarine wetland	Huckleberry/Big Dam Bayous	300
Estuarine wetland	Un-named Bayou	47
Estuarine wetland	Blind Bayou	315
Estuarine wetland/oysters	Old Town Lake	898
Tidal Lake/oysters/estuarine wetlands	Powderhorn Lake	4337
Oyster	Gallinipper Reef	815
Oyster	Indian Point Reef	226
Oyster	Powderhorn Lake Reef	136
Swales and Bars/seagrasses*	Powderhorn Ranch shoreline	800

<sup>\*</sup>TPWD personal communication

rate of change occurs over many, many decades or hundreds of years, not in days months or years.

### Oyster mitigation

The 2019 FEIS proposes a mitigation rate for oyster impacts of 1:1 based on oyster restoration/recovery studies. We believe direct and cumulative impacts to oyster resources from construction, sediment transport, and increased salinity will result in significantly more oyster loss than the 130 acres proposed in the mitigation plan. The combined footprint of NP 4-5 and OP 8 placement areas alone will cover between 516 (2019 FREIS) and 744 (COE presentation) acres of bay bottom and are located on or adjacent to two historic reefs. We do not understand how the USACE calculated the estimated 130-acre mitigation amount given the abundance and distribution of oyster resources in the area. We also question the differences in estimated oyster impacts and compensatory mitigation between those in the 2009 FEIS and updated 2019 FREIS. The 2009 FEIS Section 6.1 estimated a total 162 acres of oyster impacts from channel construction and salinity changes. This estimate did not include impacts from the new dredge placement located to the west of the channel. We also question why salinity impacts to oysters were considered in the 2009 FEIS but not the 2019 FEIS.

Oyster resource management in Texas is generally the responsibility of the TPWD Coastal Fisheries Division (TPWD 2012). TPWD oyster sample collection protocol does not include sampling and monitoring oyster resources in water < 1 meter in depth at low tide, therefore the actual extent of oyster resources located in shallow water, along shorelines and in nearby bayous and tidal lakes, is unknown. Intertidal and shallow oyster reef are important sources of larvae, and provide habitat for ecologically and economically important fish, and avian and wildlife species. Shallow reef also functions as natural breakwaters and protect fragile shorelines from erosion.

The USACOE plans to mitigate for oyster loss by constructing a clay pad and placing 6-9 inches of suitable d the cultch material on top for oysters to colonize. Much of the natural reef damaged or be lost as a result of MSIC activities are located in Texas Department of State Health Services (DSHS) approved waters and are harvested by local commercial fishers during oyster season. Mitigation for loss of commercially viable reef will have to occur in approved waters and be accessible for commercial harvest. If successful, commercial harvesters will likely begin dredging the mitigation site when oysters reach legal size, or about 2 years. With each successive harvest effort cultch material will be removed along with oysters attached and the area's value as an oyster resource will be diminished. According to Dr. Sammy Ray, former Professor Emeritus at Texas A&M Galveston, natural reefs are the product of many years of oyster growth and often have accumulations of shell many feet below the mudline on the bay bottom. This "shell bank" provides a source of cultch/shell that extends deeper than the proposed 6-9 inches of compensatory mitigation.

Recommendations- 1) use existing side scan bathymetry data collected by Dr. Tim Dellapenna and TPWD, in combination with recent TPWD side scan and oyster sampling data to estimate current oyster resource coverage and develop accurate estimates of damage and loss from channel construction, maintenance, and salinity change 2) Remove NP 4-5 and OP 8 as placement areas, 3) work with resource agency staff and academics to develop high resolution maps that quantify shallow oyster resources along shorelines, in tidal lakes and bayous, that may be at impacted, and develop appropriate compensatory plans 3) Implement alternative

