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Barataria–Terrebonne
NATIONAL ESTUARY PROGRAM

DRAFT FY 2027 Work Plan

**EPA Clean Water Act, Section 320
Fiscal Year 2027**

The purpose of this document is to transmit the Barataria-Terrebonne National Estuary Program's (BTNEP) draft FY 2027 annual work plan to the U.S. Environmental Protection Agency.

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BARATARIA-TERREBONNE NATIONAL ESTUARY PROGRAM FY 2027 WORK PLAN

I. GENERAL DESCRIPTION, CCMP GOALS, AND PREVIOUS YEAR'S PROGRAM ACCOMPLISHMENTS

Since its inception, the Barataria-Terrebonne National Estuary Program (BTNEP), its Management Conference (MC), and a myriad of stakeholders who live, work, and play in the Estuary have worked diligently to implement the BTNEP Comprehensive Conservation and Management Plan (CCMP). The protection and restoration of our unique ecosystem continues to be a priority for all our communities, the State of Louisiana, and our nation. The BTNEP area includes 4.2 million acres in southeast coastal Louisiana and has a host of issues to address. Included in the FY 2027 work plan are a variety of ways to address many of these issues and engage the public through various outreach initiatives, management tools, projects and scientific investigations.

BTNEP continues to protect America's waters and the Barataria-Terrebonne Estuaries. This annual work plan is designed to address the ongoing priority problems of our Estuary including the seven priority problems of hydrologic modification, sediment reduction, habitat loss, changes in living resources, eutrophication, pathogens, and toxic substances. It also reaffirms BTNEP's commitment to support activities that sustain the Estuary's public water quality, shellfish, fish, and wildlife habitat and populations, recreational and commercial opportunities for its residents, and the protection and preservation of our unique culture that is tied to our estuary through the implementation of its CCMP.

The BTNEP MC delineated the fundamental goals of BTNEP in 1992 and reaffirmed their commitment in the new revised 2019 CCMP which was approved by EPA in April 2020. These goals provide the basis for all Action Plans found in the CCMP and the Action Plans, in turn, drive the projects implemented by BTNEP and its partners.

PREVIOUS YEAR'S PROGRAM ACCOMPLISHMENTS

Water Quality

Water quality is a cornerstone of BTNEP. Through partnerships with the Louisiana Department of Environmental Quality, Bayou Lafourche Fresh Water District, and South Central Planning and Development Commission, staff members conduct sampling throughout the Bayou Folsé watershed, identifying sources of nonpoint source pollution and improving water quality in the bayous. BTNEP staff and partners use those sampling results to educate residents whose on-site sewage disposal systems (OSDS) need inspection and repair or replacement, and provide financial assistance to do so, through the Home Sewage Assistance Program.

- 2,594 Residents Educated

- 319 Home OSDS Inspected
- 18 Home OSDS Replaced
- 12 Sampling Events

Marine Debris

BTNEP has been working diligently since 2012 to coordinate marine debris removal in the Estuary's bayous, banks and beaches. Nearly 250 tons of trash have been removed since then, primarily in Assumption, Ascension, Lafourche and Jefferson Parishes. These efforts improve the habitat for resident wildlife and fish, help to protect water quality, and improve the recreational experiences of the bayou and beach while educating the public on the importance of keeping the Estuary trash-free. BTNEP is working to expand marine debris removal throughout the Estuary.

- 23+ tons of debris removed
- 701 volunteers
- 90 miles cleaned
- Outstanding organization award winner - Love the Boot Week, awarded by Keep Louisiana Beautiful and the Louisiana Lieutenant Governor's Office

Native Plants

Every year, the BTNEP Native Plant Nursery grows tens of thousands of native plants for restoration and conservation programs, including ridge restoration projects that are a part of Louisiana's Coastal Master Plan. Special locally sourced woody species are grown out for ridge projects, chosen specifically for their benefits to neotropical migratory birds. These plants include red mulberry, live oak, persimmon, wax myrtle, yaupon holly, American beautyberry, honey locust, and others. Many native plants that benefit pollinator species are also grown at the nursery and distributed throughout the Estuary, providing crucial habitat for pollinators like bees, butterflies, and birds. Additionally, native species' seeds are harvested and packaged to distribute through community events and local seed libraries, so Estuary residents can easily create their own native habitats at home.

- 65,738 native plants grown
- 2,176 pollinator plants and seed packets distributed
- 42 plant species grown
- 30 landscapers trained and certified in native plants as part of a project that earned the Louisiana Native Plant Society the 2025 Conservationist of the Year award from the Louisiana Wildlife Federation

Wildlife

The health of an ecosystem can often be determined by the health of the native species that inhabit it. BTNEP's Wildlife program supports the protection of local wildlife and habitats through analyzing the health and supporting the conservation of native species. In addition, BTNEP's Bird Conservation program helps protect migratory and resident bird species like purple martins, Carolina chickadees, and prothonotary warblers by

developing habitat conservation measures, building new habitat, assessing restoration efforts, and providing public education and awareness. BTNEP-funded projects, like one head-starting diamondback terrapins to give them a better chance at survival, are also assisting in wildlife conservation in the Estuary.

- 76 bird habitats installed and monitored
- 58 birds banded: purple martins, Carolina wrens, and Carolina chickadees
- 1 swallow-tailed kite tracked by GPS
- 74 diamondback terrapins head-started

Invasive Species

With invasive species, early detection and rapid response are as crucial as routine management. The BTNEP Invasive Species program supports environmental monitoring, research, and management efforts that utilize mechanical removal, herbicides, and biological control agents. These projects are working to identify emerging threats, optimize removal methods, and communicate best management practices for landowners throughout the Estuary. The Invasive Species program also supports research that will lead to regulatory change and the development of products and markets for widespread, established invasive species that could be utilized as a resource.

- 350 acres treated
- 6 educational presentations
- 10 species studied or treated
 - Apple Snails, Chinese privet, Chinese tallow, chinaberry, coral ardesia, water hyacinth, tilapia, purple loosestrife, giant salvinia, emerald ash borer

Education And Outreach

As an organization driven by stakeholder consensus, BTNEP's Education and Outreach programs focus on engaging Estuary citizens of all ages in understanding the importance of protection, conservation, and restoration of our home. From teacher trainings to student interactions, community festivals to cultural traditions, and civic organizations to historical preservation, the Education and Outreach program strives to reach all 16 parishes of our Estuary and beyond. Our strong suite of publications, digital media channels, speakers bureau topics, and field trips offer Estuary residents of all ages an opportunity to be Estuary Explorers.

- 54,000 print and digital publications distributed
- 1,800 students reached
- 300 teachers reached
- 76 outreach events
- 16% increase in social media following

II. LIST OF BTNEP STAFF AND RESPONSIBILITIES

Bren Haase, Director: Responsible for the orderly, efficient, and effective administration and operation of the Program Office, including all personnel.

Michelle Felterman, Deputy Director: Serves as an advisor to the Program Director and staff on fiscal, technical, and personnel matters.

Nicole Babin, Office Manager, Assistant to the Director: Responsible for distributing documents, performing administrative functions, maintaining databases, and coordinating meetings for the program.

Emily Knobloch Bonvillain, Communications & Public Relations Coordinator: Responsible for developing outreach material, social media content, and overall BTNEP messaging that will inform and involve the public in BTNEP activities and projects.

Andrew Barron, Senior Research Scientist: Responsible for scientific and technical aspects of Ecological Management action plans of the CCMP.

Nicki Boudreaux, Education and Engagement Coordinator: Responsible for educational outreach of the Sustained Recognition and Citizen Involvement action plans of the CCMP and acts as the liaison with local, state, and federal elected officials and other estuary stakeholders.

Siva Nunna, Water Quality Coordinator: Responsible for coordinating water quality related issues.

