



GOMESA PHASE II PROJECT FUNDING

Request for Funding FY2026

Submission ID: #202509301366

PROJECT SUMMARY

1. Title of Project

Enhancing Coastal Trails and Conservation Education in Moss Point, Jackson County

2. Location of Project

The Pascagoula River Audubon Center 5107 Arthur Street Moss Point, MS 39563

3. Requesting Organization:

National Audubon Society

4. Requesting Agency Representative

a. Name:

Mary Rodgers

b. Phone:

228.475.0825, Ext. 1004

d. Email:

mary.rodgers@audubon.org

c. Address:

5107 Arthur St

Moss Point Mississippi

5. Funding Requested:

\$499821.00

6. Have any other State or Federal funding sources been identified for the project?

No

7. If yes, enter amount and source of additional funds:

\$499821.00

Source of Additional Funds:

8. Total Project Funds

\$499821.00



ENHANCE ★ PROTECT ★ CONSERVE

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9. Provide Brief Project Description/Overview:

Runoff, habitat loss, and rising flood risks threaten both ecological integrity and public safety across Moss Point, Mississippi's coastal areas. At the Pascagoula River Audubon Center (PRAC), pedestrians, including wheelchair users and families with young children, must currently share the entry drive with vehicles, creating unsafe conditions and limiting access to nature. The terrain does not meet ADA standards, restricting opportunities for outdoor learning and the health benefits associated with nature exposure (Jiménez, Menéndez, & Valencia, 2021; Nejade et al., 2022). This proposal offers a unified solution that integrates:

- Safe public access
- Environmental education
- Habitat restoration
- Workforce development

Led by Audubon Delta and PRAC, in partnership with the City of Moss Point, Jackson County, Mississippi State University Coastal Conservation Service, and the Moss Point School District, the project will deliver three major infrastructure improvements:

- A 250-foot gravel-pave walkway with watershed and water quality interpretive stations.
- A 200-foot extension of the observation pier, adjacent to a proposed marsh restoration
- Restoration of .26 acres of marsh habitat

10. LIST Project Goals/Objectives:

Project Goals, Objectives, and Metrics

Goal 1: Provide Safe, Universal Access to Nature

To promote inclusive access to coastal habitats, the project will implement several key improvements.

Objective 1.1: Construct a 250-foot ADA-compliant GravelPave walkway that meets federal slope and width standards that includes benches at key intervals to allow rest for individuals with limited mobility.

Objective 1.2: Reduce safety risks along the shared entry drive to improve access and visibility.

Objective 1.3: Build three interpretive stations and two 10 × 10 water-testing decks that explain the watershed's flow from upland runoff through woodland swamp and tidal marsh to Rhodes Bayou.

Objective 1.4: Construct a 200-foot observation pier with an octagonal end to provide safe, elevated access to tidal marsh and deep-water inlet areas for education, recreation, and restoration viewing.

Goal 2: Restore and Enhance Coastal Marsh Habitat

Objective 2.1: Propagate and plant native marsh species to stabilize shoreline and improve habitat quality.

Objective 2.2: Monitor restoration success through survival rates, water quality data, and biodiversity indicators.

Goal 3: Develop the Next Generation of Conservation Professionals

To foster career pathways in environmental stewardship, the project will engage high school students in experiential learning.

Objective 3.1: Engage 50 to 75 high school students annually in STREAM (Students Tackling Runoff, Ecology, Aquaculture, and Microplastics) and GRITS (Green Resilient Infrastructure Technology Skills) programs.

Objective 3.2: Provide authentic workforce experiences in habitat restoration and green infrastructure.

Success will be measured by student participation in water sampling, and ecological monitoring, documented through program records, and the completion of annual water-quality datasets and habitat restoration reports submitted by student teams.

11. Which of the following authorized uses set forth in the GOMESA Act does this project fall under? Explain SPECIFICALLY and in detail how the project meets the required criteria. Check all that apply - At least one must be checked.



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(A) Projects and activities for the purposes of coastal protection, including conservation, coastal restoration, hurricane protection, and infrastructure directly affected by coastal wetland losses

- The project includes habitat restoration along trail margins, which improves water filtration, stabilizes soil, and supports pollinators and wildlife—key components of coastal restoration and conservation.
- The elevated boardwalks and ADA-compliant trails are designed to reduce erosion and protect sensitive wetland areas, directly addressing infrastructure challenges caused by coastal wetland losses.
- By guiding public access through ecologically sensitive areas, the project helps prevent further degradation and supports long-term coastal resilience.

(B) Mitigation of damage to fish, wildlife, or natural resources.

- The restoration of native vegetation and protection of sensitive habitats mitigates damage to local wildlife and natural resources.
- The STREAM and GRITS programs engage students in water sampling and ecological monitoring, which contributes to the early detection and mitigation of environmental stressors affecting fish and wildlife.
- The project's design minimizes human impact on vulnerable ecosystems, helping to preserve biodiversity in the Pascagoula River watershed.

(C) Implementation of a federally-approved marine, coastal, or conservation management plan

- The project aligns with Audubon's Gulf Coast conservation strategies, which are integrated with federally supported initiatives such as NOAA's coastal resilience and habitat restoration plans.
- PRAC offers the GRITS and STREAM programs which support implementation of conservation education and monitoring practices that reflect federal priorities.
- The boardwalk and trail system are part of the City of Moss Point's revitalization plan, which incorporates conservation



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goals consistent with broader federal and state coastal management frameworks.

(D) Mitigation of the impact of Outer Continental Shelf activities through funding of onshore infrastructure projects.

This project directly supports GOMESA Category (D) by funding onshore infrastructure that mitigates the environmental and community impacts of Outer Continental Shelf activities. The construction of an ADA-compliant observation pier, walkway, and decks enhances safe public access to sensitive coastal areas while reducing erosion and runoff through stormwater-friendly design. Additionally, marsh restoration activities stabilize shoreline habitat, improve water quality, and increase resilience to sea-level rise and storm surge—conditions exacerbated by offshore energy development. These infrastructure improvements serve both ecological and educational purposes, ensuring long-term community benefit and stewardship.

12. Project Timetable/Milestones:

Project Timeline and Milestones

Phase 1: Planning and Design (April - September 2026)

PRAC and its partners will conduct site surveys and finalize ADA-compliant designs for the observation pier, trails, benches, rest stations, and interpretive features. Deliverables will include construction plans, habitat impact analysis, and coordination with engineering consultants. This phase ensures all infrastructure and restoration components meet accessibility, environmental, and permitting standards.

Milestones:

- Site surveyed and design finalized
- Construction plans completed
- Habitat impact analysis submitted

Phase 2: Permitting and Engagement (October 2026 - January 2027)

PRAC will apply for all necessary environmental and construction permits, including USACE Section 404/10, MDMR, MDEQ, and local floodplain compliance. Staff will coordinate with Jackson County and the City of Moss Point to finalize the construction schedule and engage community stakeholders.

Milestones:

- Permits submitted and approved
- Construction timeline finalized
- Community engagement initiated



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Phase 3: Construction and Installation (February - July 2027)

PRAC will oversee contractors and trained volunteers to construct the 250-foot ADA-compliant GravelPave walkway, install benches, interpretive stations, water-testing decks, and extend the observation pier. This phase will also include installation of safety features and signage.

Milestones:

- Walkway, decks, and pier constructed
- Interpretive infrastructure installed
- ADA and safety features completed

Phase 4: Habitat Restoration and Education Launch (August - November 2027)

PRAC and a marsh restoration contractor will restore approximately 0.26 acres of marsh habitat using greenhouse-grown native plants. The STREAM and GRITS programs will launch during this phase, engaging students in restoration, water quality testing, and ecological monitoring.

Milestones:

- Marsh restoration initiated and completed
- STREAM and GRITS programs launched
- Student participation and data collection underway

Phase 5: Outreach, Monitoring, and Evaluation (December 2027 - March 2028)

PRAC staff, educators, and the marsh restoration contractor will host public events, collect ecological and visitor data, and evaluate project outcomes. A final report will be produced summarizing infrastructure performance, restoration success, and educational impact.

13. Project Timing

Short-term (3 year or less)



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APPLICATION SUMMARY QUESTIONNAIRE

14. Current status of architectural/engineering plans & specifications for this project (if applicable):

Group 1:

Group 2:

NA

Paid for

15. In what way does this project meet the goals and objectives of the Department of Marine Resources, which includes enhancing, protecting and conserving the marine interest of Mississippi for present and future generations.?

- This project reflects a deep commitment to the long-term health and accessibility of Mississippi's coastal ecosystems. Located at the Pascagoula River Audubon Center, the initiative enhances public access to Rhodes Bayou and its surrounding tidal marshes. These areas are ecologically rich and culturally significant to the Moss Point community.
- By constructing ADA-compliant infrastructure and restoring native marsh habitat, the project directly contributes to the Department of Marine Resources' mission to protect and conserve marine interests for both current residents and future generations. The observation pier and walkway not only provide safe access to sensitive environments but also serve as platforms for education, stewardship, and scientific inquiry.
- The restoration of 0.26 acres of marsh habitat using greenhouse-grown native plants stabilizes shoreline soils, filters runoff, and improves resilience to storm surge, addressing both ecological and infrastructural vulnerabilities. These efforts mitigate the cumulative impacts of offshore activities and climate change, while reinforcing the Department's goals for habitat conservation and coastal protection.
- Through the STREAM and GRITS programs, the project invests in the next generation of conservation professionals. Students from local high schools will gain hands-on experience in water quality testing, ecological monitoring, and habitat restoration. These are skills that align with Mississippi's vision for a knowledgeable, engaged, and environmentally literate coastal workforce.
- This project is more than infrastructure, it will create an impact for future generations. This project ensures that the marine interests of Mississippi are not only preserved but actively cared for by the communities who live alongside them.