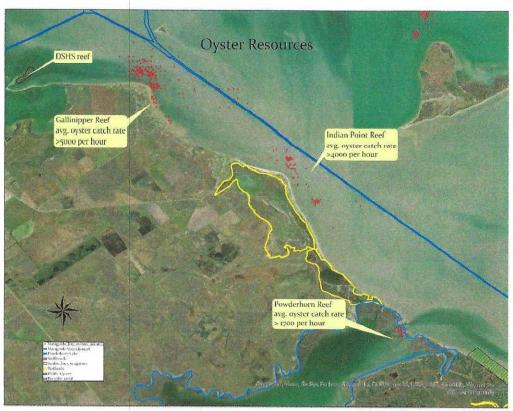


Figure 4. Oyster Resources map. Matagorda Bay Foundation

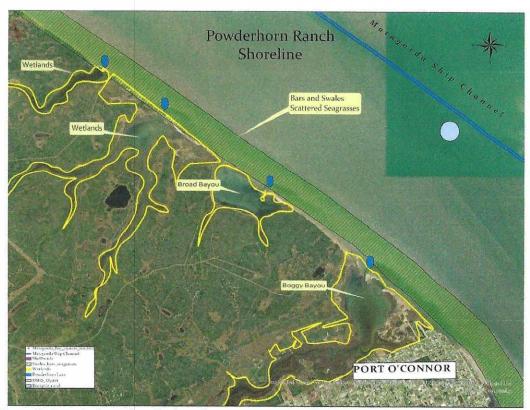


Figure 5. Powderhorn Ranch shoreline map. Matagorda Bay Foundation

DMMP with beneficial use plans that reduce impacts to oysters and other habitats, similar to those developed by resource agency staff and stakeholder groups in the 2009 FEIS, 4) Re-assess all oyster impacts and revise compensatory mitigation plans.

# Tidal Lakes and Bayous (Powderhorn Lake, Boggy bayou, Broad Bayou, Huckleberry/Big Dam bayou, un-named bayou, Old Town Lake, Bind bayou)

Several tidally influenced bayous/lakes are located along the western shore of Matagorda and Lavaca Bays (Figure). All are relatively shallow (~2 ft. deep) and connected to the bay via tidal inlets along the western shore. The combined surface area of these bayous and lakes is > 6000 acres and include, seagrasses/SAVs, shallow water habitat, oyster resources, and tidal marsh that serve as nursery, refuge, and forage areas for ecologically and economically important fish and wildlife species. (Figures1.and 5). Their close proximity to the Gulf of Mexico provides access for larval and juvenile fishes and crustaceans like red drum, southern flounder, black drum, blue crab, white shrimp, and brown shrimp. We believe unconfined placement areas adjacent to these areas will jeopardize the health and function of these biologically important areas.

The MBF and LBF believe wind and erosion will move sediment from NP and OP sites into these sensitive areas. Dredge plumes during construction and sediment transported by waves and tides may disrupt historic hydrology and restrict or impede flow at the tidal inlets. Sediments transported farther into these areas may increase turbidity, impact seagrasses and SAV's, and bury oysters and benthic organisms. Deposition of fine sediments would establish conditions that would result in long-term water quality impairments.

We were unable to locate modelling or assessment of potential project impacts to the >6000 acres of important estuarine habitats in these systems in the 2019 FEIS. Estimates of wetland or marsh loss in the 2019 FREIS recommend mitigation of 2.0 acres of wetlands impacts. Section 5.4.4 of the 2019 FEIS suggest wetland and seagrass impacts in the western bay will be offset by anticipated beneficial habitat expansion from other USACE projects located miles away (Colorado River Diversion and spoil placement during GIWW re-route). We believe substituting mitigation damages from this project for "expected" successes and habitat conversions at other project sites is misleading and wrong. We do not believe ecosystem services and benefits from habitats located miles from the project site will compensate for localized resource impacts and habitat losses in the MSCIP project area.

Recommendations- 1) hydrodynamic modelling of the bayous and tidal lakes located along the western shore of Matagorda and Lavaca Bays, 2) Modelling of sediment transport from unconfined placement areas and the fate of sediment dispersal along the western shore of Matagorda and Lavaca Bays, 3) Coordinate with resource agency staff and stakeholders to conduct comprehensive surveys of habitats in the tidal lakes and bayous along the western shore, 4) Re-assess habitat impacts and develop an appropriate compensatory mitigation plans.

## **Powderhorn Ranch Shoreline**

The Powderhorn Ranch Shoreline is a unique landscape comprised of almost 6 miles of shallow sand bars, swales, and sea grasses. The firm sand bottom and seagrasses make this area a popular destination for wade fishermen. Spotted seatrout, red drum, and sheepshead are common targets of anglers fishing the area. During the fall, Southern flounder are common on the Powderhorn Ranch sand bars as they prepare to migrate to the Gulf and spawn. The combination of sand bottom and exceptional water clarity make this area a popular destination for nighttime flounder gigging.

We believe erosion and sediment migration from dredge placement areas NP 2 and OP 2- Op 5 will cover this area with clay and soft sediments that will increase turbidity, impact seagrasses, and eventually overlay the unique sand bars and swales.

We understand this area is a candidate for a TPWD shoreline protection project that would include construction of a confined placement area along the Powderhorn Ranch shoreline that would receive dredge material for wetland creation. A project of this type, with properly constructed containment, would provide long lasting erosion control, enhance habitat, and maintain water quality on the bay side of the control structure.

We recommend USACE coordinate with TPWD and other agencies on possible BU applications near the project.

