NOVEMBER 2023

BARRIERS TO LIVING SHORELINE IMPLEMENTATION IN THE GULF OF MEXICO STATES

A SUMMARY DOCUMENT

Prepared by:
Sara Martin
Program Manager | Mississippi State University
Wetland Specialist | Mississippi-Alabama Sea Grant Consortium

TABLE OF CONTENTS

01 Abbreviations

02 The State Leads

03 Introduction

05 Gulf-Wide Living Shoreline Barriers

09 Scenarios that Result in a Living Shoreline Permit Denial

11 Scenarios that Make Obtaining a Living Shoreline Permit More Difficult

13 Regulatory Barriers that Make the Permitting Process Overly Complex

15 Barriers Preventing Property Owners from Wanting a Living Shoreline

19 Appendix I: Gulf-Wide Barrier Descriptions

24 Appendix II: Texas Barrier Descriptions

28 Appendix III: Louisiana Barrier Descriptions

30 Appendix IV: Mississippi & Alabama Barrier Descriptions

32 Appendix V: Florida Barrier Descriptions

01

ABBREVIATIONS

AL	Alabama	**LSLS**	Licensed State Land Surveyor
CBS	Coastal Boundary Survey	**MASGC**	Mississippi-Alabama Sea Grant Consortium
ERP	Environmental Resource Permitting	**MS**	Mississippi
FDEP	Florida Department of Environmental Protection	**MSAL**	Mississippi & Alabama
FL	Florida	**MSU**	Mississippi State University
FSG	Florida Sea Grant	**NWP**	Nationwide Permit
GBF	Galveston Bay Foundation	**SAV**	Submerged Aquatic Vegetation
GLO	General Land Office	**TNC**	The Nature Conservancy
GoM	Gulf of Mexico	**TX**	Texas
GW	Gulf-Wide	**UF**	Univeristy of Florida
LA	Louisiana	**USACE**	United States Army Corps of Engineers
LSG	Louisiana Sea Grant		

02

THE STATE LEADS

This project spanned the five states bordering the Gulf of Mexico: Texas, Louisiana, Mississippi, Alabama, and Florida. Therefore, the project team was made up of members from each state. Each member of the project team is an expert in living shorelines and living shorelines permitting for their respective state.

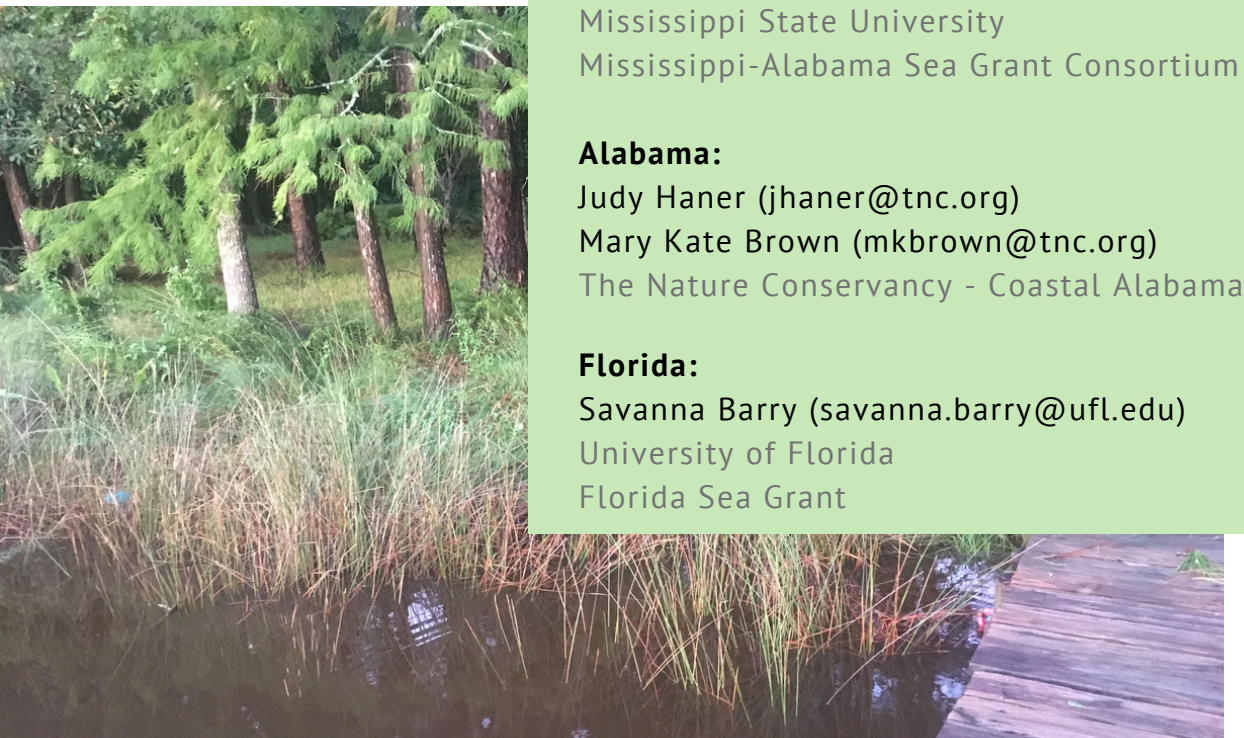
Texas:
Jessica Chappell (jessica.chappell@glo.texas.gov)
Kristin Hames (kristin.hames@glo.texas.gov)
Texas General Land Office