16. Estimated number of years to completion:

2

17. Estimated Completion Date:

March 2028

18. Prioritize if your agency has submitted multiple projects:

NA



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BUDGET

Category	Total
Salaries	91108
Travel	
Architecture & Engineering	
Legal	
Consulting	65000
Construction	223000
Site Work	7500
Equipment	55000
Indirects	55213
Other	3000
Total	499821

Attachments

1. audubon-prac-grant-gomesa-final.pdf

I hereby certify under penalty of perjury that all information contained in this application packet is true and correct. I have not knowingly or intentionally provided any false information. I understand that a false statement on this application may be grounds for rejection of my application or termination of the award. In addition, a false statement may be punishable under applicable state or federal laws, which may also result in a fine and/or imprisonment.

I certify that the above referenced agency / entity has given me the authority to submit this application.

Name

Phone

Date

Caitlin Lill

7739514900

09/29/2025



Pascagoula River
Audubon Center

**GOMESA Phase II Project Funding:
Enhancing Coastal Trails and Conservation Education in Moss Point, Jackson County**



Project Manager:
Mary Rodgers, Ed. D.
Senior Center Manager
Pascagoula River Audubon Center
5107 Arthur Street
Moss Point, MS 39563
mary.rodgers@audubon.org
228-875-0825

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Executive Summary

“Enhancing Coastal Trails and Conservation Education in Moss Point, Jackson County,” led by the National Audubon Society through the Pascagoula River Audubon Center (PRAC), in partnership with the City of Moss Point, Jackson County, Dr. Mark LaSalle, Ph. D., the Moss Point School District proposes a multi-phase infrastructure and habitat restoration initiative to address pressing environmental and public safety challenges in Moss Point, Mississippi. This GOMESA-funded project enhances ADA-compliant access, restores marsh habitat, and supports environmental education and workforce development.

Key deliverables include:

- Installation of a 250-foot gravel-pave walkway with interpretive watershed stations to enhance stormwater management and inclusive access through the woodland marsh.
- Construction of a 200-foot observation pier extension with water quality monitoring stations to support student research and improve safety and tourism.
- Restoration of 0.26 acres of coastal marsh, including native plantings and hydrologic improvements to support biodiversity, improve resilience, and provide hands-on learning opportunities.

The initiative integrates nature-based and sustainable solutions to improve public health, climate resilience, and ecological integrity. It also strengthens student engagement through STREAM and GRITS programs, preparing 50–75 high school students annually for careers in conservation. By aligning with GOMESA goals and Audubon’s Flight Plan, this project positions Moss Point as a regional leader in community-based restoration and inclusive environmental stewardship.

Description

Coastal communities in Moss Point, Mississippi face increasing threats from runoff, habitat loss, and flooding. At the Pascagoula River Audubon Center (PRAC), limited pedestrian infrastructure forces visitors to share vehicle pathways, creating unsafe conditions and restricting access for wheelchair users and families. The terrain fails to meet ADA standards, limiting outdoor learning and wellness opportunities.

Project Overview

“Enhancing Coastal Trails and Conservation Education in Moss Point, Jackson County,” offers a unified solution that integrates:

- **Safe public access** through ADA-compliant infrastructure
- **Environmental education** via interpretive stations and student programs
- **Habitat restoration** of degraded marshland
- **Workforce development** through hands-on training for local youth

Infrastructure Improvements

- **Gravel-Pave Walkway (250 ft):** Includes interpretive stations focused on watershed health and water quality.
- **Observation Pier Extension (200 ft):** Enhances access to marsh views and supports educational programming.
- **Marsh Restoration (0.26 acres):** Revives native habitat and improves flood resilience.

Educational Impact

The project supports the STREAM and GRITS programs, engaging 50–75 high school students annually in water sampling, habitat restoration, and citizen science. These experiences build scientific literacy and prepare students for careers in environmental science and conservation.

Outcomes and Alignment

This initiative delivers measurable benefits in:

- **Public health** through safe nature access
- **Environmental sustainability** via habitat restoration
- **Workforce readiness** through youth training

The project directly supports GOMESA goals by restoring coastal resources, reducing habitat damage, and building resilient infrastructure. It also advances Audubon’s Flight Plan by expanding protected habitat, fostering inclusive engagement, and generating inclusive science practices.

Introduction

Runoff, habitat loss, and rising flood risks threaten both ecological integrity and public safety across Moss Point, Mississippi's coastal areas. At the Pascagoula River Audubon Center (PRAC), pedestrians, including wheelchair users and families with young children, must currently share the entry drive with vehicles, creating unsafe conditions and limiting access to nature. The terrain does not meet ADA standards, restricting opportunities for outdoor learning and the health benefits associated with nature exposure (Jiménez, Menéndez, & Valencia, 2021; Nejade et al., 2022). This project, "Enhancing Coastal Trails and Conservation Education in Moss Point, Jackson County," offers a unified solution that integrates:

- Safe public access
- Environmental education
- Habitat restoration
- Workforce development

Led by Audubon Delta and PRAC, in partnership with the City of Moss Point, Jackson County, Dr. Mark LaSalle, Ph. D., the Moss Point School District, and a marsh restoration and environmental education consultant, the project will deliver three major infrastructure improvements:

- A 250-foot gravel-pave walkway with watershed and water quality interpretive stations.
- A 200-foot extension of the observation pier, adjacent to a proposed marsh restoration
- Restoration of .26 acres of marsh habitat

The project will be completed in five phases, within the approved budget. Additionally, this project supports student workforce development through the STREAM (Students Tackling Runoff Ecology Aquaculture and Microplastics) and GRITS (Green Resilient Infrastructure Technical Skills) education programs, which annually involve 50 - 75 high school students in water sampling, habitat restoration, and citizen science. These experiences build scientific literacy and prepare students for careers in conservation and environmental science. By integrating access, education, and restoration, this project delivers measurable outcomes in:

- Public health
- Environmental sustainability
- Workforce readiness

It positions Moss Point as a model for community-based conservation and climate resilience. This initiative directly supports GOMESA goals by restoring coastal resources, reducing habitat damage, and building resilient infrastructure that strengthens community ties and supports nature-based tourism. It also advances Audubon's Flight Plan by expanding protected habitat, fostering inclusive engagement, and generating actionable science.

Statement of Need / Problem

The Pascagoula River Audubon Center (PRAC) must take coordinated action in three key areas - safe public access, tidal-marsh restoration, and field-based education - to protect habitat, reduce flood risk, and ensure equitable use of natural spaces for residents, students, and visitors across the Gulf Coast.

1. **Safe public access** - PRAC's main entrance and visitor pathways present concerning safety and accessibility barriers. People who use wheelchairs, walkers, or strollers and families with small children must share the entry drive with vehicles. The entrance and driveway currently consist of loose gravel and uneven grades, which create slip hazards and limit traction for mobility devices. This surface fails to meet Americans with Disabilities Act (ADA) standards, which require firm, stable, and slip-resistant surfaces, and therefore denies outdoor access to many residents and visitors. Community members and staff have repeatedly reported the need for safe walkways and resting stations for individuals with limited mobility.
2. **Tidal-marsh restoration** - Healthy marshes buffer storm surge, filter pollutants, and provide critical habitat for fish and birds. Along the Gulf Coast, marsh loss accelerates because of altered hydrology and sea-level rise, weakening natural flood protection and water quality. Erosion and vegetation loss are evident along Rhodes Bayou adjacent to PRAC, where storm events and legacy infrastructure have fragmented marsh edges and reduced their flood-absorbing capacity. Restoring marsh habitat at PRAC will stabilize soils, improve filtration, and support biodiversity while demonstrating nature-based solutions that meet Mississippi GOMESA priorities (Rowland et al., 2025).
3. **Universal, field-based education** - Peer-reviewed research shows that universal design of outdoor spaces improves health and safety outcomes for people with disabilities. Firkin et al. (2024) found that park and playground design that follows accessibility standards supports physical activity and social participation, underscoring the importance of ADA-compliant paths, benches, and related infrastructure for equitable access and public health. Direct, hands-on contact with healthy wetlands also improves cognitive function, reduces stress, and supports physical activity (Jiménez et al., 2021; Nejade et al., 2022). This project integrates safe public access, watershed education, and visible habitat restoration with student workforce training through GRITS and STREAM, including two new 10 × 10 water-testing decks that create permanent outdoor classrooms for collecting and analyzing water-quality data.

PRAC and regional partners will meet these needs by constructing the 250-foot ADA-compliant walkway with three interpretive stations, adding two water-testing decks for fieldwork, extending the pier 200-feet, and restoring .26 acres of tidal marsh and riparian vegetation. These coordinated improvements will eliminate safety hazards, comply with federal accessibility requirements, enhance ecological resilience, and expand opportunities for education, recreation, and long-term community stewardship.

Project Phases / Work Plan

Audubon Delta, PRAC, and partners will carry out “Enhancing Coastal Trails and Conservation Education in Moss Point, Jackson County” in five phases outlined below followed by information regarding the walkway, decks, and pier. The team will follow the federal *2010 ADA Standards for Accessible Design* and best practices for coastal habitat protection. See the detailed Work Plan in Appendix A for outlines of each phase of the project, specifying responsible parties, major actions, measurable deliverables, potential risks, and mitigation strategies, from planning through education and monitoring.