Emily Braud, Volunteer and Marine Debris Coordinator: Responsible for developing and organizing volunteer activities related to marine debris removal.

Natalie Waters, Wildlife Conservation Coordinator: Responsible for managing projects related to the conservation efforts for native birds, plants, and pollinators.

Matt Benoit, Habitat Restoration Manager: Responsible for collecting native seeds and growing material for and implementing coastal restoration projects.

Ashleigh Lambiotte, Native Plant Nursery Coordinator: Responsible for coordinating BTNEP native plant nursery activities.

Michael Massimi, Invasive Species and Marine Programs Coordinator: Responsible for

work related to invasive species and representing BTNEP on a variety of environmental issues.

Delaina LeBlanc, Biological Resources Coordinator: Responsible for managing biological resources projects and addressing issues related to both migratory and resident birds.

Part-Time and Student Workers: Responsible for mailouts, updating databases, screening telephone calls, and farm upkeep and maintenance.

III. NEW AND ONGOING PROJECT INFORMATION

All EPA project ideas are vetted through three tiers at BTNEP: the BTNEP Action Plan Teams (APTs), BTNEP staff, and the BTNEP Management Conference. For FY 2027 project ideas APTs met prior to the request for proposal's release to decide on priority issues and help focus project idea submissions. The priorities were meant to encourage proposals that address specific areas of need as identified by the APTs. They did not preclude proposals that address other issues affecting the Barataria Terrebonne National Estuary (BTNE). Each APT's focus areas were:

Water Quality:

- Map, track, and identify mechanism of harmful algal blooms' (HABs) movement from inland waterways down basin to coastal waterways
- Demonstrate and identify potential links between cyanobacterial HABs and fish kills
- Develop a forecasting model for inshore fish kills that delineates susceptible areas
- Determine the cause of inland and coastal SAV bed losses
- Host Water Quality Content Workshops for K-12 Teachers and develop media and print
- Content covering the following subject areas:
 - Sources and causes of Vibrio occurrence in coastal waters, as it relates to human and fisheries health
 - Sources and causes of fish kills, as they relate to human and fisheries health

Invasive Species:

- Early detection of new invasive species, including the use of eDNA, better coordination among field personnel across various organizations, and more consistent utilization of citizen science projects such as iNaturalist
- Rapid response to new observations with resources applied quickly to control efforts and eradication if possible
- Prevention of the introduction of new invasive species

- Outreach and engagement with decision-makers and the general public with current information on resource needs, economic impact, and perhaps an updated catalog and map of invasive species currently present in the state

Biological Resources:

- Small-scale habitat creation/restoration
- Pollinator census/bumblebee atlas
- Mammal monitoring/tracking – mammal monitoring along the batture
- Fisheries – telemetry work, eDNA as a sampling technique, non-game species, and juvenile studies
- Amphibian habitat use, presence, and population trends

Community Engagement and Education:

- High school curriculum gaps and career pathways: addressing the lack of technical and environmental science curriculum; developing "Fast Forward" and "Jump Start" pathways for students to enter environmental science careers
- Adult education and community learning: expanding adult engagement through events like "Science on the Bayou" and regional lunch-and-learn sessions
- Cultural integration & seasonal festivals: incorporating local culture (e.g., Cajun music, French language, boat building) into programming and supporting cultural festivals
- Digital storytelling, oral histories and content creation: creating digital resources (videos, podcasts, ArcGIS StoryMaps) to preserve and share local stories and environmental education; supporting projects like "Humans of the Estuary"
- Geographic reach (Upper and Middle Estuary Outreach): expanding projects beyond the southernmost part of the Estuary to northern and middle Estuary parishes

No funding discussed in this Workplan is for the purchase of promotional materials. The BTNEP logo along with any partner's logo(s) for a particular activity will be displayed as part of any materials disseminated in print or digitally by BTNEP. Also, with permission, a small EPA logo will be included with language crediting EPA as a funder of BTNEP. This logo will be in a smaller font and format so that it is clear, without ambiguity, that EPA is not responsible for the particular activity.

BTNEP will pay five percent indirect costs to its fiscal agent, Louisiana Universities Marine Consortium (LUMCON).

This Workplan includes a project to be carried out by faculty members at the Louisiana Universities Marine Consortium (LUMCON). The project is titled, "Sources of Toxic Cyanobacteria to Southern Louisiana Estuaries" and is described in section III(D). The project budget is incorporated into this Workplan's full budget rollup.

A. FY 2027 MAJOR BUDGET AREA COMPONENTS / COSTS

	Cost
a. Personnel Salary	\$533,109
b. Personnel Fringe	\$213,243
c. Travel	\$0
d. Equipment	\$13,200
e. Supplies	\$6,600
f. Contractual	\$0
g. Construction	\$0
h. Other	\$44,000
i. Program Income	\$0
Total Direct Charges (Sum of a through i)	\$810,152
Indirect Charges (5%)	\$39,848
TOTAL	\$850,000

B. FY 2027 PROJECT SUMMARY SHEET BY PROJECT NAME

		COST
Personnel Salary and Fringe		\$746,352
Equipment		\$13,200
Supplies		\$6,600
Indirect (5%)		\$39,848
Subaward	Performing Organization	
Where Tradition Grows: The Expanded Folklife Village at Rougarou Fest	South Louisiana Wetlands Discovery Center (SLWDC)	\$44,000
TOTAL		\$850,000

C. COST SHARE SUMMARY TABLE

Source of Funds	Amount
Non-Federal Match: State General Funds	\$547,158
*Non-Federal Match: Waived IDC (38%)	\$302,842
Federal Funds	\$850,000
TOTAL	\$1,700,000

*LUMCON will waive 38% of its approved IDC of 43% and claim only 5% IDC

D. FY 2027 NEW PROJECTS

NAME: WHERE TRADITION GROWS: THE EXPANDED FOLKLIFE VILLAGE AT ROUGAROU FEST

Budget: \$44,000

Performing Organization: South Louisiana Wetlands Discovery Center (SLWDC)

Partners: Barataria-Terrebonne National Estuary Program (BTNEP) Nicholls State University, Bayou Culture Collaborative local artisans, tradition bearers, cultural organizations, and coastal organizations

Project Period: January 1, 2027 – December 31, 2027

Objectives: The Rougarou Fest Folklife Village strengthens cultural preservation, education, and environmental awareness within the Barataria-Terrebonne National Estuary. The specific objectives are:

1. Increase accessibility, outreach, and education on the connection between cultural sustainability and environmental stewardship.
2. Expand cultural representation by engaging additional groups and traditions.
3. Launch an Apprenticeship Program with Nicholls State University.
4. Enhance infrastructure to better support more cultural demonstrations, including adding cooking exhibits and hands-on workshops.
5. Continue to evaluate and document cultural impacts for long-term program development.
6. Support the economic viability of artisans and tradition bearers by providing paid

opportunities, increased visibility, and expanded platforms for showcasing traditional skills and knowledge.

Description: The Rougarou Fest Folklife Village Expansion will transform a section of the festival grounds into an interactive hub for cultural learning and exchange. The expanded village will include multiple demonstration tents and cooking demonstrations. Each space will highlight a unique aspect of regional heritage—from traditional boat building and weaving to music, food, and oral storytelling.

Festival organizers will collaborate with local cultural groups, experts in folklife, environmental organizations, Nicholls State University, and BTNEP to ensure both cultural authenticity and environmental relevance throughout the project. A college student from Nicholls State University will be selected for a folklife apprenticeship, working directly with artisans and tradition bearers in the weeks leading up to the festival. The apprentice will assist with planning, coordination, and documentation of cultural demonstrations, gaining hands-on experience in heritage preservation and public education. This model supports workforce development while fostering intergenerational knowledge transfer and inspiring future leaders in cultural and environmental stewardship.