Louisiana:
Niki Pace (nlpace@lsu.edu)
Louisiana Sea Grant

Mississippi:
Eric Sparks (eric.sparks@msstate.edu)
Sara Martin (sara.martin@msstate.edu)
Mississippi State University
Mississippi-Alabama Sea Grant Consortium

Alabama:
Judy Haner (jhaner@tnc.org)
Mary Kate Brown (mkbrown@tnc.org)
The Nature Conservancy - Coastal Alabama

Florida:
Savanna Barry (savanna.barry@ufl.edu)
University of Florida
Florida Sea Grant



03

INTRODUCTION

This document discusses barriers to living shoreline permitting in each Gulf of Mexico (GoM) state as identified by the state leads at the time of this publication. Each state lead has extensive experience with living shorelines in their respective state.

This document is meant to aid in the creation of living shorelines guidance by identifying barriers that those seeking a living shoreline general permit (or state equivalent) might encounter, but by also proposing solutions that each state's lead can pursue in the future. These barriers are separated into five categories:

1) Gulf-Wide Living Shoreline Barriers

2) Scenarios that Result in Living Shoreline Permit Denial

3) Scenarios that Make Obtaining a Living Shoreline More Difficult

4) Regulatory Barriers that Complicate the Permitting Process

5) Barriers Preventing Property Owners from Wanting a Living Shoreline

04

INTRODUCTION

Each barrier in this document will be formatted as described below. Click "Barrier STATE1" to a read a more in-depth description of the barrier. You can also find these descriptions in the appropriate appendix at the end of the document.

Barrier STATE1**: A short statement describing a barrier to living shoreline implementation.**

Existing Solutions:

- Solutions to the barrier that can be used now to mitigate the barrier

Proposed Solutions:

- Potential solutions that can be pursued to address and lessen the barrier in the future

Funding information

This project was made possible by funding from the Gulf of Mexico Alliance through their Gulf Star Program. The contents of this document do not necessarily reflect the views and policies of the Gulf of Mexico Alliance or its partners.

MASGC Publication

This publication was prepared by the Mississippi-Alabama Sea Grant Consortium using federal funds under award NA22OAR4170090 from the National Sea Grant Office, NOAA, U.S. Department of Commerce. The statements, findings, conclusions and recommendations are those of the authors and do not necessarily reflect the views of the National Sea Grant Office, NOAA, U.S. Department of Commerce. MASGP-23-063.