Table 1: Project Phases and Work Plan Overview

<p>Phase 1: Planning & Design (Apr 2026–Sep 2026) PRAC and partners will survey the site and finalize ADA-compliant designs for trails, benches, rest stations, and interpretive features. Deliverables include construction plans and habitat impact analysis.</p>
<p>Phase 2: Permitting & Engagement (Oct 2026–Jan 2027) PRAC will apply for all necessary permits and finalize the construction schedule in coordination with Jackson County and the City of Moss Point</p>
<p>Phase 3: Construction & Installation (Feb 2027–Jul 2027) PRAC will oversee contractors to build a 250-ft ADA walkway, install benches, interpretive stations, water testing decks, and extend the observation pier by 200 ft.</p>
<p>Phase 4: Habitat Restoration & Education Launch (Aug 2027–Nov 2027) PRAC and a marsh restoration contractor will restore .26 acres of marsh habitat and launch STREAM and GRITS programs using greenhouse-grown native plants.</p>
<p>Phase 5: Outreach, Monitoring & Evaluation (Dec 2027–Mar 2028) PRAC staff, a marsh restoration contractor, and educators will host public events, collect ecological and visitor data, and produce a final evaluation report.</p>

Pedestrian Entrance Walkway & Decks

The planned pedestrian entrance walkway and deck at the Pascagoula River Audubon Center (Figure 1) will serve two purposes. The primary purpose of the 5-ft wide, 250 ft long, pervious GravelPave walkway is to provide a safer pathway for visitors to the center that currently walk down the entrance lane. Although vehicle use of the lane is reserved for staff, visitors needing access to onsite handicap parking, and deliveries, the lane is not wide enough for simultaneous safe passage of vehicles and pedestrians, who typically step outside of the lane borders. The 8 by 6 ft wooden deck will define the start of the walkway and serve as a viewing area for the Bayhead Swamp that occupies this part of the site and allow access to the stormwater outflow that delivers water to the wetland. The outflow is one of several sampling locations that are part of a water quality assessment program being developed by PRAC. This sampling point will help document the role of this wetland and others across the site in treating stormwater runoff (Figure 2). The use of GravelPave material for the walkway reflects continued emphasis of stormwater

management that the center grounds represent. See the design summary for the walkway and paths in Appendix B.

Figure 1
Audubon Vicinity Map



Figure 2
Path and Position of Pedestrian Entrance Walkway and Deck

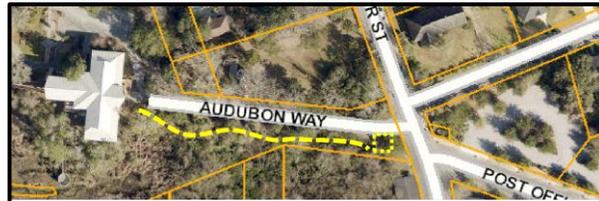


Figure 3
Water Quality Testing Decks

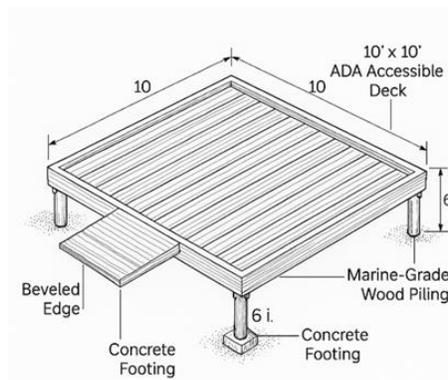
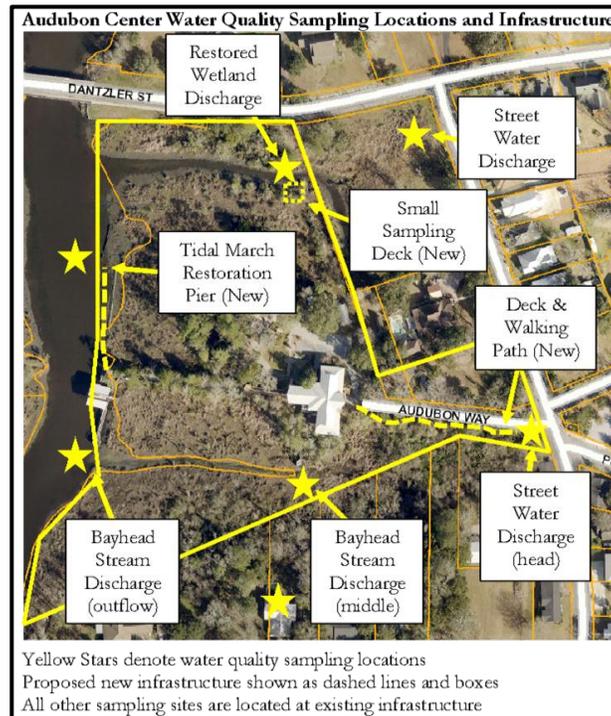


Figure 4
Water Quality Testing Deck Locations



Observation Pier - The proposed observation pier at the Pascagoula River Audubon Center will extend from the kayak launch dock and replicate the environmentally friendly design of the existing center pier, demonstrating best practices in sustainable coastal infrastructure. The pier will span 200 feet in length, including a high-ground landing and a 16-foot diameter octagonal end, with a consistent width of 6 feet and standard handrail height throughout. Construction will utilize marine-grade pier pilings and deck stringers, premium treated wood for handrails and balusters, and Thru-Flow decking panels, pending confirmation from the Mississippi Department of Marine Resources. The deck will be elevated a minimum of two feet above high water to avoid crossing tidal vegetation, with final elevation and piling lengths determined by site-specific soil borings. Soil conditions will be verified to ensure structural integrity and long-term durability. See Appendix C for the design summary of the pier.

Figure 5
Existing PRAC Pier



Shoreline Marsh Restoration

This project was based on a mitigation requirement associated with the replacement of the Dantzler Street bridge over Rhodes Bayou in 2016. As part of filling small portions of tidal marsh at the footings of the new, larger bridge, the MS Dept. of Marine Resources asked for an acre of tidal marsh. The PRAC offered to support and coordinate that requirement with an on-site restoration that would a) fulfill the mitigation requirement for the county, and b) provide an onsite wetland restoration project that would support research and outreach.

This opportunity was and can continue to be part of a conversation about the historic loss of tidal wetlands in the lower Escatawpa River, that began in the mid-19th Century and continued throughout the 20th Century associated with dredging and relocation of the main channel in this reach of the river. Over the years these efforts allowed increasing levels of saltwater intrusion that altered the salinity regime and tidal landscape of this region. What was once a freshwater/oligohaline Sawgrass (*Cladium jamaicense*)–Pond Cypress (*Taxodium ascendens*) marsh complex became an oligohaline system, including the expansion of shallow, open water areas seen today. This situation was also, in part, the result of the heavy shipbuilding activities in this area between the mid-1800s and early mid-1900s.

High-resolution photos of Moss Point over a 78-year period shows an estimated loss of at least 40 acres of marsh in Rhodes Bayou and Beardslee Lake. (graphics below). This was the basis of supporting restoration associated with the bridge replacement. It also represents an example of shifting baseline syndrome, in that restoration will not be reflective of historic conditions, given the shift in salinity regime in this area. The restoration plan that was developed for the PRAC recognized this and the target species was Smooth Cordgrass, rather than Sawgrass.

Figure 5
Habitat Loss over a 78-year Period



The original approach toward mitigation in Rhodes Bayou was based on successful shoreline restoration of the south shoreline at the Chevron Refinery (LaSalle and Hollomon 1998). That ap-

proach entailed the installation of a rock-rubble breakwater located outward of the eroding shoreline that ultimately created a quiet water area that supported accretion of sediments and ultimately the natural development of a healthy tidal marsh. For Rhodes Bayou, a wooden fence was placed outward of the shoreline for the same purpose, hoping that enough sediment would accrete to make up a 10-15 cm deficit sediment that would support the recruitment or planting of Smooth Cordgrass. PRAC was part of a Five Star Grant program in 2016 that supported this effort and according to LaSalle (2016), outreach signage and educational programs are essential for effective wetland restoration awareness.

As it turns out, the levels of sediment in Rhodes Bayou is not enough to support this approach and the effort failed. Short of placing sediment in a contained area, the current approach is to plant the area with California Bulrush (*Schoenoplectus californicus*) – an emergent species that grows along the shoreline of the nearby Pascagoula River. It is a large, vigorous, fast-growing emergent species that can grow in water depths of 10-20 cm. Once established, a stand of bulrush will stabilize the area and reestablish a vegetated marsh. The PRAC has the capacity to propagate enough plants from locally collected seeds.

Since its inception, the Pascagoula River Audubon Center (PRAC) has actively pursued opportunities for research and outreach about on-site and local wetlands. The center grounds include Bayhead Swamp and Tidal Marsh habitats that are focal points of on-site outreach and citizen science efforts. PRAC was also a partner in multiple wetland-focused projects within the local watershed and beyond, as described below.

- **On-site Tidal Marsh Restoration**

PRAC coordinated a tidal marsh mitigation project associated with the replacement of the Dantzler Street bridge over Rhodes Bayou in 2016. The bridge project was sponsored and funded by the Jackson County Board of Supervisors, in part supported by GOMESA funds. As part of filling small portions of tidal marsh at the footings of the new, larger bridge, the MS Dept. of Marine Resources asked for mitigation of about 0.26 acres of tidal marsh. The PRAC coordinated the project that a) supported the mitigation requirement for the county, and b) provided an opportunity to have an onsite wetland restoration project that would support research and outreach.