Infrastructure improvements will include additional tents, seating, and power access, enabling expanded programming and comfort for visitors and presenters. Cooking demonstrations will feature traditional dishes tied to local ecosystems, connecting wetland conservation with culinary heritage. The project will be promoted through regional and national media, social platforms, and educational outreach, positioning the Folklife Village as a model for cultural and environmental sustainability in estuarine communities. Post-festival evaluations and surveys will measure community impact, visitor learning, and cultural engagement.

Outcomes/Final Deliverables:

- Expanded Folklife Village with additional cultural representation.
- Launch of Apprenticeship Program.
- Enhanced infrastructure (additional tents, seating, signage, cooking demo space).
- Event documentation including photos, videos, and interviews.
- Public outreach and education materials.
- Final evaluation and report summarizing participation, reach, and lessons learned.

Milestones Table:

YEAR 1

Milestone	1*	2	3	4	5	6	7	8	9	10	11	12
Task #1 – Conceptualization and Planning	x	x	x									
Task #2 – Research, Outreach, and Apprenticeship Recruitment				x	x	x						
Task #3 – Logistics and Infrastructure Enhancement				x	x	x	x	x	x	x		
Task #4 – Programming, Activities, Marketing and Promotion							x	x	x	x	x	x
Task #5 – Volunteer and Staffing Support										x		
Task #6 – Evaluation and Reporting										x	x	x
Task #7 – Quarterly Monitoring Reports	x	x	x	x	x	x	x	x	x	x	x	x
Task #8 – Final Report and Presentation												x

*Year 1, Month 1 indicates date of full execution of the subaward/subcontract and project start date.

How the project supports the Clean Water Act: The project supports the CWA’s goals by fostering environmental awareness and stewardship among the public. Through cultural programming that connects traditional livelihoods, cuisine, and art to wetland and estuarine health, the project educates attendees about the importance of clean water and habitat protection. The Rougarou Fest Folklife Village strengthens community engagement in conservation by linking water quality and wetland sustainability to local culture, food, and economy.

How the project supports EPA’s “Powering the Great American Comeback Initiative”: This project advances EPA’s “Powering the Great American Comeback Initiative” by promoting local economic growth, cultural resilience, and environmental restoration within coastal Louisiana. The Folklife Village Expansion sustains regional identity while supporting small organizations, chefs, and artisans, thereby contributing to community revitalization. It also engages youth in workforce development through apprenticeships,

building capacity for the next generation of environmental and cultural leaders.

BTNEP CCMP Action Plans the project fulfills:

1. Cultural Heritage and Environmental Education (E-4)
2. Community Resilience and Sustainability (E-5)
3. Public Awareness and Engagement (E-3)

NAME: SOURCES OF TOXIC CYANOBACTERIA TO SOUTHERN LOUISIANA ESTUARIES

Budget: \$62,430

Category	Cost
Salary	\$30,450
Fringe	\$12,180
Travel	\$0
Equipment	\$13,200
Supplies	\$6,600
Contractual	\$0
Total	\$62,430

Performing Organization: Louisiana Universities Marine Consortium (LUMCON), Dr. Zhengchen (John) Zang and Dr. Kevin T. Du Clos

Project Period: January 1, 2027 – December 31, 2028

Objective: This project will combine phytoplankton sampling and machine learning (ML) models to determine the sources and environmental drivers of toxic cyanobacteria species in estuarine waters flowing into Terrebonne Bay. The overarching goal of this proposed work is to better understand the mechanisms modulating harmful cyanobacterial bloom (cyanoHAB) dynamics from inland waterways to coastal environments by integrating field observations and machine learning models.

Description: In freshwater and estuarine systems, cyanobacteria are the major harmful phytoplankton groups that can proliferate rapidly when physical and biogeochemical conditions are favorable and cause cyanoHAB events. Over the last several decades, cyanoHAB events have increased in frequency, duration, and location in the U.S. CyanoHABs can produce a wide range of toxins (e.g., microcystins and anatoxins), resulting in water quality deterioration, mass mortality of fish/shellfish, animal poisonings, and serious health risks to humans. Therefore, understanding cyanoHAB dynamics and the underlying mechanisms is essential for advancing water quality management, supporting sustainable fisheries, and enhancing the resilience of coastal

communities.

Terrebonne Bay, a shallow, microtidal estuarine system located on the abandoned deltaic lobes of the Teche and Lafourche Mississippi River deltaic plain, is the study site. Terrebonne Bay does not receive direct freshwater input from the Mississippi–Atchafalaya River system, and one of its primary freshwater sources is the Houma Navigation Canal (HNC) connecting the GIWW and the bay. During the high stage of lower Atchafalaya River discharge, about 6,400 ft³/s of freshwater are diverted into Terrebonne Bay. Terrebonne Bay serves as an important oyster habitat in coastal Louisiana. The 2023 oyster stock assessment showed that Terrebonne Bay consists of 2,640 acres of oyster reefs with ~175,484 barrels of market-size oysters. In 2025, LUMCON partnered with the Coalition to Restore Coastal Louisiana and the Grand Caillou/Dulac Band of the Biloxi-Chitimacha-Choctaw Tribe to develop an artificial oyster reef adjacent to the Marine Center environmental monitoring station. Given the detrimental effects of cyanoHABs on oyster physiology and survival, both the existing oyster fishery resources and ongoing reef restoration efforts could be threatened by cyanoHAB events in Terrebonne Bay.

Although many previous studies have examined the roles of physical, chemical, and biological processes in modulating cyanoHAB dynamics across various ecosystems, the environmental conditions that promote cyanoHAB proliferations and the mechanisms regulating their dispersal in Terrebonne Bay remain poorly understood due to the lack of long-term continuous observations in cyanobacterial community structure. In addition, the complex interactions between terrestrial, estuarine, and oceanic processes in Terrebonne Bay further obscure the key drivers of cyanoHAB events. This project aims to establish an observational-modeling framework to monitor cyanoHAB and water quality in Terrebonne Bay and disentangle the impacts of multiple environmental factors on cyanoHAB. The outcomes of this project will provide a robust knowledge base for developing adaptive water quality management plans and cyanoHAB forecasting system in coastal Louisiana.

Outcomes/Final Deliverables:

- A dataset of weekly phytoplankton abundance for two years at two sites (coastal and inland) will be created and made available via the data sharing platform Figshare.
- A dataset of weekly depth profiles of temperature, salinity, nitrate, ammonium, chlorophyll, and phycoerythrin at two sites (coastal and inland) will be created and made available via the data-sharing platform Figshare.
- An observational–modeling framework will be created and applied to produce seasonal plots showing environmental conditions favorable for cyanoHAB events at two study sites. This framework will be maintained and shared through the

THREDDS service hosted on PI Zang’s data server. In addition, a user manual will be providing describing the framework’s structures, functions, and workflows to support end users in applying the framework to other research areas.

- One local undergraduate per year will be trained in phytoplankton sampling and identification and the collection of environmental data. Each student will also gain data analysis skills by completing an independent project based on a portion of the collected data.
- One postdoc will be trained in developing observational-modeling framework and analyzing model results. The postdoc will also participate in LUMCON outreach activities to disseminate the findings of this project to the public.