05

GULF-WIDE LIVING SHORELINE BARRIERS

The following barriers were identified by state leads as common challenges across the Gulf of Mexico region rather than being specific to a single state. Each barrier is linked to an expanded description in Appendix I.

Barrier GW1**: The presence of submerged aquatic vegetation (SAV) restricts implementation of living shorelines.**

Existing Solutions:

- In some cases, the living shoreline can be redesigned to avoid impacts to SAV.

Proposed Solutions:

- Discussions with and between permitting agencies should occur about the trade-offs associated with potential SAV impact and shoreline protection. For example, an area with heavy boat traffic that is losing extensive amounts of marsh shoreline might also have extensive SAV near the shoreline edge. In these cases, it may be more environmentally beneficial to alleviate the marsh erosion at the expense of small impacts to the SAV.
- Regulatory agencies could clarify specific guidance such as the size of buffer zones and discuss potential variances for environmentally beneficial projects.

Barrier GW2**: If a property is along a special habitat, an individual permit may be required increasing the timeline and costs.**

06

Existing Solutions:

- Follow the full individual permitting process.

Proposed Solutions:

- Applicants should leverage how the living shoreline project will support the critical habitat or enhance it rather than impede their habitat and/or flow.
- Permitting agencies could allow for expedited reviews of environmentally beneficial projects by incorporating pre-approved allowances for special or critical habitat review criteria into general permits.

Barrier GW3: Local or regionally accessible plant nurseries are limited to non-existent in the Gulf States outside of Louisiana.

Existing Solutions:

- In Texas (TX), the Galveston Bay Foundation (GBF) has a private plant source that may be able to assist landowners in the upper coast of TX. For the mid- and lower TX coasts, plants are harvested from “borrow sites” and relocated to the project site; however, this involves additional permitting and agency coordination.
- Projects in several Gulf States have involved high schools, Master Gardener programs, gardening clubs, and other organizations to grow limited amounts of native plants for restoration. Protocols for growing these plants can be found here.

Proposed Solutions:

- Relevant groups should continue coordinating to learn of resources available to landowners.
- Extension professionals should communicate the need for locally-sourced plants during outreach activities.
- When applicable, groups could seek funding to start, support, and sustain a locally sourced native plant industry in each state.

07

Barrier GW4: The timeline to complete living shorelines permitting is too long, particularly in relation to hardened structures like bulkheads.

Existing Solutions:

- Encourage project designs that fall under United States Army Corps of Engineers (USACE) Nationwide Permits and begin early coordination prior to submitting an application to speed up permit processing.

Proposed Solutions:

- Permitting agencies could consider further exemption or pre-approval processes for environmentally beneficial projects that could expedite permitting.

Barrier GW5: Many property owners are unfamiliar with living shorelines, do not know where to start, or are overwhelmed by the process to implement one.

Existing Solutions:

- Many states have done outreach and extension with property owners and may have resources to share.
    - MASGC Living Shorelines Website
    - GulfLivingShorelines.com
    - Texas Living Shorelines Program
    - FloridaLivingShorelines.com

Proposed Solutions:

- Groups in each state should develop and fund technical assistance programs that can help guide property owners, contractors, and any other interested parties through all steps of conceptualizing, designing, permitting, and implementing living shoreline projects.
- Extension efforts should focus outreach activities on shoreline property owners.

- Extension activities should include sending information to shoreline property owners about living shorelines and who to contact with questions.
- Extension programs should work with municipalities, counties, and other local groups to share resources.
- Regulatory agencies could work with living shoreline professionals to learn which organizations they can recommend to shoreline property owners for help.
- Living shoreline professionals should conduct more contractor trainings so they are aware of living shorelines and can be informative to property owners.

Barrier GW6: Incorporating dredge materials into living shoreline projects is difficult due to testing requirements, poor guidance, and a lack of coordination between property owners, dredgers, and permitting agencies.

Existing Solutions:

- The state leads were not able to identify existing solutions.

Proposed Solutions:

- Coordination between the scheduling of dredgers, permitting agencies, and property owners could help alleviate this difficulty and lower the cost of living shoreline projects substantially.