- **Five Star & Urban Waters Restoration Program**

PRAC partnered with Jackson County on a Five Star Grant program in 2016 that supported the above-described mitigation project. The *Pascagoula River Audubon Marsh Laboratory Project* produced outreach signage and a program for education about wetland restoration (LaSalle, 2016). Monitoring of the sediment stations was conducted by Honors Students from the Mississippi Gulf Coast Community College and PRAC volunteers.

- **Coastal Streams and Habitat Initiative**

PRAC provided education and outreach elements of the *Coastal Streams and Habitat Initiative* project, in partnership with The Nature Conservancy, and supported by RESTORE funds. This project developed detailed conservation plans in nine coastal watersheds across the three Mississippi coastal counties, including Rhodes Bayou, that was described

as the least developed watershed in the region. The center focused its efforts on outreach and education around water quality monitoring and watershed functions and values.

- **Arthur Street Wetland Restoration**

PRAC initiated the proposal to Jackson County in 2018 to acquire a 1.75-acre parcel of land adjacent to the center for the purpose of demonstrating the restoration of wetland elements of a small urban watershed. The project was completed in 2020 (LaSalle, 2020) with the restoration of an acre of wetland, including bayhead swamp and tidal marsh elements. As with the center's on-site restoration, this site provides opportunities to expand the center's outreach and research around habitat restoration and water quality.

Goals, Objectives, & Metrics

Table 1 outlines the project’s goals, objectives, and metrics. A detailed logic model in Appendix D supports the design and implementation strategy.

Table 1
Goals, Objectives, and Metrics – Detailed Plan

Goal	Objectives	Metrics
1. Provide safe, universal access to nature	<p>1.1: Construct a 250-foot ADA-compliant GravelPave walkway that includes benches for limited mobility.</p> <p>1.2: Reduce safety risks to improve access and visibility.</p> <p>1.3: Build three interpretive stations and two water-testing decks that explain the watershed’s flow from upland runoff through woodland swamp and tidal marsh to Rhodes Bayou.</p> <p>1.4: Construct a 200-foot observation pier to provide safe, elevated access to tidal marsh and deep-water inlet areas for education, recreation, and restoration viewing.</p>	<p>250 linear feet of ADA accessible path. Minimum of three resting benches installed and maintained. Three interpretive stations Two water quality testing decks, 200-foot observation pier</p> <p>At least 500 visitors participate annually in guided or self-guided watershed learning, measured through visitor counts and program sign-ins.</p>
2. Restore and Enhance Coastal Marsh Habitat	<p>2.1: Propagate and plant native marsh species to stabilize shoreline and improve habitat quality.</p> <p>2.2: Monitor restoration success through survival rates, water quality data, and biodiversity indicators.</p>	<p>Plant Survival Rate: Percentage of native plants surviving after 6-12 months. Water Quality Improvement: Measurable changes in turbidity, dissolved oxygen, and nutrient levels. Biodiversity Increase. Student or citizen science contributions. Restored Area: Total square footage or acreage of stabilized shoreline with native vegetation.</p>
3. Develop the next generation of conservation professionals	<p>3.1 Engage 50 - 75 high-school students annually in STREAM and GRITS programs.</p> <p>3.2 Provide authentic workforce experiences in habitat restoration and green infrastructure.</p>	<p>50 - 75 students per year conduct water sampling and ecological monitoring, documented in participation records. Student teams complete and submit annual water-quality datasets and habitat restoration reports.</p>

Alignment with GOMESA Authorized Uses and Audubon Flight Plan

1. Alignment with GOMESA Authorized Uses

This project satisfies multiple authorized uses under the Gulf of Mexico Energy Security Act (GOMESA) and aligns with Mississippi’s coastal management priorities: Public Access and Outdoor Recreation

- Action: Build a 250-foot ADA-compliant walkway, install benches, and add interpretive stations leading to the Rhodes Bayou kayak launch.
 - Relevance: Meets GOMESA’s authorized use for “projects and activities for the purpose of coastal protection, including conservation, mitigation of damage to fish, wildlife, or natural resources, and the enhancement of public access to the Gulf Coast’s natural resources” (43 U.S.C. § 1333).
- b. Coastal Habitat Restoration and Conservation
- Action: Restore .26 acres of native marsh and riparian vegetation, stabilize soils, and improve water filtration.
 - Relevance: Advances GOMESA’s objective to conserve and restore coastal resources and mitigate damage to habitats and wildlife.
- c. Flood and Storm Damage Mitigation
- Action: Incorporate natural flood-mitigation strategies in the pier extension and marsh restoration to buffer storm surge and manage runoff.
 - Relevance: Supports GOMESA’s use for protecting coastal infrastructure and mitigating impacts from natural disasters and human activity.
- d. Environmental Education and Community Engagement
- Action: Deliver STREAM and GRITS programs that train 50–75 students annually in water-quality testing, ecological monitoring, and green-infrastructure skills, while engaging visitors in watershed education.
 - Relevance: Reinforces Mississippi’s coastal management plans by fostering an informed, conservation-minded workforce and public.

By fulfilling these authorized uses, the project protects and restores critical habitats, ensures equitable and safe access to natural resources, mitigates flood risks, and builds lasting public engagement and workforce capacity which are core objectives of GOMESA and Mississippi’s state coastal plans.

2. Alignment with Audubon’s Flight Plan Goals

This project directly supports Audubon’s Flight Plan priorities by integrating habitat protection, community engagement, and science-based conservation:

- a. Habitat Expansion and Protection
- Action: Restore .26 acres of native marsh and riparian vegetation, stabilize soils, and improve water filtration.
 - Relevance: Expands protected habitat and strengthens ecological resilience in a high-biodiversity coastal zone.

b. Community Engagement and Education

- Action: Collaborate with Moss Point School District and other partners to deliver STREAM and GRITS programs, co-teach watershed lessons, and involve students in restoration activities.
- Relevance: Builds local stewardship and conservation literacy through hands-on learning and inclusive programming.

c. Actionable Science and Monitoring

- Action: Engage students and staff in water-quality testing, ecological monitoring, and data collection to inform restoration strategies.
- Relevance: Generates community-based science that supports adaptive management and long-term coastal conservation.

Partners Organizational Capacity

PRAC will serve as the sole applicant and fiscal agent for this grant, with support from key partners. The City of Moss Point and Jackson County will provide planning assistance, permitting, and long-term maintenance support. A contractor will be selected to conduct marsh restoration and monitoring through a competitive bid process and will serve as a scientific and technical partner. Dr. Mark LaSalle will serve as an in-kind Ecological Restoration Consultant, donating professional expertise. See Dr. LaSalle's letter of commitment in Appendix E. These partners will support implementation but will not serve as co-applicants.

Lead Organization: Audubon Delta, through PRAC, will direct and manage all phases of the project. The center has extensive experience delivering large, multi-partner coastal conservation initiatives. Notably, Audubon Mississippi (now Audubon Delta) received an \$8.2 million award from the National Fish and Wildlife Foundation (NFWF) Gulf Environmental Benefit Fund to expand the Coastal Bird Survey program, protect nesting sites, and engage the public in stewardship and education. Audubon Delta also administers the Audubon Mississippi Coastal Bird Stewardship Program, funded by NFWF with support from the Mississippi Department of Environmental Quality, which provides habitat management, volunteer training, and community outreach. PRAC administers "Expansion and Enhancement of Teen STEM Preparedness Program" grant awarded by The Land Trust for the Mississippi Coastal Plain. These and other successful grants demonstrate the team's ability to manage significant budgets, meet strict reporting schedules, and achieve measurable ecological outcomes.

Scientific and Technical Partner: In accordance with Mississippi GOMESA grant requirements, a competitive bidding process will be used to procure professional services for marsh restoration and monitoring. The selected contractor will be responsible for supporting the implementing of the restoration activities, collecting ecological data, and supporting project reporting.

Education Partner: PRAC implements the STREAM (Students Tackling Runoff, Ecology, Aquaculture & Microplastics) curriculum on-site, engaging Moss Point School District students twice per week in authentic watershed science. Teachers and students have worked with PRAC on field-based citizen science and water-quality sampling, demonstrating their ability to meet educational objectives and supply consistent participation data.

Local Government Partners: The City of Moss Point and Jackson County provide municipal and county-level support, including permitting, land access, infrastructure planning, and long-term maintenance coordination. Both have successfully partnered with PRAC on nature-based tourism and outdoor recreation projects, ensuring that construction and maintenance integrate with local plans.

Ecological Restoration Consultant: Dr. Mary LaSalle, Ph. D. will serve as the project's Ecological Restoration Consultant, advising on marsh restoration design, planting strategy, and adaptive management. As former Director of PRAC and an estuarine ecologist,

he has directed coastal wetland biology and ecology programs, worked on watershed issues, and led environmental education for the community (youth, teachers, volunteers). He earned his Ph.D. in Zoology/Entomology from Mississippi State University. Dr. LaSalle will ensure scientific rigor in restoration, integrate community knowledge, support permitting and monitoring, and ensure compliance with ADA and environmental regulations.

Organizational Capacity: Audubon Delta maintains a dedicated grants and finance team that oversees the PRAC budgeting, contracting, and federal and state reporting. The team coordinates engineering, habitat restoration, and educational partners to ensure compliance with ADA standards and environmental regulations. An expert marsh restoration organization with scientists and engineers will support design and ecological oversight. City and county partners sustain stakeholder engagement and maintain the improvements beyond the grant period.

This collaborative team combines a proven record of awarded grants, technical and educational expertise, and long-term community commitment. Together they provide the leadership, financial accountability, scientific rigor, and public engagement capacity required.