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Task 1																									
QAPP Development	X	X																							
Task 2																									
Data collection	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Data processing		X	X		X	X		X	X		X	X		X	X		X	X		X	X		X	X	
Data archiving				X			X			X			X			X			X			X		X	
Task 3																									
Data collection	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Data processing		X	X		X	X		X	X		X	X		X	X		X	X		X	X		X	X	
Data archiving				X			X			X			X			X			X			X		X	
Task 4																									
Model development	X	X	X	X	X	X	X	X	X	X	X	X													
Model testing			X	X	X	X	X	X	X	X	X	X													
Model operation								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Model archiving																				X	X	X	X	X	
Task 5																									
Outreach activity							X	X			X								X	X			X		
Task 6																									
Quarterly report			X			X			X			X			X			X			X			X	
Task 7																									
Final report																							X	X	

How the project supports the Clean Water Act: This project supports the CWA by providing data on the effects of nutrient discharges (regulated under section 301) on cyanoHABs in estuarine systems. This project also supports the Harmful Algal Bloom and Hypoxia Research and Control Act (HABHRCA) of 2025 (awaiting approval in the House), which charges the EPA to “develop algal bloom monitoring, observing, and forecasting programs in lakes, rivers, and reservoirs and carry out other activities related to researching freshwater harmful algal blooms and hypoxia events”.

How the project supports EPA’s “Powering the Great American Comeback Initiative”: Our project supports EPA’s “Powering the Great American Comeback Initiative” in two primary ways. First, by generating in-situ HAB observations and developing an integrated observational-modeling framework, we will deliver critical information for designing adaptive coastal environmental management strategies (Pillar 1: Clean Air, Land, and Water for Every American). Second, we will develop a state-of-the-art AI-based machine learning model to analyze environmental drivers of cyanoHAB events. Our project strengthens U.S. leadership in advanced AI technologies (Pillar 4: Make the United States the Artificial Intelligence Capital of the World).

BTNEP CCMP Action Plans the project fulfills:

1. Pollutant Identification and Assessment (EM-8)
2. Assessment of Harmful Algal Blooms (EM-14)
3. Protection and Enhancement of Native Biological Resources (EM-15)

E. FY 2024 – FY 2026 Ongoing Projects

a. FY 2024 Ongoing Projects

NAME: BANDING AND ENHANCED MONITORING OF BLACK SKIMMERS ON GRAND ISLE

Budget: \$38,664

Performing Organization: Audubon Delta

Project Period: October 1, 2024 – September 1, 2026

Objective: Quantify body condition of Black Skimmers wintering on Grand Isle and compare it to Black Skimmers wintering in Mississippi under different environmental conditions and disturbance regimes. Document site fidelity and dispersal of Black Skimmers wintering on Grand Isle through banding and band resight surveys. Determine

juvenile to adult age ratios, which provide a proxy for measuring breeding productivity.

Description: Band Black Skimmers at Grand Isle between 1 Nov 2025 and 30 March 2026 with a stainless-steel band issued by the USGS Bird Banding Lab and a red wrap-around color band with a unique 3-digit code embossed in white letters and numbers. Standard body size measurements will be taken (wing chord, culmen) for sex determination, and for assessment of body condition when compared against bird mass. Surveys will be conducted for Black Skimmers on Grand Isle following the Audubon Coastal Bird Survey protocol (National Audubon Society 2022). This will entail three surveys during the winter pulse (10 Jan – 20 Feb 2026) and six surveys during the spring pulse (20 Mar – 30 May 2026) conducted along a one-mile transect. As part of these surveys, counts of Black Skimmers will be recorded and observers will search for banded birds within the quarter mile transect buffer

Outcomes/Final Deliverables:

- Better understanding and documentation of wintering habits and conditions of Black Skimmers in BTNEP’s Grand Isle compared to another wintering site in Mississippi. The study will serve as a proxy for understanding breeding productivity and will inform activity on Grand Isle.
- A final report will summarize all activities and results.

CCMP Action Plans:

1. Protection and Enhancement of Native Biological Resources (EM-15)
2. Community Engagement (SR-1)

NAME: SOURCES OF RECURRING OUTBREAKS OF PURPLE LOOSESTRIFE IN THE LOWER MISSISSIPPI RIVER DELTA

Budget: \$47,252

Performing Organization: U.S. Geological Survey, Wetland and Aquatic Research Center

Project Period: March 1, 2024 - September 30, 2026

Objective: The project will contribute to a deeper understanding of loosestrife invasion mechanics via dispersal and seed bank storage. The project seeks to detect the sources of recurring outbreaks of purple loosestrife by searching for seed banks and assessing the input from upstream river sources and birds near former infestation areas in the Birdsfoot Delta of Louisiana.

Description: The study will locate potential outbreak areas of purple loosestrife by examining dispersal and likely deposition areas near former sites of infestation in the

freshwater estuary of the lower Mississippi River delta. Soil will be collected at progressive distances away from former infestation areas (4 replicated sets of distance surveys), by collecting soil in November 2023, and then conducting a seedbank assay in the greenhouse of the U.S. Geological Survey in Lafayette, Louisiana from February through August 2024. The work will also alert local managers and citizen scientists via a website and factsheet to identify emerging populations of this invasive Eurasian species in this vast wilderness area. A factsheet and website were developed in conjunction with the U.S. Fish and Wildlife Service in 2022, and are available for citizen scientists visiting the Birdsfoot Delta.

Long term Outcomes: This work will determine if the invasive species purple loosestrife has indeed infested freshwater areas of our Estuary in the lower Mississippi River as it begins to take hold. A fact sheet for distribution to citizen scientists as well as a website run by USGS will be created to map out the emerging populations of purple loosestrife.

CCMP Action Plans:

1. Protection and Enhancement of Biological Resources (EM-15)
2. Reduction of Impacts from Invasive Species (EM-16)

NAME: TRANSITIONS FOR RE-ENTRY

Budget: \$50,000

Performing Organization: Fletcher Technical Community College

Project Period: February 15, 2025 - September 30, 2026

Objective: This project aims to enroll additional justice-involved individuals in the environmental science and/or coastal geology programs at Fletcher, provide a series of short-term training credentials to justice-involved individuals that assist in securing employment in this sector, and provide field experiences that introduce environment and coastal careers to individuals involved in justice programs.

Description: Fletcher Technical Community College has established a series of pathways for formerly incarcerated individuals, as well as those in diversion programs, to find opportunities to enter the workforce and transition back into their communities. This proposal aims to provide opportunities for students to train and study in environmental and coastal studies, both of which are Louisiana 4- and 5-star jobs that are classified as high-wage and high-demand careers.

Outcomes/Final Deliverables:

- Develop a plan to create pathways for formerly incarcerated citizens to engage in activities and vocations to protect and restore our estuary and coastal

environments.

- Put the Justice 40 initiative to use by engaging a population that is largely ignored and could be enlisted in the fight to save our coast

CCMP Action Plans:

1. Continuing Education Programs and Informal Education Programs (SR-6)
2. Business Education and Training (PE-8)

b. FY 2025 Ongoing Projects

NAME: ENGAGING PRIMARY AND SECONDARY STUDENTS IN CITIZEN SCIENCE THROUGH PURPLE MARTIN CONSERVATION

Budget: \$19,961

Performing Organization: Purple Martin Conservation Initiative (PMCI)

Project Period: December 15, 2024 - December 15, 2026

Objective: In late 2024, identify and meet with administration/school personnel to introduce the project and determine placement for bird housing. In early 2025, housing materials will be purchased and installed at two sites for the 2025 Purple Martin season. A third location, to be determined, will be installed for the 2026 Purple Martin season. Educational sessions with school personnel and students to introduce Purple Martin biology, identification, attraction, management, and protection of this avian population will occur throughout the project.

Description: Location for bird housing within the estuary will be determined first. Contact will then be made with school administration to schedule a meeting to provide an overview of the project, timeline, and discuss the needs to ensure success. Contractor will then purchase Purple Martin and Eastern Bluebird housing for each location. Educational signage will be developed, purchased, and installed.

Once bird housing is installed, PMCI will schedule an educational session with school personnel/students to introduce Purple Martin biology, identification, attraction, management, and protection of this avian population. Project MartinWatch and Citizen Science will be introduced and education materials will be provided.

Regular contact with schools will continue during the nesting season. Periodic visits to the schools will be scheduled to observe and provide resources for nest monitoring.

