Project Summary

Oyster reefs provide food, cover, shelter, spawning sites and nursery areas for marine and estuarine fish and invertebrate species, and have been declared "essential fish habitat" by the South Atlantic Fishery Management Council (SAFMC) and the National Marine Fisheries Service (NMFS). The loss of oyster reefs along the Southeastern U. S. Coast since European settlement is documented within the historical record and confirmed through visual surveys conducted by the Georgia Department of Natural Resources.

The University of Georgia in partnership with the 501(c)3 non-profit organizations Save Our Legacy Ourself and Shell to Shore, proposes to place clean suitable cultch materials between the mean low water line and the marsh edge to promote the growth of oysters (Figure 1). The sites include Cabretta and Big Hole Creeks from their mouths to heads. We propose to place cultch materials at 100 locations within the sites (See attached Appendix). Each cultch location will consist of 2-3 plots approximately 15 square feet in area (5 feet long x 3 feet wide). Signage will be posted at access points to the sites to minimize the potential of vessel interactions and to post the area as closed to shellfish harvesting. Materials to be used as cultch in this project include wooden pallets to provide a foundation for place cultch on and oyster shell (bagged and loose).

The 100 plots will be approximately 50 square feet each (5000 square feet total, ~0.1 acres; Figures 2 & 3). The cultch materials at each location will total no more than 140 cubic feet (<5 cubic yards each, 500 cubic yards total) and will include bagged or loose oyster shell on pallet foundation up to 18" tall. Construction is proposed to begin in Spring of 2026. All materials will be placed by hand. Figures 2-4 show approximate site locations for the 100 plots, exact locations will be determined by selection based on traditional ecological knowledge (e.g. recounting of culturally-important oyster locations historically) and coupled ocean-oyster growth model that predicts currents, water levels, and optimal sites for oyster growth that is being developed as part of this project.

Through this project approved cultch materials will be deployed at plots within Cabretta and Big Hole creek sites on the oceanward side of Sapelo Island on the coast of Georgia to promote the recruitment of wild oysters for the establishment of new reefs or enhancement of existing reefs in state waters. The proposed sites lie on inter-tidal banks of Cabretta and Big Hole Creeks owned by the state of Georgia (Figure 4). This site consists of intertidal sand flats adjacent to riprap, and pockets of salt marsh (Figure 5).

Goals

1. Restore habitat by the creation of "essential fish habitat" as described by SAFMC and NMFS.
2. Restore culturally and historically important oyster reefs adjacent to the Hogg Hummock community.
3. Enhance existing reefs by providing additional substrate for oyster spat recruitment.
4. Improve water quality within the vicinity.

Methods and Materials

Project Sites

A Letter of Permission (LOP) will be requested for each the restoration within Cabretta and Big Hole Creeks sites on Sapelo Island as they are chosen. A NWP 27 permit has already been obtained for all sites. All sites included in this project will meet the following requirements:

1. All sites are located on tidal bottom waters owned by the State of Georgia. All sites in Big Hole Creek will be located on the bank opposite of the upland.
2. Reefs will either be constructed in the inter-tidal zone typically within 20 feet of the adjacent vegetative edge, or in subtidal areas with adequate water. All sites will be situated in a manner that will not impede navigation within these waterways.

3. Signage will be placed at access points to both areas to inform constituents of the benefits of oyster restoration enhancement, minimize the potential of vessel interactions and indicate the site is closed to shellfish harvesting.

4. Pre and post cultch deployment photo documentation will be made of each site. Additionally, post cultch deployment monitoring of spat recruitment, reef growth, reef footprint, and shoreline stabilization will be conducted at each site at least biannually and after major storm events until the reef is self-sustaining and deemed stable under all normal conditions. Monitoring will be conducted primarily via drone with some direct measurements for field validation. Stability will be defined as the installed oyster units are not being buried in mud and active growth is occurring. Maintenance of plots will consist of adding additional shell to areas that are being buried or removal of any debris that may accumulate.

Cultch material

Proposed cultch materials include natural and man-made materials excluding unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.) consistent with the requirements of United States Army Corps of Engineers Nationwide Permit #27 (Aquatic Habitat Restoration, Enhancement, and Establishment Activities) and section 307 of the Clean Water Act. Examples of suitable materials include but are not limited to Oyster shell (bagged and loose) and bundled wood mounds. In the event non-shell cultch material is determined to be unsuccessful at a given site it will be removed. Unsuccessful will be defined as (a) material not exhibiting recruitment of oyster spat and/or barnacles within 24 months of deployment (b) material (e.g. oak bundles) becomes unstable.

Distance of the projects into the waterway from MLW

All restoration/enhancement projects will be above MLW in the intertidal zone (see figure 1).

Distance of the projects from the navigable channel

All restoration/enhancement projects will be above MLW in the intertidal zone (see figure 1). However, the distance of each project from the navigational channel will be provided when requesting a LOP for each project.

Depths of waterway at MLW

Depth of the waterway at MLW for all sites is generally between 1 and 3 feet. Depth of waterway at MLW will be obtained for each location and recorded prior to installation.

Total width of the waterway from MLW to MLW

The total width of the waterway from MLW to MLW varies between 5 and 30 feet across all plot locations. Total width at MLW will be obtained through drone surveys for each plot location prior to installation and recorded.