Budget Narrative

The Pascagoula River Audubon Center (PRAC) seeks funding through the GOMESA grant program to support the construction of an observation pier, ADA-accessible walkway, and entrance decks, along with marsh restoration and public programming initiatives. This project will enhance community access to coastal habitats, support environmental education through the STREAM and GRITS programs, and promote long-term ecological stewardship. The total project budget is \$499,821.71, which includes a 2% allocation for administrative costs. See figure 6 below.

Figure 6:
Budget

Category	Total
Salaries, wages, Fringe	91,108.00
Travel	
Architecture & Engineering	
Legal	
Consulting	\$65,000.00
Construction	\$223,000.00
Site Work	\$ 7,500.00
Equipment	\$55,000.00
Indirects	\$55,213.00
Other	\$3000.00
Total	\$499,822.00

Salary Allocation

The following personnel will contribute to the successful implementation of the project through leadership, technical expertise, education, and operational support.

Dr. Rodgers will provide oversight and approvals on all aspects of the project. She will lead planning, meetings, outreach, and relationship management. In addition, she will serve as the grant manager, responsible for reporting, invoicing, and ensuring compliance with GOMESA requirements.

Cindy Wilson will support all aspects of contracting and contractor supervision on site. She will also be responsible for procuring materials and coordinating logistics related to construction and restoration activities.

Amanda Romano will lead GRITS and STREAM educational programming, including curriculum development and delivery. She will also recruit and supervise volunteers participating in restoration and citizen science activities.

Christopher Wells will manage the growth of marsh plants and greenhouse maintenance. He will also provide support for natural resource testing and data collection during educational programs.

Caitlin Lill will provide high-level oversight for all activities. She brings prior experience managing a GOMESA grant in 2021 and will ensure strategic alignment and administrative coordination across all project components.

Consulting – Marsh Restoration Expert

Requested Amount: \$55,000.00

This funding will support a qualified marsh restoration consultant to provide technical expertise throughout the project lifecycle. Responsibilities include:

- Advising on native plant selection, propagation, and planting strategies
- Supports restoration activities and volunteer coordination
- Collecting ecological data and monitoring restoration outcomes
- Preparing and presenting findings to stakeholders and the public

This consultant will play a critical role in ensuring ecological integrity, compliance with restoration best practices, and alignment with educational goals of the STREAM and GRITS programs.

Construction – Observation Pier, Walkway, and Decks

Requested Amount: \$291,000.00

This line item covers the cost of materials and contracted services for the construction of the observation pier and associated infrastructure. It includes:

- Marine-grade pilings, decking, and structural components
- GravelPave walkway system and ADA-compliant entrance decks
- Site preparation, delivery, and installation support

While the walkway and decks will be built by trained volunteers, this budget ensures all necessary materials and professional services are available to meet safety, environmental, and accessibility standards. The pier will replicate the design of the existing pier.

Site Work

Requested Amount: \$7,500.00

This funding will support initial site clearing, grading, and preparation necessary for safe and efficient installation of the pier, walkway, and decks. It includes erosion control measures and access improvements to accommodate volunteer crews and equipment.

Supplemental Project Costs

Extra Supplies for Pier and Walkway Construction

Requested Amount: \$25,000.00

This funding will cover additional construction materials and supplies not included in the base estimates, such as fasteners, anchoring systems, supplemental decking, edging, and erosion control materials. These items are necessary to ensure structural integrity, ADA compliance, and environmental resilience. Costs also include contingency materials for volunteer-led installation and adjustments based on site conditions.

Events, Signage, Workshops, and Public Programming

Match Contribution: \$28,155.13

This match supports interpretive signage, community workshops, and educational events aligned with the STREAM and GRITS programs. It includes materials for hands-on activities, outreach, and engagement with local schools and conservation partners. These efforts promote public awareness of coastal ecosystems and sustainable practices.

Water Quality Testing Kits and Seine Nets

Requested Amount: \$3,000.00

These supplies will be used by students and volunteers to monitor water quality and biodiversity in the marsh and inlet areas adjacent to the pier and boardwalk. The kits and nets support citizen science and educational programming, providing data for ecological monitoring and student research.

Permits for Construction

Requested Amount: \$3,000.00

This line item covers the cost of required environmental and construction permits, including USACE Section 404/10, MDMR, MDEQ, and local floodplain compliance. The match reflects in-kind contributions for engineering review, administrative processing, and coordination with permitting agencies.

Indirect Costs

Requested Amount: \$55,213.45

Indirect costs cover administrative overhead, fiscal management, reporting, and compliance activities necessary to support the execution of the project. Administrative costs are calculated at 2% of the total project budget and ensure proper stewardship of grant funds.

This budget reflects a strategic investment in infrastructure, restoration, and education that will benefit the Moss Point community and the broader Mississippi Gulf Coast. Through a combination of requested funds and match contributions, the Pascagoula River Audubon Center will deliver a high-impact project that aligns with GOMESA goals, enhances public access, and fosters long-term environmental stewardship.

Timeline / Milestones

The timeline below details how the project will move from design to final evaluation. Each phase specifies the timeframe, lead responsibilities, and measurable deliverables, ensuring transparency and accountability (American Psychological Association, 2020). The project will run from April 2026 to March 2028 in five phases covering planning, permitting, construction, restoration, education, and evaluation. Each phase lists its timeframe, lead responsibilities, and measurable deliverables for easy tracking (American Psychological Association, 2020).

Table 2
Timeline and Key Milestones

Phase & Time-line	Lead / Partners	Key Actions	Deliverables
1. Planning & Design (Apr–Sep 2026)	PRAC senior staff; CMP & JC planning support; marsh restoration contractor	Survey entrance and wetlands; prepare final ADA-compliant designs for walkway, benches, rest stations, and interpretive stations; identify pier extension and marsh restoration sites.	Final construction plans, site maps, and habitat impact analysis
2. Permitting & Engagement (Oct 2026–Jan 2027)	CMP secures permits; JC compliance review	Obtain all permits; finalize construction schedule.	Approved permits
3. Construction & Installation (Feb–Jul 20)	PRAC oversees ADA contractors; JC infrastructure oversight	Build 250-ft ADA-compliant walkway; install benches and rest stations, interpretive stations, two water testing decks and extend 200-ft observation pier.	Completed walkway, benches, interpretive stations, and pier extension
4. Habitat Restoration & Education Launch (Aug–Nov 2027)	PRAC and a marsh restoration contractor manage	Restore .26 acres of marsh and riparian habitat; launch STREAM and GRITS programs.	Restored habitat with GIS and water-quality baselines; STREAM and GRITS initiated
5. Outreach, Monitoring & Evaluation (Dec 2027–Mar 2028)	PRAC education staff; MSU scientists; Moss Point School District educators	Host public events and citizen-science activities; collect visitor counts and ecological data; evaluate project outcomes.	Final evaluation report covering access, education, and ecological result

Monitoring, Maintenance, and Long-Term Reporting

1. Monitoring

Audubon Delta and Mississippi State University (MSU) Coastal Conservation Service will measure ecological and educational outcomes by recording:

- a. 250 linear feet of ADA-compliant walkway installed and inspected for ADA compliance
- b. Three interpretive stations built and functional
- c. .26 acres of riparian and marsh habitat restored and mapped by GIS
- d. 50–75 students engaged annually in STREAM and GRITS programs, with documented water-quality and habitat data
- e. Visitor counts, including those using mobility aids, and participant feedback collected through sign-in sheets and online surveys

These metrics directly track project goals of safe access, watershed education, and habitat restoration. The PRAC team will collect and review all data annually and compile a final comprehensive evaluation by March 2028.

2. Reporting

Audubon Delta's grants and finance team will submit quarterly financial and progress reports and a final report to the Mississippi Department of Marine Resources (GOMESA administrator). Reports will include:

- a. Construction milestones
- b. ADA-compliance documentation
- c. Ecological monitoring results
- d. Student participation records
- e. Public engagement outcomes

3. Long-Term Maintenance and Sustainability

a. Maintenance Responsibilities:

- PRAC staff and trained volunteers will inspect and maintain the 250-foot walkway, benches, interpretive signage, and pier extension at least quarterly and after major storms
- PRAC staff will inspect and maintain the 200-foot observation pier and two 10×10 water-testing decks at least quarterly and after major storms
- An expert contractor will continue to guide marsh monitoring and habitat management through student and research programs
- The City of Moss Point and Jackson County will provide municipal support for routine repairs and long-term infrastructure upkeep
-

b. Funding and Volunteer Support:

- PRAC will leverage annual operating funds, membership dues, National Audubon Society's Deferred Maintenance Program, and donations to sustain routine maintenance
- Existing volunteer networks and student groups engaged through STREAM and GRITS will support long-term vegetation management and interpretive programming

By March 2028, Audubon Delta and its partners will demonstrate that the new trail system remains fully ADA-compliant, that restored habitats meet survival and water-quality benchmarks, and that educational and community-engagement metrics meet or exceed annual targets. Ongoing quarterly inspections, annual data reviews, and a final comprehensive report will ensure accountability and sustainability.

Audubon Delta and PRAC will involve students, educators, and community members in every stage of the project to foster long-term stewardship and public use.