09

SCENARIOS THAT RESULT IN LIVING SHORELINE PERMIT DENIAL

The following scenarios were identified by state leads in each state. Each is linked to an expanded description of the barrier in Appendices II-V.

TEXAS

Barrier TX1**: Many potential living shoreline sites have environmental conditions that require project components that do not fit within the USACE NWP 54 parameters and instead must go through the Individual Permit process.**

Existing Solutions:

- The GLO Permitting Service Centers advise applicants on permitting requirements. Local partners and stakeholders provide input on alternate designs.

Proposed Solutions:

- Alternative breakwater designs (low and wide; taller) may be effective in shallow waters.

FLORIDA

Barrier FL1**: Breakwaters cannot be installed alone (i.e., without associated planting) under the permit exemption.**

Existing Solutions:

- If appropriate, redesign the living shoreline to include a planting element.

Proposed Solutions:

- Agencies could allow discretion for the permitting officer to determine if a planting element should be required. For example, if reef breakwaters are installed in front of existing marsh, then requiring a planting element would be redundant.

Barrier FL2**: Most projects do not fit within the 10 ft limit from mean high water and therefore do not qualify for permit exemption.**

Existing Solutions:

- If appropriate, scale back the project to fit within 10 ft of mean high water.
- Apply for a permit type with fewer restrictions, such as an individual permit or a letter of consent.

Proposed Solutions:

- Regulators could modify the Florida small-scale living shoreline exemption language to be less restrictive.

SCENARIOS THAT MAKE OBTAINING A LIVING SHORELINE PERMIT DIFFICULT

The following scenarios were identified by state leads in each state. Each is linked to an expanded description of the barrier in Appendices II-V.

TEXAS

Barrier TX2**: Texas Administrative Code regulations restrict design features that are sometimes considered components of living shorelines in other states (e.g., land reclamation and groins).**

Existing Solutions:

- In Alabama, property owners must sign a living shoreline affidavit in the permit application in which they agree that they are not trying to reclaim any land gained.

Proposed Solutions:

- Provide technical guidance for projects that achieve desired goals under regulatory restrictions.

MISSISSIPPI & ALABAMA

Barrier MSAL1**: The USACE Mobile District prefers that living shoreline projects are designed to go out the minimum distance needed to be effective, rather than the maximum 30 feet allowed.**

Existing Solutions:

- When designing a living shoreline in Mississippi and Alabama, consider how far waterward of the mean high water line is necessary for a living shoreline project to be effective.
- Taking regulators on tours of existing sites or providing case studies of sites that are built to the maximum 30 feet allowed has been effective at allowing more flexibility in this area.

Proposed Solutions:

- Adjust regulations to explicitly allow structures and/or planting up to the maximum distance from the mean high water line.

FLORIDA

Barrier FL3**: If a living shoreline project includes beach nourishment, it can be disqualified from NWP 54 eligibility.**

Existing Solutions:

- Avoid the term “beach nourishment” for small-scale projects.

Proposed Solutions:

- Allow permitting officers to use their discretion to assess whether or not a beach enhancement in conjunction with a living shoreline is ecologically justifiable given the site context.

REGULATORY BARRIERS THAT COMPLICATE THE PERMITTING PROCESS

The following scenarios were identified by state leads in each state. Each is linked to an expanded description of the barrier in Appendices II-V.

TEXAS

Barrier TX3**: For the GLO lease, a coastal boundary survey (CBS) from a certified LSLS surveyor is required for a living shoreline project.**

Existing Solutions:

- In Mississippi, MSU Extension created a detailed mean high water survey methodology (can be found here) that state permitting agencies will accept in lieu of a traditional land survey.

Proposed Solutions:

- The Texas state leads will be including a detailed CBS process in their workshop materials for this project.