Distance to the next structure to either side of the proposed project

Proposed project will not include the construction of structures. However, if needed the distance to the nearest structure to either side of proposed projects will be provided as sites are finalized. Generally, there are no structures within either site except for the Cabretta Bridge.

Adherence to the Coastal Marshland Protection Act of 1970

The following statements address the criteria set forth in O.C.G.A. 12-5-286 (g) of the *Coastal marshland protection Act of 1970*:

(1) The requested permit will not unreasonably obstruct or alter the natural flow of navigation water due to the small and "natural" characteristics of oyster mounds.

(2) The requested permit will not increase erosion, shoaling of channels, or stagnant areas of water. In fact, construction of viable oyster reefs will likely improve conditions in regards to these factors by further stabilizing sediment naturally, and improving water quality conditions through the natural water filtration of the oyster reef.

(3) The requested permit will not interfere with the conservation of, but will rather promote the conservation of fish, shrimp, oysters, crab, clams, and other marine life by creating habitat that has been declared as "essential fish habitat" by SAFMC and NMFS.

Project Drawings

Project drawings are provided in Figures 1-5.

Site Plans

Site plans are provided in Figures 2-4.

Marshland Component of the Project

Existing features such as structures, boardwalks, etc. within jurisdiction.

When requesting a LOP for specific sites, a map or drawing will be provided that shows relative proximity of all existing features such as structures, boardwalks, etc. within jurisdiction.

Proposed features such as structures, boardwalks, etc. within jurisdiction.

There will be no proposed features such as structures, boardwalks, etc. within jurisdiction.

Dimensions of the proposed Structure/project that is in the marshland component of the project.

No project will extend into the waterway (see figure 2). When requesting a LOP for specific sites, distance from the navigable channel, and the total width and depths of the waterway from MLW to MLW will be provided.

Total square footage of proposed project footprint within jurisdiction and total square footage over vegetated marshlands.

When requesting an LOP for a specific site, the total square footage of the proposed project footprint will be provided. Total square footage for entire project will be 5000 square feet. All sites will be in the intertidal zone (see figure 1).

Section/Elevation views showing a cross-section view of the project using the same water elevations as the Site Plan.

The cross section view and elevation will be the same for each project. The cultch material will provide no more than 1m vertical relief. (see figure 2).

Depth of water at the water-ward face of the proposed project, the dimensions and names of structures supported on floats or piles, the distance between pilings, the number of pilings, the types of materials used.

All projects will be in the intertidal zone (see figure 2). There will be no structures, floats or piles associated with these projects.

Upland Component of the Project

There will be no Upland Component to any proposed projects.

Deed or other legal instrument:

Sites will be located adjacent to upland properties owned by the State of Georgia. Examples of state-owned lands would include public shellfish areas, barrier islands, hammocks and state parks. See attached letter from the Georgia Department of Natural Resources providing permission for oyster reef on state-owned lands.

Adjoining Landowners

The project does not have any adjoining landowners. All activities are on state lands and between MLW and MHW.

Zoning Letter & Signed Drawings from Local Governments

Letters from the appropriate zoning authorities insuring that the proposed projects will not violate any zoning ordinances have been provided (see attachments).

Non-refundable Application Fee

Application fee for a moderate project ($250) is included in this application made out to the Georgia Department of Natural Resources.

Alternative Analysis

No alternative analysis because all activities are water dependent (oysters).

Landfill or Hazardous Waste Statement

All sites are within MLW and MHW and are not over landfill or hazardous waste sites based on inquiry with local authorities.

Erosion and Sedimentation Statement

The project will be conducted in compliance with applicable erosion and sediment control responsibilities. No disruption of existing grade will be conducted.

Public Interest Statement

Intertidal oyster beds are considered "Essential Fish Habitat (EFH)" by SAFMC and NMFS. EFH is defined as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity" (16 U.S.C. 1802 (10)). Section 303 (a) (7). Oyster habitat is deemed essential to the enhancement of commercial and recreational species including oysters, shrimp, clams, fish, crabs, and several other species. Oyster reefs enhance fishing opportunities

This project will enhance oyster reefs on Sapelo Island. Restoration of these habitats will improve habitat for oysters as well as the surrounding lowland forest. By strategically placing oyster reefs in areas that channel flood waters away from the local community and that increase oyster growth and survival, the restoration will enhance the local ecosystem and restore culturally important oyster reef locations. Oyster reefs will be located to improve ecosystem condition, but also to guide floodwaters away from critical areas. These two fundamental objectives will not only enhance resilience to flooding and other climate hazards, but will also improve fishery production, allow for improved farming on historical lands, and potentially provide other recreational or cultural benefits.

Saltmarshes and oyster reefs are both regionally and culturally important for coastal Georgia and its Gullah Geechee communities. These communities are deeply connected to salt marsh ecosystems, often relying on them for sustenance and cultural connection. This restoration project will enable the community of Hog Hammock to resume many culturally important practices such as oyster harvesting and farming while also improving resilience to flooding. This project will further serve as a model for restoration across the southeast region and throughout the Gullah Geechee corridor.

Additionally, these projects fortify the state's efforts focusing on the management and conservation of marine life, wildlife, and natural resources through habitat restoration and enhancement. The granting of this permit will not in any way interfere with the management and conservation of marine life, wildlife, or any other resources. There will not be any unreasonably harmful or increased erosion, shoaling of channels, or stagnant areas of water as a result of these projects. These projects will reduce erosion / sedimentation and assist with bank stabilization.