1) Student and Volunteer Involvement

- a. STREAM (Students Tackling Runoff, Ecology, Aquaculture & Microplastics) and GRITS (Green Resilient Infrastructure Technical Skills) will engage 50 – 75 high-school students each year in water-quality sampling, habitat restoration, and ecological monitoring. The Students Tackling Runoff, Ecology, Aquaculture, and Microplastics (STREAM) program is a yearlong, inquiry-based environmental science initiative led by PRAC. High school aquaculture students design and maintain aquariums, test water samples for microplastics, and monitor seasonal water quality, building scientific literacy and workforce-ready STEM skills. STREAM aligns with Next Generation Science Standards and culminates in a public showcase, strengthening both civic engagement and environmental stewardship (Rodgers, 2025).
- b. Students will collect and analyze data on runoff, water quality, and habitat conditions and share their findings with the public and local decision-makers.
- c. PRAC’s established volunteer corps will help with marsh plantings, habitat maintenance, and citizen-science events.

2) Interpretive Signage and Outdoor Classrooms

- a. Three interpretive stations along the ADA-compliant walkway will guide visitors through the watershed story, from upland runoff through woodland swamp to Rhodes Bayou tidal marsh, linking the new infrastructure directly to environmental education.
- b. Signs will include QR codes linking to up-to-date ecological data collected by students, encouraging repeat visits and ongoing learning.

3) Integration into Local STEM and Watershed Education

- a. The Moss Point School District will integrate project activities into science curricula, using the walkway and stations as an outdoor classroom for STREAM and related courses.
- b. PRAC will incorporate the project into GRITS field camps, training students in green-infrastructure and restoration skills relevant to conservation careers.

4) Ensuring Ongoing Engagement and Stewardship

- a. PRAC will schedule annual community events such as “Watershed Discovery Days” and citizen-science water-sampling weekends to keep the public involved.

- b. Volunteer and student groups will help with seasonal maintenance and habitat monitoring, ensuring that the walkway, benches, and signage remain safe and informative.
- c. Social media updates, QR-linked data dashboards, and school partnerships will sustain interest and educational use well beyond the grant period.

Environmental / Regulatory Compliance

Audubon Delta and PRAC will secure and document all environmental and regulatory approvals required by state and federal law before construction. The project area includes upland riparian zones, tidal marsh, and flood-prone coastal habitat, so a comprehensive compliance strategy is essential.

- 1) Permitting and Reviews
 - a. U.S. Army Corps of Engineers Section 404/10 Permits: Required for construction activities that involve wetlands and navigable waters, including the Rhodes Bayou pier extension and marsh restoration.
 - b. Mississippi Department of Environmental Quality (MDEQ) Water Quality Certification: Required to ensure that construction and marsh restoration meet state water-quality standards.
 - c. Mississippi Department of Marine Resources (MDMR) Coastal Wetlands Permit: Required for work within tidally influenced wetlands and marsh areas.
 - d. City of Moss Point and Jackson County Building and Construction Permits: Required for the ADA-compliant walkway, benches, and interpretive stations.
- 2) Environmental Assessments and Mitigation
 - a. Conduct site-specific environmental assessments and habitat impact analyses in cooperation with an expert marsh restoration contractor to identify sensitive species and minimize disturbance.
 - b. Incorporate best management practices (e.g., silt fencing, minimal clearing) to prevent erosion and protect water quality during construction.
- 3) ADA Compliance - Design the 250-foot gravel-pave walkway, benches, and interpretive stations to meet or exceed the 2010 Americans with Disabilities Act (ADA) Standards.
- 4) Floodplain and Stormwater Management
 - a. Verify compliance with Federal Emergency Management Agency (FEMA) floodplain management requirements and local stormwater ordinances.
 - b. Integrate natural flood-mitigation measures such as marsh restoration and vegetative buffers to manage runoff and enhance resilience to storm surge.

Audubon Delta's grants and finance team will maintain records of all permits and compliance documents and include them in required GOMESA reporting. This proactive approach ensures that the project meets all federal, state, and local environmental regulations while protecting sensitive coastal habitats.

Key Personnel Assigned to the Grant

Mark W. LaSalle, Ph.D.

Dr. Mark W. LaSalle is a naturalist and wetland ecologist with decades of expertise in wetlands, water quality, and the ecological impacts of human activity. He has led numerous wetland restoration, water-quality assessment, stormwater management, and environmental landscaping projects and oversaw the design and construction of the Pascagoula River Audubon Center as well as multiple nature-based parks and greenspaces. Dr. LaSalle develops and delivers environmental education programs for youth, educators, realtors, and the public on wetlands, natural history, and conservation landscaping. A graduate of the University of Southwestern Louisiana (B.S. and M.S.) and Mississippi State University (Ph.D.), he is widely recognized for conservation leadership, receiving the Chevron Conservation Award, Mississippi Wildlife Federation Conservation Educator Award, Gulf Guardian Award, Boy Scouts of America Silver Beaver Award, and Pascagoula River Basin Ambassador Award. He also authors the popular “Qu’est Que C’est” nature series for *OurMSHome* and shares daily natural history insights on social media, bringing exceptional scientific expertise and community engagement skills to the Enhancing Coastal Trails and Conservation Education project.

Caitlin Lill, MA

Caitlin Lill is the Director of Strategic Operations with Audubon Delta and provides high-level supervision to PRAC. She has a B.A. in Ecology, Evolution, and Behavioral Biology from Beloit College, a Master of Arts in Museum Studies from San Francisco State University, and an Advanced Graduate Certificate in Public Policy from Northwestern University. She has a strong background in projects, budget, and staff management, having most recently utilized those skills while at the Wisconsin Department of Natural Resources where she was the Capital Development Coordinator for the Bureau of Parks and Recreation. She managed projects ranging from the construction of boat launches to campground buildings and facilities, trails, and multiple dams and water control structures. Before that, she worked at the Urbana Park District in Illinois, where she administered habitat restoration and infrastructure projects, park revitalization, and public education programming. She has managed grants up to \$5 million and projects up to \$30,000,000.

Amanda Romano, MS

Amanda Romano serves as Education Manager for the Pascagoula River Audubon Center (PRAC), where she leads volunteer coordination and delivers hands-on environmental education programs that align with the goals of the Enhancing Coastal Trails and Conservation Education project. She manages and trains volunteers, develops and presents watershed and marsh-focused curricula, and implements the STREAM (Students Tackling Runoff, Ecology, Aquaculture, and Microplastics) and GRITS (Green Resilient Infrastructure Technology Skills) programs, engaging 75–100 students each year in water sampling, habitat restoration, and ecological monitoring. Romano draws on more than 20 years of teaching, coaching, and program management experience, including instructional roles in public schools, higher education, and community-based youth programs. She is on track to complete her Master Naturalist certification in October 2025, enhancing her field ecology and interpretive skills. Romano’s combined strengths in volunteer

leadership, STEM-based environmental education, and naturalist training ensure high-quality implementation of the project's interpretive stations, water-testing decks, and student workforce development objectives.

Mary Rodgers, Ed.D.

Dr. Mary Rodgers directs PRAC for the National Audubon Society, leading high-impact conservation, education, and community partnerships across the Gulf Coast. A certified Master Naturalist, she applies field-based ecological knowledge to community engagement and habitat stewardship, enhancing the scientific and educational value of GOMESA-funded initiatives. Dr. Rodgers has secured and managed over \$5 million in competitive federal and foundation grants, including a recent \$134,000 teen workforce development award, and holds advanced training in federal grant management. With a doctorate in Educational Leadership and a master's in public administration, she unites strategic planning, fiscal rigor, and collaborative leadership to deliver ADA-compliant infrastructure and nature-based solutions. Her proven record of transforming complex conservation goals into measurable outcomes directly supports Audubon's Flight Plan and Mississippi GOMESA priorities, ensuring enduring ecological and community benefits.

Cindy Wilson, MS

Cindy Wilson is Operations Manager for the Pascagoula River Audubon Center (PRAC), where she manages daily finances by paying invoices and contractor fees, recording expenditures, and maintaining detailed financial records. She also coordinates facility rentals and event bookings and supervises gift shop operations. Wilson joined PRAC in January 2025 after more than two decades as a school and college librarian and district technology director, positions that required careful budget adherence, purchasing oversight, and compliance with state and federal reporting requirements. Her proven ability to track expenses accurately and manage day-to-day fiscal operations will ensure transparent use of GOMESA funds and reliable support for the ADA-compliant walkway, interpretive stations, and pier extension planned in this project.

Christopher Wells, Senior Center Associate

The Senior Center Assistant at the Pascagoula River Audubon Center is a highly qualified outdoor recreation and estuarine education specialist with hands-on experience in habitat management, ecological monitoring, and public engagement. Currently pursuing Master Naturalist certification through Mississippi State University Extension Service, he supports daily operations and programming at PRAC, including visitor services, volunteer coordination, and greenhouse and shade house maintenance. His recent work with the MSU Native Plant Network includes direct care and monitoring of native marsh grasses, making him well-suited to oversee vegetation growth and survival rates for restoration efforts. With a background in leading nature-based activities, facility management, and environmental education, he brings both technical skill and community-focused experience to the GOMESA project.