LOUISIANA

Barrier LA1**: Louisiana does not allow use of NWP 54 or any other general permits for living shorelines.**

Existing Solutions:

- Louisiana applicants may be eligible to use a Programmatic General permit for activities that cause only minor impacts to special aquatic sites, including vegetated wetlands.
- Louisiana applicants may use the Coastal Use Permit application, a joint application with the state and the USACE.

Proposed Solutions:

- The USACE New Orleans District and appropriate state agencies should work towards a joint general permit application that can accommodate small-scale living shoreline projects.

FLORIDA

Barrier FL4: **In many cases, property owners may need three separate permits (local, state, and federal) to implement a living shoreline.**

Existing Solutions:

- Accessible guidance will help property owners to understand what steps are needed for living shoreline implementation.
- Several other Gulf states (i.e., Mississippi and Alabama) have joint permit applications that could serve as examples for a joint permit in Florida.

Proposed Solutions:

- Regulatory agencies could revise the State Programmatic General Permit VI to better enable joint permitting, at least for state and federal permits.

BARRIERS PREVENTING PROPERTY OWNERS FROM WANTING A LIVING SHORELINE

The following scenarios were identified by state leads in each state. Each is linked to an expanded description of the barrier in Appendices II-V.

TEXAS

Barrier TX4: **There are no organizations to aid property owners consistently throughout the living shoreline process which can leave property owners overwhelmed.**

Existing Solutions:

- The GLO, Galveston Bay Foundation, Matagorda Bay Foundation, and Coastal Bend Bays and Estuaries Program are available to provide guidance and insight for navigating processes involved in implementing living shorelines, but are not able to manage the projects at a granular level.

Proposed Solutions:

- Texas could continue coordinating with nonprofits to explore solutions and continued networking among government entities, nonprofits, and landowners to look for potential opportunities for furthering cooperation and assistance.
- The Mississippi-Alabama Sea Grant Consortium built their living shoreline program to be a one-stop shop for property owners. It can serve as a model for other state programs.

Barrier TX5: While funding assistance is available for public entities to implement a living shoreline, funding for private landowners is extremely limited.

Existing Solutions:

- The GLO connects private landowners with entities and nonprofits that may have alternate funding sources.

Proposed Solutions:

- In Texas, the GLO will continue to act as a resource hub to connect landowners and organizations interested in building living shorelines. As funding or initiatives become available, the GLO will keep the living shorelines website up to date with opportunities and resources.
- State programs can pursue cost-share programs to offset some of the cost for private property owners.

Barrier TX6: There is a lack of knowledgeable contractors available to build living shoreline projects.

Existing Solutions:

- Texas A&M Corpus Christi has hosted contractor training workshops for living shorelines projects, with an emphasis on oyster structure.
- Many organizations (e.g., MSU Extension, GOMA, RAE) have hosted contractor trainings and created many resources geared towards contractors that may be helpful to contractors in Texas.
- Florida has an extensive contractor training program that can serve as a model for other states.

Proposed Solutions:

- GLO will continue to look for resources and coordinate with upcoming opportunities to educate contractors on living shorelines.

Barrier TX7: Though the use of oyster structures are encouraged, property owners and small-scale construction firms do not have access to these materials.

Existing Solutions:

- Small-scale living shorelines can use alternative materials.

Proposed Solutions:

- State programs could work together to create a materials cooperative and/or support "shuck and share" programs.
- Explore availability of bagged shell through oyster recycling programs conducted by the Galveston Bay Foundation and the Harte Research Institute.
- Living shoreline groups should coordinate with entities that create and sell oyster structure materials to evaluate their feasibility for use in landowner projects.
- Living shorelines groups should develop technical and cost-share programs for each state that can allow for experts to track down materials in bulk.

LOUISIANA

Barrier LA2: Much of the coast is rural and owned in large parcels by land holding companies rather than small-scale property owners.

Existing Solutions:

- The Louisiana Coastal Protection and Restoration Authority works with coastal landowners to implement restoration projects through the Louisiana Coastal Master Plan.

- Groups have partnered with land holding companies in Louisiana to pursue restoration projects.