### Salinity

Expected changes in salinity from the deepening and widening of the Matagorda Ship Channel are noted in the Section 5.4.5 Cumulative Impacts-Conclusion of the 2019 FREIS - "the most substantial impact would be potential for increased salinity and tidal amplitude in the bay." The 2018 USACE Draft Feasibility and Environmental Impact Review of Completed Projects, section 5.7.1.2 reported "One effect of the TSP may be to allow the density current to transport a large volume of higher salinity Gulf water up the bay under certain conditions. The biggest effects are expected to occur following large freshwater inflow events when there is a strong salinity gradient from the upper to the lower bay. In this case, the deeper channel can be expected to reduce the time required for the density current to move higher salinity. Gulf water to Lavaca Bay. This can be expected to increase the average salinity in the upper Matagorda and Lavaca Bays." Estuarine salinity gradients determine the character and distribution of habitats and organisms in an estuary. The salinity and habitat gradient from upper to lower bay are important components of all estuaries and provide important nursery and/or refugium for most estuarine dependent organisms during their life cycles. Increased salinity is also a well-known factor in the distribution and occurrence of the oyster disease Dermosytidium (Dermo). Elevated salinity levels on oyster grounds have been documented as causes of high oyster mortality from bot Dermo and predation by snails (Culbertson 2008). The 2019 FREIS and other USACE documents acknowledge the project's effect on salinity but do not adequately address the impacts to oysters, habitats, or fisheries.

The Lavaca-Navidad River Authority (LNRA) is responsible for managing the freshwater

resources of the Lavaca and Navidad River watersheds. LNRA is currently developing plans to construct an off-channel reservoir to impound freshwater from the Lavaca River. Part of this process will likely include establishing different beneficial freshwater flow release criteria that may influence timing and quantities of freshwater releases to the bay. We do not believe the 2019 FREIS salinity models incorporated the combined effects of MSCIP and LNRA's plans when projecting changes to bay salinity. We recommend the USACE collaborate with LNRA to determine possible changes to water management strategies and incorporate these into salinity projections.

Recommendations – 1) Analysis and modelling of salinity conditions with current LNRA off-channel reservoir and modified water management plans, 2) The effects of reduced residence times on oyster habitats in Lavaca Bay, 3) the economic impacts of reduced salinity on commercial oyster harvest, 4) a compensatory plan to mitigate for oyster impacts, and 5) analysis of the impacts of reduced freshwater residence times on other ecologically and economically important fish, invertebrates and wildlife.

#### **Recreation and Tourism**

The shell beaches at Magnolia and Indianola Beaches are popular destinations for locals and tourists. These shell beaches are a unique feature along the Lavaca-Matagorda Bay shoreline and are often crowded with campers and beachgoers throughout the year. The 2019 FREIS DMMP includes two unconfined new placement sites (NP3 and NP4) and three unconfined operational placement areas (OP 6-8) adjacent to Magnolia and Indianola beaches. We believe dredge plumes, and sediment transported by wave energy and tides will affect water quality, change bottom composition, and cover the shell beaches with sediment.

The Indianola Fishing Marina is a multi-purpose bait and tackle/ grocery store and fishing pier located at the tidal inlet to Powderhorn Lake. The store serves tourists, beachgoers, and anglers that fish from the lighted pier at the mouth of Powderhorn Lake or launch vessels at the marina. Current DMMP plans and construction-related water quality issues will likely impact angler success with subsequent reductions in commerce at the marina.

We could not locate assessments or evaluations of project impacts to local tourism and recreational fishing-based businesses/economies.

Recommendations – 1) Modelling of sediment transport from unconfined placement areas and the fate of sediment dispersal along the western shore of Matagorda and Lavaca Bay, 2) Investigate impacts to tourism and recreational fishing, 3) Avoid impacts to unique landscape features and popular tourist destinations.

# Sea Turtles and Threatened and Endangered Species

According to Donna Shaver at the Padre Island National Seashore the March 2020 freeze event was the largest sea turtle cold-stunning event in U.S. history. Two hundred thirty-seven cold stunned turtles were collected in the Matagorda-Lavaca-Espiritu Sant-San Antonio Bay area. We believe the extent of this event merits a new Endangered Species Act Section 7 consultation before the project begins.

## Overarching Concerns and Mercury

We are concerned that much of the biological and environmental data used for the current 2019 FEIS was collected over a decade ago for development for the 2009 effort. It is common knowledge that storms, floods, drought, and freezes produce varying degrees of change to the structure, function, and biological health of coastal bays and shorelines. Since 2009 the central Texas coast has endured hurricanes, severe local weather events, floods, a drought of record, a recent coastal freeze event, and significant pollution event. We believe it is critical that USACE consider the cumulative impacts of these events on bay landscape and biota.

Of particular concern is the movement and dispersal of mercury laden sediments across the bay during storm events. Hydraulic dredging activities and placement of contaminated sediments in unconfined open bay disposal areas would potentially expose a much greater area of the bay to the effects of methylmercury contamination. The long-term effects on human health, bay health, and expense for government mitigation would be catastrophic.

#### References

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