Long term Outcomes: Participation in educational and conservation activities focused on expanding students' knowledge and awareness of the life cycles of Purple Martins will foster an increased understanding of the need for individuals to take part in conservation activities. The installation of the bird housing on the school grounds will provide students the ability to observe nature without the expense of field trips and missed class time. By inspiring the youth to honor and protect the environment through citizen science efforts aimed at supporting this special swallow, PMCI is developing a base for future generations of Purple Martin enthusiasts to provide housing for the species that has become so closely aligned with humans.

Ultimately, humans and birds will benefit from the increased environmental literacy resulting from this project. A complete final report using a compilation of quarterly reports and the Final Report format to complete this report. The Final Report can be submitted for final payment after all edits have been completed to the approval of the BTNEP Project officer. The contractor will submit a final project report to include a narrative of challenges and accomplishments, an analysis and summary of results.

CCMP Action Plans:

1. Protection and Enhancement of Native Biological Resources (EM-15)
2. Continuing Education Programs and Informal Education Programs (SR-6)
3. Community Engagement (SR-1)

NAME: SURVEY FOR FRESHWATER MUSSELS (ORDER UNIONIDA) IN PLAQUEMINES PARISH, LOUISIANA

Budget: \$49,702

Performing Organization: Nekton Research Laboratory, Pontchartrain Institute for Environmental Sciences, University of New Orleans

Project Period: January 1, 2025 - December 31, 2026

Objective: In early 2025, we will conduct a land-based reconnaissance survey of potential freshwater mussel habitats in western Plaquemines Parish with an emphasis on visual searches of bayou, canal, and river banks for freshwater mussel shells (Cummings et al., 2016). In late 2025, we will conduct active sampling using bail hooks at those sites most likely to have live freshwater mussels based on the land-based reconnaissance survey. We will identify, count, measure, and photograph any live freshwater mussels and mussel shells we collect to determine which species occur in which parts of Plaquemines Parish.

Description: Prior to conducting the land-based reconnaissance survey, we will use

Google Maps to identify 20-30 potential sites to survey in western Plaquemines Parish. This will be followed by an initial scouting trip to the area to determine which of these sites are accessible. During the land-based reconnaissance survey, each pre-selected site will be surveyed on foot for half an hour. An emphasis will be based on locating animal middens, debris piles, and other habitats where mussel shells accumulate (Cummings et al., 2016). If freshwater mussel shells are discovered in the first half hour of surveying, we will conduct another half hour of surveying at the site. The total number of mussel shells collected will be recorded and maps of the site will be drawn for future reference. If no freshwater mussel shells are discovered during the initial land-based reconnaissance survey, a second survey will be conducted in another region of Plaquemines Parish. At those sites containing freshwater mussel valves, we will sample the adjacent aquatic habitats using bail hooks deployed from the shoreline. Sampling will continue for an hour at each site. All live mussels will be identified, measured, photographed, and returned to the water.

Outcomes/Final Deliverables: There are two possible long-term outcomes of our proposed project. We may determine that multiple species of freshwater mussels occur in shallow water habitats throughout Plaquemines Parish and that these mussels represent truly established mussel beds. We may also not find any freshwater mussels in Plaquemines Parish or the ones we do find will represent anomalous aggregations of freshwater mussels perhaps deposited in “sink” or “trap” habitats by riverine fish hosts. If the former occurs, we will need to determine if any federally threatened or endangered species are present and, if so, their habitats will need to be protected. If the latter occurs, then the presence of freshwater mussels in Plaquemines Parish could be considered an interesting phenomenon that could be better understood with further research, but nothing requiring federal management or protection. A complete final report using a compilation of quarterly reports and the Final Report format to complete this report. The Final Report can be submitted for final payment after all edits have been completed to the approval of the BTNEP Project officer. Contractor will submit a final project report to include a narrative of challenges and accomplishments, an analysis and summary of results. The Contractor will present results to a meeting of the BTNEP Management Conference, if requested, and submit results to journals for publication as appropriate.

CCMP Action Plans:

Protection and Enhancement of Native Biological Resources (EM-15)

**NAME: VERTICAL OYSTER GARDENING WITH RECYCLED OYSTER SHELLS
PILOT**

Funding Request: \$25,000

Performing Organization: Coalition to Restore Coastal Louisiana (CRCL)

Project Period: January 1, 2025 – June 30, 2027

Objective: CRCL will construct and distribute 250 vertical oyster gardens (VOG) in the BTES. These vertical oyster gardens will be constructed by volunteers with recycled oyster shells collected from regional restaurants through CRCL's Oyster Shell Recycling Program. These gardens will be provided to waterfront property owners to recruit new oyster growth, which will provide estuarine habitat and engage the public in citizen science. The vertical oyster gardens will be periodically assessed to track oyster recruitment trends across the BTES.

Description: Volunteers will be tasked with using cured, recycled shell from CRCL's recycled oyster shell collection, and drill 1/2" holes using masonry bits on a drill press. They will then take a 6' length of 3/8" poly rope and tie a knot on one end. Volunteers will string approximately 16" worth of oyster shell on the line and tie a knot above the top shell. This is now a deployable VOG that will be tagged with a unique id tag to track future oyster recruitment. VOGs will be distributed to private waterfront property owners across the BTES through various outreach and educational channels and existing partnerships.

CRCL will create a webpage to educate the public and participants about the program, how to successfully hang the VOG, and how to monitor twice a year and record findings.

VOGs will be hung from docks or anywhere they will be submerged in tidal waters and initial installation data will be recorded. VOGs will be monitored by property owners at a regular interval (likely every six months) to assess oyster larvae recruitment.

Outcomes/Final Deliverables: This effort supports the primary goal of this Action Plan to build and develop a grassroots movement by which active engagement, education, and volunteerism implements restoration, protection and stewardship initiatives throughout the BTES. CRCL will submit a final project report to include a narrative of challenges and accomplishments, an analysis and summary of results. Contractor will present results to a meeting of the BTNEP Management Conference, if requested, and submit results to journals for publication as appropriate.

CCMP Action Plans:

1. Protection and Enhancement of Native Biological Resources (EM-15)
2. Community Engagement (SR-1)
3. Public Engagement (SR-4)

NAME: WETSHOP 2025

Funding Request: \$20,000

Performing Organization: Louisiana Wildlife and Fisheries Foundation

Project Period: January 1, 2025 - October 31, 2026

Objective: To increase awareness about Louisiana’s wetland values, coastal issues, and history among teachers and their students through place-based lessons.

Description: WETshop is a week-long coastal awareness teacher training with an intent of educating approximately 40,000 Louisiana students on the values, issues and history of Louisiana’s coastal ecosystems through the training of Louisiana teachers on wetland issues.

Outcomes/Final Deliverables: This successful project has been renewed multiple times as it brings BTNEP together with many agencies teaming up for this “train the trainer” training in which teachers are paid a stipend for one week of their time in the summer. There they learn about coastal Louisiana so that they can carry these experiences back to the classroom. WETshop will provide a final report once the project has concluded.

CCMP Action Plans:

1. Community Engagement (SR-1)
2. SR-4 Public Engagement
3. Estuarine Curriculum Development (SR-5)
4. Continuing Education Programs and Informal Education Programs (SR-6)
5. Financial Support for Educational Initiatives (SR-7)

NAME: CYNTHIA FIBER FOR BIODEGRADABLE PLANT POTS

Funding Request: \$50,000

Performing Organization: Cynthia Louisiana, LLC

Project Period: February 10, 2025 - September 30, 2026

Objective: This project intends to remove invasive water hyacinth (*Pontederia crassipes*) from local waterways and use it for the production of biodegradable plant pots. The contractor will develop, manufacture, and commercialize biodegradable plant pots made from water hyacinth by utilizing a novel process of harvesting and processing the plant

into fibers, known commercially as Cynthia. Variations of pot construction will be tested to optimize the pots for maximum utility in nurseries and other plant materials operations.