Proposed Solutions:
- Living shorelines groups should conduct targeted outreach to coastal landowners to determine the best methods for protecting those areas of coastline.

MISSISSIPPI & ALABAMA

Barrier MSAL2: **Current regulations in Mississippi require property owners to pay an annual fee on any structures built for a living shoreline.**

Existing Solutions:
- Property owners agree to and pay the annual fee.

Proposed Solutions:
- Living shorelines groups should work with the relevant agencies to include residential property owners among the groups that are exempt from this fee.
- Living shorelines groups should work with the relevant agencies to include lease exemptions for environmentally beneficial activities, such as living shorelines.

Barrier FL5: **Traditional living shorelines are not feasible in communities that are highly canaled.**

Existing Solutions:
- As canals are maintained or managed, work with communities on hybrid options to enhance ecological function, such as seawall retrofits and upland buffer enhancements.

- Texas has examples of “retrofit” living shorelines that have been implemented along highly modified and armored residential shores. These can be found on our GLO living shorelines website case study map.

Proposed Solutions:

- Living shoreline groups should document case studies for retrofit and other unique living shorelines designs for modified shorelines.

20

APPENDIX I: GULF-WIDE BARRIER DESCRIPTIONS

GULF-WIDE

GW1. SEAGRASS PRESENCE

TX. Presence of seagrass in the project area often requires alterations to living shoreline design to avoid impacts to the seagrass, conducting habitat surveys, and post-construction monitoring to meet permitting requirements.

MS & AL. The permitting agencies do not allow any impacts to seagrass under the living shoreline general permit regardless of trade-offs with shoreline marsh protection.

FL. The Florida living shoreline permit exemption requires that all breakwater and planting elements remain at least 3 ft. away from any existing seagrass or other wetlands (e.g., mangrove and marsh). Impacts to seagrass are allowable only under an individual permit and mitigation fees would apply.

GW2. SITES ALONG SPECIAL HABITATS

MS, AL, & FL. If a property is along a special habitat (e.g., Gulf sturgeon habitat), a general permit may not be allowed regardless of the design. Living shoreline implementation in these cases would require more complicated, costly, and time-consuming permitting routes.

GULF-WIDE

GW3. LACK OF NATIVE PLANT NURSERIES

TX. For the majority of the Texas coast, there are no facilities to buy native wetland plants. The exception is in the Houston/Galveston area, where the non-profit GBF may be able to assist in sourcing cordgrass (*Spartina alterniflora*) from a private location. In all other cases, plants are harvested and relocated from a borrow site which involves extra permitting requirements.

MS & AL. There are no local sources for native marsh plants in coastal Mississippi and very few in the Gulf of Mexico region. Those that do exist sometimes source seeds from outside of the region. This lack can lead to delays in living shoreline implementation.

FL. There are a few, though not enough, native plant nurseries that produce salt-tolerant plants but many of them are commercial wholesalers and do not sell to individual homeowners. Many community groups grow and donate living shoreline plants but these are not consistently available.

GULF-WIDE

GW4. LIVING SHORELINE PERMITTING TIMELINE

TX. The timeline associated with implementing a living shoreline project is 1 to 2 years. A landowner can potentially build a bulkhead on their property within a month. Landowners are very concerned about erosion. Once the land has eroded, the new submerged area becomes property of the State and cannot be reclaimed by the landowner. Texas landowners are very concerned about losing their land to the State and want to take action as soon as possible to protect their property.

LA. The timeline associated with living shoreline permitting is significantly longer than bulkheads. Permitting a living shoreline project is conservatively estimated at 18 months but can extend to 2 years. This can be a significant obstacle to landowners interested in installing living shorelines.

MS & AL. Private property owners are often concerned about erosion and the potential for loss in the near-term (e.g., the upcoming hurricane season). The months it may take to obtain a living shoreline permit, hire a contractor, and install the living shoreline may be too long to adequately protect the property.