Appendix A
Project Phases – Work Plan

Phase & Timeline	Lead / Partners	Key Actions	Deliverables	Cost	Methodology	Risks & Mitigation Strategies
1. Planning & Design (Apr– Sep 2026)	PRAC senior staff; CMP & JC planning support; Restoration contractor assessments	Survey entrance corridor and wetlands; prepare final ADA-compliant designs for gravel-pave walkway, three benches, rest stations, and interpretive stations; identify pier extension and marsh restoration sites.	Final construction plans, site maps, and habitat impact analysis	\$15,000 in Building Supplies \$500 in Permits \$10,000 In-Kind Expertise & Volunteers \$7500 Site Work	Contractors will clear the area of brush and create level surface for trail. Volunteers will complete installation of trail and interpretive stations.	Inaccurate wetland delineation or ADA compliance issues - Begin assessments early and coordinate closely with CMP and JC Planning
2. Permitting & Engagement (Oct 2026–Jan 2027)	CMP secures permits; JC compliance review	Obtain all permits; finalize construction schedule.	Approved permits	\$2500 for permits and surveys	Third Party Match submitting permits.	Permitting delays or denials Public opposition or lack of engagement - Submit permit applications early with complete documentation

Phase & Timeline	Lead / Partners	Key Actions	Deliverables	Cost	Methodology	Risks & Mitigation Strategies
3. Construction & Installation (Feb–Jul 20)	PRAC oversees ADA contractors; JC infrastructure oversight	Build 200-ft ADA-compliant walkway; install benches and rest stations; install interpretive stations; install two water testing decks and extend 200-ft observation pier.	Completed walkway, benches, interpretive stations, and pier extension	\$223,000 construction contract for 200-ft. pier \$10,000 building supplies decks \$10,000 contract for interpretive stations	Pier construction by competitive bidding contract. Volunteers complete the water testing decks. Graphic design contract for interpretive signs and printings.	Contractor delays or cost overruns Weather-related construction interruptions, Volunteer shortages, Use competitive bidding and include buffer in contracts Schedule construction outside peak storm season Recruit/confirm volunteers in advance
4. Habitat Restoration & Education Launch (Aug–Nov 2027)	PRAC and restoration contractor manage	Restore .26 acres of marsh and riparian habitat; launch STREAM and GRITS programs.	Restored habitat with GIS and water-quality baselines; STREAM and GRITS initiated	\$5,000 educational supplies for greenhouse materials \$10,000 In-kind expertise and volunteer labor \$55,000 in Consulting for restoration and education connectivity	Native plants will be grown in the PRAC greenhouse. Volunteers will install .26 acres of marsh. Environmental consultant will assist with restoration program development	Low plant survival or invasive species encroachment Limited student or volunteer participation - Use greenhouse-grown native plants and monitor early survival

Phase & Timeline	Lead / Partners	Key Actions	Deliverables	Cost	Methodology	Risks & Mitigation Strategies
5. Outreach, Monitoring & Evaluation (Dec 2027–Mar 2028)	PRAC education staff; MSU scientists; Moss Point School District educators	Host public events and citizen-science activities; collect visitor counts and ecological data; evaluate project outcomes.	Final evaluation report covering access, education, and ecological result	\$25,000 in educational supplies for programs, water testing kits, research supplies	Collect qualitative and quantitative data through satisfaction survey and pre and posttests, and citizen science data	<p>Low public turnout or data collection gaps</p> <p>Difficulty measuring long-term impact - Promote events through multiple channels</p> <p>Use standardized tools (e.g., surveys, citizen science apps)</p>

Appendix B

Design Summary – Walkway and Water Quality Testing Decks

The proposed walkway and entrance deck design complements the environmentally friendly observation pier and supports ADA accessibility, stormwater management, and educational programming at the Pascagoula River Audubon Center.

Size and Dimensions

Walkway

- Approximately 250 linear feet
- 5 ft in width
- Constructed using GravelPave matting system

Water Quality Testing Decks

- Includes Arthur Street Restoration Site Deck
- Dimensions vary by site; designed to meet ADA turning radius and slope requirements

Materials

Walkway

- GravelPave Matting: 3 rolls (65.6 ft × 6.6 ft each), cut into 5-ft-wide strips
- #89 Aggregate Gravel: ~3.8 cu yd for 1-inch depth fill
- Plastic Edging: Five 100-ft rolls, 1.5-inch height, with stakes

Water Quality Testing Decks

- Marine-Grade Lumber:
 - 6 × 6 in posts, 10 ft: 3 units
 - 2 × 8 in joists, 8 ft: 10 units
- Treated Lumber Decking:
 - 1 × 6 in deck boards, 8 ft: 12 units
- Hardware:
 - #10 × 3.5 in stainless deck screws (box of 250)
 - Simpson Strong-Tie #12 × 6 in construction screws (box of 50)

Installation Considerations

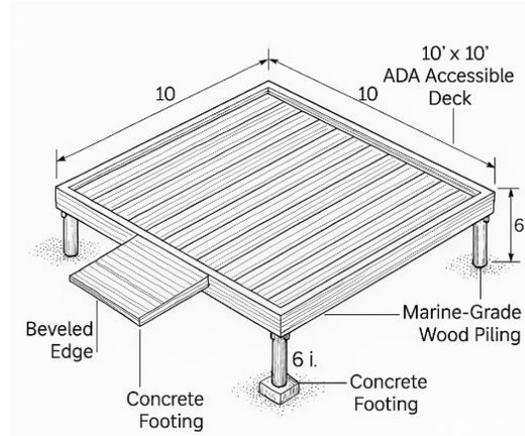
- Walkway installed over compacted subgrade with edging to retain gravel
- Decks installed by trained volunteers using concrete footings and pilings
- Designs conform to 2010 ADA Standards for Accessible Design
- All materials selected for durability, floodplain compliance, and environmental friendliness

Compliance Checklist

- ADA-compliant surface, slope, width, and turning radius
- Concrete footings and pilings meet structural and floodplain standards
- Environmental permits: USACE Section 404/10, MDEQ, MDMR, City/County
- Floodplain compliance with FEMA and local ordinances
- Educational use supports STREAM and GRITS programs

- Monitoring: ADA inspections, ecological data, student participation
- Maintenance: PRAC staff, City/County support

Example Gravel Pave Walkway and Water Quality Testing Deck



Appendix C Design Summary - Observation Pier

The proposed observation pier design is based on the pier built at the Audubon Center. This design will demonstrate environmentally friendly construction.

Size and Dimensions

- 200 ft in length including the high-ground landing and a 16 ft diameter octagonal end
- 6 ft in width
- 16 ft diameter octagonal end
- Standard handrail height throughout

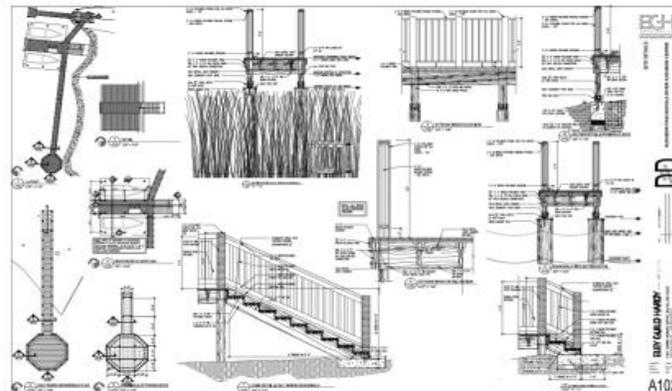
Materials

- Marine-grade pier pilings and deck stringers
- Premium treated wood handrail uprights, railings, and balusters
- Thru-Flow decking panels (subject to MDMR confirmation)
- <https://www.boatliftanddock.com/productgroup/494/thru-flow-decking-panels>

Installation Considerations

- Deck height a minimum of 2 ft above high water since the pier will not cross tidal vegetation
- Final deck elevation and pier piling lengths determined by high-ground landing site and soil borings
- Soil conditions verified to confirm support requirements

Pier Design Image



Existing Audubon Pier Images



Appendix D
Logic Model for Enhancing Coastal Trails and Conservation Education

Inputs / Resources	Activities	Outputs	Short-Term Outcomes (1–2 yrs)	Intermediate Outcomes (3–5 yrs)	Long-Term Impacts (5+ yrs)
<p>GOMESA funding; PRAC staff & volunteers; support from City of Moss Point (CMP), Jackson County (JC), Mississippi State University Coastal Conservation Service (MSU-CCS), and Dr. Mark LaSalle; peer-reviewed evidence</p>	<p>Plan and design ADA-compliant walkway, three benches, three rest stations, three interpretive stations, two 10×10 water-testing decks, and 200-ft observation pier extension; secure permits; restore .25 acres of marsh and riparian habitat; integrate STREAM and GRITS education</p>	<p>ADA-compliant walkway with benches and rest stations; three interpretive stations; two water-testing decks; extended pier; restored marsh habitat; documented education and monitoring programs</p>	<p>Safe, inclusive access for all visitors; functioning interpretive stations and water-testing decks; 75–100 students engaged annually in STREAM and GRITS</p>	<p>Sustained increase in inclusive public access and environmental learning; improved flood resilience and water quality; steady pipeline of students with conservation skills</p>	<p>Long-term equitable access to natural areas; improved regional biodiversity and coastal resilience; durable community stewardship of the Pascagoula River watershed</p>

Appendix E

Letters of Support and Commitment

JACKSON COUNTY BOARD OF SUPERVISORS

POST OFFICE BOX 998 | PASCAGOULA, MS 39568 | WWW.CO.JACKSON.MS.US



September 15, 2025

To Whom It May Concern:

The Jackson County Board of Supervisors is proud to support the Pascagoula River Audubon Center project, "Enhancing Coastal Trails & Conservation Education in Moss Point, Jackson County", for funding through the GOMESA Mississippi Grant Program. This initiative restores coastal habitats, improves public access, advances environmental education, and strengthens community resilience.

Led by the Pascagoula River Audubon Center in partnership with the City of Moss Point, Jackson County, MSU Coastal and Marine Extension, and the Moss Point School District, the project improves access to nature and delivers hands-on STEM learning.

Key elements include:

- ADA-compliant trails and an elevated boardwalk connecting visitors to sensitive marsh areas.
• Expansion of the .26-acre Pascagoula River Audubon Marsh Mitigation site.
• Trail-side water sampling stations supporting GRITS and STREAM youth programs focused on infrastructure, aquaculture, and ecology.