Description: The contractor will utilize water hyacinth collected from local waterways and processed into fibers at their recently inaugurated solar drying facility in Gibson, LA to manufacture pressed fiber plant pots. The contractor will collaborate with local nurseries and universities in the BTES to conduct trials aimed at optimizing the manufacture, form, and function of the pots. Working closely with these partners, the trials will focus on refining technical aspects to optimize the performance and usability of the plant pots:

- To study the influence of the pot thickness and size to its other mechanical properties.
- To study the most suitable watering processes for plant growth (Cynthia fiber has a significant water retention) and to reduce water use.
- To study the behavior of a selection of plants and plant parts (root system, etc.) within the pots.

Outcomes/Final Deliverables: The contractor will test variations of plant pot construction and ultimately provide a list of technical requirements to be used for the manufacturing of pots that will suit nursery identified needs in terms of size, thickness, durability, biodegradability, etc. Documentation of technical details including pot thickness, watering processes, and root behavior observed during the trials will be provided. By conducting trials with nurseries, the aim is to develop plant pots that meet the highest standards of performance, durability, and sustainability required by nurseries. This will lead to the creation of optimal biodegradable plant pots for commercial use. Furthermore, the removal of water hyacinth will help restore aquatic habitats and lessen the reliance on chemical herbicides. Production and commercialization of the biodegradable pots will provide an eco-friendly alternative to plastic plant pots.

CCMP Action Plans:

1. Reduction of impacts from invasive species (EM-16)
2. Technology (R&D) and Market Development (EG-2)
3. Marketing Sustainable Products and Practices (EG-4)

NAME: MAPPING HYPOXIC ZONES IN BARATARIA BAY FROM 2001 TO 2020

Funding Request: \$49,999

Performing Organization: Louisiana State University

Project Period: October 1, 2024 - October 31, 2026

Objective: To map hypoxic conditions in Barataria Bay, we will conduct three-dimensional

computer simulations of hydrodynamics (temperature, salinity, currents) and biogeochemistry (oxygen nutrients, functional plankton groups, non-living organic matters) for the bay

Description: The computer simulations will be performed using a coupled-hydrodynamic-biogeochemical model. The hydrodynamic module is the Coastal and Regional Ocean Community Model (CROCO). It calculates three-dimensional fields of temperature, salinity and ocean currents. The biogeochemical model is the Pelagic Interactions Scheme for Carbon and Ecosystem Studies (PISCES) model. It prognostically solves 24 tracer variables for the lower-trophic levels of marine ecosystems and the biogeochemical cycles of oxygen, carbon, and nutrients (N, P, Si, Fe). The coupled-CROCO-PISCES will be configured on a domain for Barataria Bay at high-resolution (black box in Fig. 1) that is nested with the northern Gulf of Mexico domain that the PI's team constructed for the NOAA hypoxia project. The grid will be at a much higher resolution than the one used to generate the results shown in Fig. 1. Simulations will be performed from 2001 to 2020. Model solutions will be validated against available observation. The spatial and temporal variability of the hypoxic zone in the Bay will be characterized. Conditions for the formation of hypoxic zones in Barataria Bay, e.g., river discharge, wind forcing, and circulation in the Louisiana Bight, will be explored. Maps of hypoxic zones will be created.

Outcomes/Final Deliverables: Final Report; Final completed model that has been validated and ground-truthed as described in the Description section. The study will, for the first time, offer a systematic characterization of hypoxic zone in Barataria Bay, providing baseline information on water quality in the bay for future coastal restoration and protection activities

CCMP Action Plans:

1. Pollutant Identification and Assessment (EM-8)
2. Protection and Enhancement of Native Biological Resources (EM-15)

NAME: 2025 BTNEP INDICATOR REPORT

Funding Request: \$64,346

Performing Organization: Arcadis, Inc.

Project Period: contract not executed

Objective: To create the fourth updated volume of a report using a suite of environmental and socioeconomic indicators to represent the overall health of the BTES and, in certain instances, the effect of restoration and enhancement efforts by BTNEP

and its partners.

These indicators represent some of the vital signs of the Estuary, painting a picture of the overall health of the system and establishing an associational link to how our restoration efforts are working. The BTNEP Indicator Report intends to offer to decision-makers and citizens of the BTES a simplified view of representative components of an extremely complex ecosystem. It is important to periodically check and report on these vital signs – and to use this information carefully and in the appropriate context as we try to understand status and trends in these key environmental and socioeconomic indicators. The goal of this report is to help citizens understand how activities in the Estuary directly impact the vitality of our regional economy, ecosystems, culture, and way of life.

Description: The contractor will use specific environmental and socioeconomic indicators gathered from previous BTNEP Indicator Reports, plus several new indicators reflecting recent trends in the estuary, to research the latest data from numerous and varied sources such as federal and state resource agencies, business and industry groups, and academia. The data will be presented in a comprehensive document for print and online distribution with background descriptions for each indicator and graphical representations of the data for a general audience.

Outcomes/Final Deliverables: The final deliverable will consist of a digital file of the final draft of the 2025 Indicator Report, including photos and other images, photo permissions and credits, and a list of data sources and their contact information. The indicators will reflect environmental and socioeconomic trends in the BTES and show how restoration efforts and ongoing implementation of the CCMP Action Plans are affecting outcomes. By producing Indicator Reports more regularly and providing this information to lawmakers and the public, we hope to effect more informed decision-making in our region.

CCMP Action Plans:

1. Governmental Affairs and Education (CP-1)
2. Community Engagement (SR-1)
3. Public Engagement (SR-4)
4. Estuarine Curriculum Development (SR-5)
5. Continuing Education Programs and Informal Education Programs (SR-6)
6. Marketing the Barataria-Terrebonne National Estuary Program (PE-9)

c. FY2026 Ongoing Projects

NAME: LAKES BOEUF AND VERRET AQUATIC VEGETATION INVESTIGATION

Budget: \$74,935

Performing Organization: Comite Resources

Partners: Spatial Analytics & Research Consulting

Project Period: contract not executed

Objective: To quantify changes in water quality to determine if these changes are related to the decline of submerged and floating aquatic vegetation (AV) in Lake Boeuf and Lake Verret. To establish a timeline of the decline in AV at both lakes using aerial imagery. Collect water quality data at both lakes, including Photosynthetically Active Radiation (PAR) and percent coverage of aquatic vegetation. Document observations made of the decline in AV by users of the lakes.

Description: This study will assess water quality and aquatic vegetation decline in Lakes Boeuf and Verret using field data, historical records, remote sensing analysis, and interviews with lake users. The principal investigator (PI) previously collected historical water quality data for Lake Boeuf, which will be compared with current conditions. Efforts will also be made to compile existing data for Lake Verret, where fewer historical records are available. The study includes the following tasks:

1. Water Quality & Vegetation Monitoring – Bimonthly sampling for one year at key locations in both lakes to measure temperature, pH, dissolved oxygen, conductivity, salinity, turbidity, and total dissolved solids. Water samples will be collected for nutrient, sediment and chlorophyll analysis. PAR will be measured to assess light penetration, and vegetation surveys will document percent cover and species composition of aquatic vegetation.
2. Historical Data Compilation – Water quality data from governmental, academic, and private sources will be compiled, including datasets from 2000–2011 collected by the PI and LDEQ.
3. Comparative Analysis – Current data will be compared with historical datasets, particularly from 2007–2009 for Lake Boeuf, to assess changes over time.
4. Aerial Imagery Analysis – High-resolution imagery will be analyzed to detect shifts in vegetation cover and wetland extent.
5. Stakeholder Interviews – Interviews with lake users will document firsthand observations of vegetation loss, changes in water conditions, and potential contributing factors such as herbicide use, sedimentation, or algal blooms.