GULF-WIDE

FL. Following application submission, permitting timelines at the state level can be as fast as 30 days. However, the state permitting process usually takes 60-90 days due to multiple rounds of clarifications, especially for those new to the process. Review times for individual permits tend to be longer still. For federal permits, a typical timeline is between 60 days and 6 months for Nationwide Permits. For standard (individual) permits, timelines between 6-9 months are more common. Living shoreline permitting timelines of 1-2 years or more are not unheard of.

GW5. MANY PROPERTY OWNERS DON'T KNOW THE BASICS OF LIVING SHORELINES

TX. The majority of heavily developed, residential shorelines in TX are bulkheaded. Landowners see this as the "normal" precedent and are reluctant to install a living shoreline that they think may not be as effective as the neighboring bulkheads. If the shoreline is unprotected, erosion is often exacerbated by the neighboring bulkheads and landowners feel pressure to install a bulkhead on their property to mitigate the erosion.

LA, MS, & AL. Private property owners are unsure which state and federal agencies are involved in living shoreline permitting, where to start, or the order to do things in. This uncertainty can lead to hesitance in pursuing a living shoreline.

GULF-WIDE

LA. Private property owners need more demonstration projects to gain a hands-on understanding of living shorelines and how living shorelines can work in coastal Louisiana.

MS & AL. Private property owners are not familiar with the materials that can be used in a living shoreline or how hard materials like rip-rap can be considered a part of a living shoreline. This confusion can decrease the willingness of some property owners to install a living shoreline who want only the “green” elements.

FL. Florida’s coastline is highly variable across the state, making it difficult to capture the nuances of all the shoreline contexts and approaches as it varies so much by location (e.g., mangroves in south Florida versus marsh species in the Panhandle or variations in tide cycles influencing where oyster reefs best survive).

FL. Florida is a rapidly growing state with many coastal residents who only recently moved there. This means a high proportion of residents are unfamiliar with Florida’s natural communities and the coastal processes that living shorelines seek to emulate.

GULF-WIDE

GW6. INCORPORATING BENEFICIAL USE OF DREDGE MATERIALS INTO LIVING SHORELINES

MS & AL. Many living shoreline designs will benefit from fill to create an adequate shoreline slope for planting. Concurrently, dredge activities are occurring all along the coast. It would benefit dredgers and property owners if the dredged material was able to be placed along nearby living shoreline projects by reducing project costs. However, the coordination of these activities and regulations around the beneficial use of dredge materials preclude this from happening.

FL. Florida has very strict laws governing the quality of dredge material that can be used on shorelines (related to protecting the integrity and quality of beaches). Thus, there are few cases where estuarine sediments may be legally placed on shorelines, even if these shorelines are not beaches.

APPENDIX II: TEXAS BARRIER DESCRIPTIONS

TEXAS

TX1. To establish a successful living shoreline, many sites need components that do not fit within USACE NWP 54 limitations of 30 feet from the shoreline and 500 feet in length. This is often the case when a rock breakwater is needed. Texas bays tend to be high energy environments that require a hard structural component for the plants to flourish. Landowners who have money and time to invest in implementing a living shoreline have larger properties and often need more than 500 feet in length to protect property. Shallow water depth may necessitate breakwater installation further bayward than 30 feet.

TX2. The Texas Administrative Code restricts private landowners from utilizing certain components that are used in living shoreline projects in other state. For example, no groins can be built on private property and regulations regarding fill on state lands (i.e., no land reclamation).

TX3. The Texas Administrative Code requires a Coastal Boundary Survey (CBS) for all living shoreline projects. This survey costs thousands of dollars, requires hiring a licensed state lands surveyor (of which there are only a handful in the state), must be approved by the GLO survey department, and is a very lengthy and complicated process. The timeline for CBS process completion can be six months or more.