These efforts promote habitat protection, outdoor recreation, and real-world science education while enhancing eco-tourism.

The Jackson County Board of Supervisors fully endorses this project and its long-term benefits to Jackson County's people, wildlife, and natural resources.

Sincerely,

[Handwritten signature of Barry Cumbest]

Barry Cumbest
President

BARRY CUMBEST
District One
2915 Canty Street
Pascagoula, MS 39567
228-769-3403
877-542-0976 Toll Free
228-769-3475 Fax
Barry_Cumbest@co.jackson.ms.us

ENNIT MORRIS
District Two
2500 Criswell Avenue
Pascagoula, MS 39567
228-769-3170
228-762-6578 Fax
Ennit_Morris@co.jackson.ms.us

KENNETH TAYLOR
District Three
2915 Canty Street
Pascagoula, MS 39567
228-762-7641
228-769-3363 Fax
Ken_Taylor@co.jackson.ms.us

J. TROY ROSS
District Four
2915 Canty Street
Pascagoula, MS 39567
228-769-3457
877-542-0975 Toll Free
228-769-3482 Fax
Troy_Ross@co.jackson.ms.us

RANDY BOSARGE
District Five
2915 Canty Street
Pascagoula, MS 39567
228-769-3378
228-696-6500 Fax
Randy_Bosarge@co.jackson.ms.us

Gateway to the
Mississippi Gulf Coast





Moss Point School District

Superintendent Office

4924 Church Street
Moss Point, MS 39563
Phone: (228) 475-4558
www.mpsdnow.org

September 10, 2025

To Whom It May Concern:

On behalf of Moss Point School District, I am writing to express our strong support for the proposed project titled "Enhancing Coastal Trails and Conservation Education in Moss Point, Jackson County."

This project is being submitted for funding consideration through the Gulf of Mexico Energy Security Act (GOMESA) Mississippi Grant Program, which supports coastal restoration, conservation, and public access initiatives. This initiative represents a collaborative effort between the City of Moss Point, Jackson County, Mississippi State University Coastal and Marine Extension Program, and Moss Point School District to improve public access to nature and expand environmental education opportunities for our community.

We are particularly enthusiastic about the project's focus on:

- Developing ADA-compliant trails and elevated boardwalks that provide safe, inclusive access to ecologically sensitive areas
- Protecting critical habitats while promoting outdoor recreation and ecotourism
- Delivering hands-on STEM education through trail-side water sampling stations and youth programs like GRITS (Green Resilient Infrastructure Technical Skills) and STREAM (Students Tackling Runoff, Ecology, Aquaculture & Microplastics)

These programs empower students with real-world environmental science experience, blending classroom learning with field-based research and stewardship. GRITS provides technical training in sustainable infrastructure, while STREAM engages aquaculture students in monitoring water quality and exploring coastal ecology.

This project aligns with the goals of the GOMESA program by:

- Improving public access to coastal resources
- Advancing environmental education and stewardship
- Restoring native vegetation and protecting sensitive habitats
- Stimulating regional economic growth through ecotourism and outdoor learning

Moss Point School District is proud to support this initiative and its long-term benefits to the people, wildlife, and natural resources of Jackson County.

Sincerely,

Dr. Christopher J. Williams, Sr.
Superintendent

Email: cjwilliams@mpsnow.org



City of Moss Point
4320 McInnis Avenue
Moss Point, Mississippi 39563

billy.knight@cityofmosspoint.org
Telephone (228) 475-0301

Facsimile (228) 474-4519

Billy E. Knight, Sr.
Mayor

September 3, 2025

To Whom It May Concern:

On behalf of **City of Moss Point**, I am writing to express our strong support for the proposed project titled “**Enhancing Coastal Trails and Conservation Education in Moss Point, Jackson County.**”

This project is being submitted for funding consideration through the **Gulf of Mexico Energy Security Act (GOMESA) Mississippi Grant Program**, which supports coastal restoration, conservation, and public access initiatives. This initiative represents a collaborative effort between the City of Moss Point, Jackson County, Mississippi State University Coastal and Marine Extension Program, and Moss Point School District to improve public access to nature and expand environmental education opportunities for our community.

We are particularly enthusiastic about the project’s focus on:

- Developing ADA-compliant trails and elevated boardwalks that provide safe, inclusive access to ecologically sensitive areas
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These programs empower students with real-world environmental science experience, blending classroom learning with field-based research and stewardship. GRITS provides technical training in sustainable infrastructure, while STREAM engages aquaculture students in monitoring water quality and exploring coastal ecology.

This project aligns with the goals of the GOMESA program by:

- Improving public access to coastal resources
- Advancing environmental education and stewardship
- Restoring native vegetation and protecting sensitive habitats
- Stimulating regional economic growth through ecotourism and outdoor learning

City of Moss Point is proud to support this initiative and its long-term benefits to the people, wildlife, and natural resources of Jackson County.

Best regards,


Billy E. Knight, Sr.
Mayor

City of Moss Point

TOGETHER FOR THE BEST MOSS POINT
WE ARE ALL IN THIS TOGETHER

LaSalle Consulting, LLC

9241 Wild Oaks Dr.
Ocean Springs, MS 39564
(228) 990-1495
mwasalle@gmail.com

28 September 2025

To Whom It May Concern,

I am writing to formally express my commitment to support the Pascagoula River Audubon Center's GOMESA-funded initiative as a volunteer contributor. I, Mark W. LaSalle, will dedicate my time and expertise to assist with the implementation of conservation, education, and community engagement activities outlined in the grant proposal.

My involvement will include, but is not limited to, supporting habitat restoration efforts, contributing to interpretive programming, mentoring staff and volunteers, and assisting with environmental education initiatives.

I understand the importance of this project to the Moss Point community and the broader coastal ecosystem, and I am honored to contribute my time and knowledge to help ensure its success.

Sincerely,



Mark W. LaSalle, Ph.D.
LaSalle Consulting, LLC

Rotary

Club of Moss Point



P.O. Box 8904
Moss Point, MS 39563

25 September 2025

To Whom It May Concern:

On behalf of the Rotary Club of Moss Point, we strongly support the Pascagoula River Audubon Center project "Enhancing Coastal Trails and Conservation Education in Moss Point, Jackson County" for funding through the GOMESA Mississippi Grant Program. This initiative restores coastal habitats, improves public access, advances environmental education, and strengthens community resilience.

Led by the Pascagoula River Audubon Center in partnership with the City of Moss Point, Jackson County, MSU Coastal and Marine Extension, and the Moss Point School District, the project improves access to nature and delivers hands-on STEM learning.

Key elements include:

- ADA-compliant trails and an elevated boardwalk connecting visitors to sensitive marsh areas.
- Expansion of the .26-acre Pascagoula River Audubon Marsh Mitigation site.
- Trail-side water sampling stations supporting GRITS and STREAM youth programs focused on infrastructure, aquaculture, and ecology.

These efforts promote habitat protection, outdoor recreation, and real-world science education while enhancing eco-tourism.

The Rotary Club of Moss Point fully endorses this project and its long-term benefits to the people of Moss Point, Jackson County, and the area's wildlife, and natural resources.

Sincerely,

A handwritten signature in black ink that reads "Slim Smith".

Timothy "Slim" Smith
President
Rotary Club of Moss Point

References

- American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). American Psychological Association.
- Firkin, M. W., Jensen, J., Williams, L., & Hall, S. (2024). Paving the way to active living for people with disabilities: A scoping review of accessible park and playground design. *International Journal of Environmental Research and Public Health*, 21(3), 412. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10987020/>
- Jiménez, M. P., Menéndez, V., & Valencia, M. (2021). Associations between nature exposure and health: A systematic review and meta-analysis. *Environmental Health Perspectives*, 129(7), Article 077001. <https://www.mdpi.com/1660-4601/18/9/4790>
- LaSalle, M. W., & Hollomon, S. A. (1998). *Design and implementation of rock-rubble breakwaters for marsh creation along industrial shorelines*. Gulf of Mexico Science, 16(2), 123–134. <https://aquila.usm.edu/goms/vol16/iss2/3>
- LaSalle, M. W. (2016). *Quick guide to tidal marsh restoration in Mississippi*. Five Star and Urban Waters Program Report. <https://www.nfwf.org/programs/five-star-and-urban-waters-restoration-grant-program>
- LaSalle, M. W. (2020). *Arthur Street property habitat restoration: Implementation and assessment*. Report to Jackson County Board of Supervisors.
- Nejade, S., Tamene, A., Mebrahtu, G., & Seyoum, A. (2022). What is the impact of nature on human health? A scoping review. *Environmental Health Insights*, 16, 1–14. <https://pmc.ncbi.nlm.nih.gov/articles/PMC9754067/>
- Rodgers, M. (2024). *Students Tackling Runoff, Ecology, Aquaculture & Microplastics (STREAM): Connecting youth to water health & sustainability*. Pascagoula River Audubon Center.
- Rowland, J., Smith, P., & Zhou, L. (2025). Review of methods for quantifying the benefits of coastal wetlands and tidal marshes in flood risk reduction. *Science of the Total Environment*, 912, Article 170846. <https://www.sciencedirect.com/science/article/pii/S2212041625000269>
- The Nature Conservancy. (2016). *Coastal streams and habitat initiative: A conservation action plan for nine Mississippi coastal streams*. <https://www.nature.org>
- U.S. Code. (n.d.). *Outer Continental Shelf Lands Act*, 43 U.S.C. § 1333. Retrieved from <https://www.law.cornell.edu/uscode/text/43/1333>