Outcomes/Final Deliverables: This project will identify factors driving aquatic vegetation loss in Lakes Boeuf and Verret, guiding targeted restoration efforts. By analyzing

historical and current water quality and vegetation data, it will establish baseline conditions to track future changes. Findings will inform agencies on best practices for habitat restoration, water quality improvement, and fisheries management. The research will support conservation initiatives by providing data for regulatory decisions and policy changes. Engaging stakeholders, including fishers and community groups, will ensure restoration strategies align with ecological and economic priorities, fostering long-term advocacy for wetland conservation.

How the Project Supports the CWA: This project will investigate degraded water quality as a potential cause of the loss of emergent and submerged aquatic vegetation, which may lead to restoration of this habitat.

How this Project Supports EPA’s “Powering the Great American Comeback Initiative”: This project supports **Pillar 1: Clean Air, Land, and Water for Every American** by using data-driven analysis to identify causes of aquatic vegetation decline and inform future water quality and habitat restoration strategies.

CCMP Action Plans:

1. Pollutant Identification and Assessment (EM-8)
2. Protection and Enhancement of Native Biological Resources(EM-15)
3. Wetland Restoration and Enhancement (EM-17)

NAME: NATIVE PLANT EDUCATION PROGRAM 2026-2028

Budget: \$22,000.00

Performing Organization: NPIGNO

Partners: Master Gardeners of Greater New Orleans, Master Naturalists of Greater New Orleans, Baton Rouge Wild Ones, Louisiana Native Plant Society, Houma/Terrebonne Master Gardeners, and various other potential community partners throughout the New Orleans, Baton Rouge, and Terrebonne areas

Project Period: subaward not executed

Objective: Expand the use of native plants in urban landscaping across Southeast Louisiana by expanding accessibility to them and providing engaging educational content that highlights their ecological benefits and beauty.

Description: Over the next two years, native Louisiana plants will be cultivated from collected and purchased seeds and plant material, in partnership with a professional grower and with the help of dedicated volunteers. These plants, along with packets of regionally appropriate native seeds, will be distributed at community engagement events

held at various locations, including local community gardens, universities, neighborhood associations, garden clubs, other community events, and Native Plant Initiative (NPI) membership meetings.

At these events, NPI representatives will be on hand to distribute plants and seed packets, providing detailed descriptions and instructions for successful planting and seed starting. The goal is to engage, educate, and excite the general public about the ecological benefits of native plants, ultimately increasing the presence of these vital species in our local landscapes. The seed distribution component will empower individuals to further expand their native plant gardens and contribute to local biodiversity.

In addition to plant and seed distributions, a podcast will be launched, and educational materials will be developed to provide in-depth communication about native plants. This podcast will serve as an engaging educational resource, featuring interviews with experts in Southeast Louisiana, discussions on native plant gardening techniques, and insights into the ecological importance of native species. The podcast will be promoted through our website, social media channels, and community events, further expanding our reach and fostering a deeper understanding of the crucial role native plants play in our environment.

Outcomes/Final Deliverables: A minimum of six Plant Distribution Events will provide a minimum of 12,500 plants and 4,000 seed packets to be distributed at community engagement events held at various locations, including local community gardens, universities, neighborhood associations, garden clubs, other community events, and NPI membership meetings. Production of six educational videos and audio podcasts on native plants will be made publicly available and designed for a broad audience, including home gardeners, educators, people interested in environmental science, and anyone interested in learning more about native flora. They will be hosted by an NPI member and feature guest speakers throughout Southern Louisiana who hold unique knowledge of the region.

How the Project Supports the CWA: This project will distribute native plants and seeds to the public. A native plant landscape supports local wildlife, enhances urban water systems, and requires less maintenance. Audio and video podcast episodes will be produced to engage and educate audiences about the ecological benefits of native plants.

How this Project Supports EPA's "Powering the Great American Comeback Initiative": This project promotes urban biodiversity and community involvement through native landscaping, aligning with **Pillar 1** by reducing irrigation needs and runoff in urban landscapes and **Pillar 3: Permitting Reform, Cooperative Federalism, and Cross-Agency Partnership** by empowering local groups and fostering sustainable land use.

CCMP Action Plans:

Community Engagement (SR-1)
Media Engagement (SR-3)
Urban Green Spaces (EM-13)
Protection and Enhancement of Native Biological Resources (EM-15)
Reduction of Impacts from Invasive Species (EM-16)

NAME: THIBODAUX GLASS RECYCLING PROGRAM

Budget: \$60,000

Performing Organization: Glass Half Full (GHF)

Project Period: subaward not executed

Objective: To bring glass collection and recycling to the Thibodaux area. Residents can recycle their glass for free, to be sorted, processed, pulverized, and refined into beach-like sand to use for local coastal restoration projects and disaster relief efforts.

Description: GHF, a glass recycling program that transforms glass waste into sand for coastal restoration, will implement a comprehensive glass recycling program in Thibodaux that comprises two significant programs. The first program is deploying a large, bulk-glass recycling receptacle where the community can drop off their glass for recycling. This receptacle will hold approximately 16 cubic yards of glass waste or about 8,000 pounds. GHF estimates that this receptacle will be able to accommodate approximately 1,270 residents every month. GHF estimates that this program will recycle approximately 104,000 pounds of glass waste per year and 208,000 pounds over two years.

The second program is deploying 21, 64-gallon toter bins to approximately seven “sub-sites” (with each sub-site having approximately three toters). GHF estimates that this program will recycle approximately 47,775 pounds of glass waste per year and 95,500 pounds over two years. GHF will recycle the glass that is collected in this program for coastal restoration projects within the state. This initiative ensures a clear, transparent, and local end-use for the glass, which is expected to generate significant excitement among residents.

GHF is well-qualified to deliver exceptional service. In 2024, GHF operated over 1,000 routes across Louisiana, Mississippi, and Alabama, with nearly 30,000 unique servicing or pickups per year. GHF maintains an on-scheduled rate (meaning GHF performs the service on the scheduled date unless otherwise requested) that nears 100%. Further, GHF maintains comprehensive recycling data collection systems to ensure thorough recycling reporting and analysis to their partners and clients.

Outcomes/Final Deliverables: The Thibodaux Glass Recycling Program project aims to reduce waste in Thibodaux by diverting approximately 151,775 pounds of glass from landfills annually, helping conserve landfill space and reduce environmental impact. The initiative will raise awareness through educational efforts, promoting recycling and coastal restoration, and encouraging long-term community participation. Over the next two years, GHF plans to recycle an estimated 300,000 pounds or more of glass through this project, transforming it into sand for coastal restoration and disaster relief. Additionally, GHF will use advanced data collection to monitor recycling volumes, contamination rates, and participation, ensuring the program’s success and guiding future initiatives.

How the Project Supports the CWA: This project diverts glass from landfills and repurposes it for environmental restoration. The initiative also reduces pollution and promotes sustainable waste management practices in alignment with the Act’s goals.

How this Project Supports EPA’s “Powering the Great American Comeback Initiative”: This project supports **Pillar 1** through litter and landfill waste reduction and **Pillar 2: Restore American Energy Dominance** by supplying recycled materials for coastal restoration—lessening reliance on energy-intensive raw materials.

CCMP Action Plans:

1. Improvement of Water Quality through the Reduction of Inshore and Marine Debris (EM-17)
2. Media Engagement (SR-3)
3. Public Engagement (SR-4)

NAME: SLWDC SWAMP CAMP 2026 & 2027

Budget: \$30,000 Base Grant Funding; \$8,750 Program Income (\$175 registration fee per camper; estimated 50 campers)

Performing Organization: South Louisiana Wetlands Discovery Center (SLWDC)

Partners: The following organizations donate staff time and/or the use of their facilities for Swamp Camp: ConocoPhillips, T. Baker Smith, Nicholls State University (Nicholls Farm), BTNEP, Restore or Retreat.