TEXAS

TX4. There are no entities in Texas that are able to help landowners at a granular level, and the "project management" required to construct a living shoreline project is overwhelming to many landowners. GLO provides overview and guidance, as does the Galveston Bay Foundation, but the landowner must track, coordinate, and complete all aspects of their project themselves (i.e., USACE permitting, Texas Parks and Wildlife Department permitting, GLO leasing, GLO survey, finding plants, hiring a contractor, hiring a LSLS surveyor, etc.). Most landowners find this overly burdensome, especially compared to the low level of effort needed to install a bulkhead.

TX5. Funding assistance for private landowners to build a living shoreline is extremely limited. Funding is easier for public entities to receive for living shoreline implementation.

TX6. Landowners and non-profits report that finding a contractor who can build living shoreline projects in TX is very difficult. While larger firms are used in implementing public, large-scale living shorelines, landowners state that finding individual contractors and smaller firms able to construct a living shoreline is very difficult. Also, the GLO cannot make recommendations regarding firms or contractors.

30

TEXAS

TX7. Texas resource agencies encourage the use of oyster structures in breakwaters as an alternative to rock to provide an additional habitat component to a project and encourage oyster growth. Use of oyster structures can be used to qualify the project for NWP 54. However, individual landowners and most small-scale marine construction firms do not have access to these structures (i.e., oyster shell bags, gabion, oyster castles, reef balls, etc.).

APPENDIX III: LOUISIANA BARRIER DESCRIPTIONS

LOUISIANA

LA1. The State of Louisiana objects to the use of certain nationwide permits in coastal Louisiana including NWP 54 for living shorelines. If living shorelines do not qualify for the Programmatic General Permit, they must go through the USACE individual permitting process which can be time consuming and burdensome.

LA2. Much of coastal Louisiana is owned in large tracts by land holding companies rather than individual or smaller-scale property owners. Much of the coastal marsh is held for land management activities like hunting and recreation. The motivations for protecting the shoreline can differ from smaller landowners with waterfront homes.

APPENDIX IV: MISSISSIPPI & ALABAMA BARRIER DESCRIPTIONS

MISSISSIPPI & ALABAMA

MSAL1. The USACE Mobile District prefers that living shoreline designs that go out the minimum necessary amount to protect the shoreline rather than the maximum 30 feet allowed under the permitting regulations. This can cause delays in the permitting process and necessitate a redesign of the living shoreline plans.

MSAL2. The MS Secretary of State office is legally considered the trustee of public lands in the state, including all submerged water bottoms. As such, activities on submerged water bottoms are required to be reviewed under Tidelands protocols. Among these, is the requirement for anyone installing structures on these lands to pay an annual fee on the structures. However, this requirement may deter small-scale property owners as the fee can be high depending on the structure and the agreement with the state is transferred with the sale of the upland property.

APPENDIX V: FLORIDA EXPANDED BARRIERS

FLORIDA

FL1. Living shoreline exemption only allows breakwaters if plants are also installed. In scenarios where a breakwater would achieve the project goals without planting (e.g., creating oyster habitat by installing an oyster reef), these applicants would have to apply for more costly and intensive permitting processes.

FL2. State-level exemption is highly restrictive, only allowing work 10 feet from the mean high water line. This is not sufficient for many sites. Most projects calling for designs beyond the 10 foot restriction require an individual permit from the state. This might deter private property owners as the individual permit is significantly more costly and time consuming than the state-level exemption.

FL3. If a living shoreline is being built in conjunction with a beach nourishment project, it can disqualify the project from NWP 54 eligibility. It also can push the project into the Joint Coastal Permit with the Florida Department of Environmental Protection (FDEP) Beaches and Inlets division rather than a standard environmental resource permitting (ERP) with the Environmental Resources division.

FL4. In many cases, a property owner might need three different permits (i.e., local, state, and federal) for a living shoreline. The current SPGP VI agreement between USACE and FL has language that precludes the state from issuing joint state and federal permits. Additionally, local permitting rules in certain counties (e.g., Sarasota, Pinellas, Hillsborough, etc.) add a layer of complexity.

FLORIDA

FL5. Historical dredge and fill activities have created highly modified shorelines (i.e., extensively canaled communities) where traditional living shorelines may not be feasible.