Project Period: subaward not executed

Objective: Educate students about Louisiana’s wetlands and the importance of the coast’s industries using daily field trips and activities.

Description: The daily field trips and activities will include native plant use, land subsidence, water quality, fish anatomy and estuary management to introduce students to the basics of the Louisiana wetlands and encourage students to preserve the coast. In addition to lessons on Louisiana’s wetlands, the camp will also educate students on the oil and gas, fishing, and agriculture industries that support the economy of Southern Louisiana. With these activities, the students are expected to gain an appreciation of their coastal home and become good stewards of the Estuary so they continue to have a place to live, work and play.

To measure the effectiveness of the camps’ lessons, students will take a pre-test before participating in any activities and a post-test at the conclusion of the week. We will be able to use these test scores to evaluate the students’ increase in knowledge about their coastal home.

Outcomes/Final Deliverables: This program lays the foundation for our next generation to be successful and responsible while preserving their way of life into the future. We expect our students to gain an appreciation of their coastal home and become good stewards of the Estuary so they continue to have a place to live, work, and play. We encourage our students to identify careers that interest them and explore educational requirements to pursue those careers. SLWDC will also provide a Swamp Camp final report.

How the Project Supports the CWA: Students will engage in hands-on learning about water pollution, conduct water quality testing, and explore ways to prevent pollution— all while developing a strong sense of environmental stewardship through direct connections with their local watersheds. These meaningful experiences are designed to inspire a lifelong commitment to protecting our water resources.

How this Project Supports EPA’s “Powering the Great American Comeback Initiative”: This project promotes environmental literacy and stewardship in youth and educators, embodying **Pillar 1** and **Pillar 3** by building cross-sector collaboration and empowering local communities to preserve coastal ecosystems.

CCMP Action Plans:

1. Community Engagement (SR-1)
2. Estuarine Curriculum Development (SR-5)
3. Continuing Education Programs and Informal Education Programs (SR-6)

**NAME: WETLAND EDUCATION FOR TEACHERS WORKSHOP (WETSHOP)
2026 & 2027**

Budget: \$20,000

Performing Organization: Louisiana Wildlife and Fisheries Foundation

Partners: BTNEP, Louisiana Department of Wildlife & Fisheries Staff & Volunteers, CPRA, Coastal Wetlands Planning Protection Restoration Act, Delta Discovery Tours, Department of Natural Resources, Louisiana College Sea Grant Program, LMN of Greater Baton Rouge, Louisiana Nature Conservancy, Louisiana State University, National Oceanic and Atmospheric Administration, Nunez Community College, Port Fourchon Port Authority

Project Period: subaward not executed

Objective: To increase awareness about Louisiana’s wetland values, coastal issues, and history among teachers and their students through place-based lessons.

Description: WETshop is a week-long coastal awareness training with an intent of educating approximately 40,000 Louisiana students on the values, issues and history of Louisiana’s coastal ecosystems. To accomplish this goal, the training will include presentations and field trips by bus, boat, and foot, covering topics such as fisheries management, coastal restoration projects, oil and gas exploration, birding, botany, freshwater diversions, history, invasive species, marine debris, hurricane mapping, hydrology, and other coastal-related issues led by LWDF and agency partners.

Outcomes/Final Deliverables: This successful project has been renewed multiple times as it brings BTNEP together with many agencies teaming up for this “train the trainer” training in which teachers are paid a stipend for one week of their time in the summer. There they learn about coastal Louisiana so that they can carry these experiences back to the classroom. Upon completion of the training, it is required that participants return to their educational domiciles and develop a wetlands project for the students and/or the community. WETshop will provide a final report once the project has concluded.

How the Project Supports the CWA: Teachers will gain a deeper understanding of the importance of clean water, learn how to conduct water quality testing, and explore best environmental practices—equipping them to bring these valuable lessons and hands-on experiences back to their classrooms.

How this Project Supports EPA’s “Powering the Great American Comeback Initiative”: This project promotes environmental literacy and stewardship in youth and educators, embodying **Pillar 1** and **Pillar 3** by building cross-sector collaboration and empowering local communities to preserve coastal ecosystems.

CCMP Action Plans:

1. Protection and Enhancement of Native Biological Resources (EM-15)
2. Community Engagement (SR-1)

NAME: CAJUN & NATIVE AMERICAN TRADITIONS: PASSING ON OUR HERITAGE

Budget: \$27,500

Performing Organization: Friends for Traditional Louisiana Boat Builders

Partners: South Central Planning & Development Commission, managers of “The Marketplace at the Isle”

Project Period: subaward not executed

Objective: To reopen the FFTLBB museum and workshop at a temporary location after the existing location suffered irreparable damage from Hurricane Ida. The museum and workshop allow the public a glimpse into the lifeways of our ancestors and how they interacted with the environment around them through presentations, demonstrations, and artifact displays in an effort to preserve the heritage of the estuary.

Description: Since 1979, FFTLBB has upheld its mission to “promote, preserve, and cultivate the traditional methods of wooden boat building and the associated livelihoods and activities supported by these boats.” The organization is dedicated to preserving local heritage through boat building and creating a museum of local artifacts that reflect the lives of the Cajun people and Native Americans of Louisiana. Over the years, the museum collection has grown to include hundreds of Cajun and Native American artifacts, including the largest collection of cypress dugout boats in the state, and one Native American dugout radiocarbon-dated to the 1500s. Before the pandemic and Hurricane Ida, the organization served both local residents and visitors from around the world, and held classes in boat building, cypress paddle making, Louisiana scenic painting, and wooden boat restoration. However, due to the damage sustained to the museum in Lockport, Louisiana, the entire collection is in storage until a permanent location is built at Nicholls State University in approximately two years.

FFTLBB will rent a facility located on the property of “The Isle,” and at this location, the FFTLBB staff will be available three days a week and by appointment to carry out the goals of this project. The director will conduct classes on paddle making using traditional tools such as the hand adze, broad axe, draw knife, and hand planer. Other staff volunteers will give information on the uniqueness of this skill and how it relates to the Cajun and Native American cultures. Other demonstrations will include traditional wooden boat building, net tying, duck carving, basket weaving, and other crafts. Such

activities include but are not limited to games, creating plans of survival using resources native to the BTES, listening to Cajun and Native American tales, viewing videos such as The Pirogue Maker, and much more. These activities will be age-appropriate and created by a certified teacher using Louisiana state standards for social studies and science.

Outcomes/Final Deliverables: The overall outcome of this project is the creation of a temporary museum and workshop at the Isle de Jean Charles resettlement, allowing the organization to continue its educational programs despite the loss of its facility due to Hurricane Ida. The project will focus on preserving and showcasing traditional crafts, such as paddle making, boat building, and basket weaving, through hands-on demonstrations and presentations. The temporary facility will offer a platform for interactive activities, storytelling, and cultural education, preserving the rich heritage of both Cajun and Native American communities.

How the Project Supports the CWA: This project supports the EPA Clean Water Act by preserving and teaching traditional boatbuilding practices that emphasize sustainable interaction with the estuarine environment and fostering community stewardship of local waterways. By educating the public on historical lifeways and environmental reliance, it promotes awareness of the need to protect water resources and the ecosystems they support.

How this Project Supports EPA's "Powering the Great American Comeback Initiative": This project safeguards invaluable cultural heritage through educational programming, reinforcing environmental respect and community resilience consistent with **Pillar 1** and **Pillar 3**.

CCMP Action Plans:

1. Cultural Heritage and Lifeways (SR-8)
2. Financial Support for Educational Initiatives (SR-7)
3. Place-Based Benefits of the Barataria-Terrebonne Estuary System (PE-1)

NAME: BARATARIA-TERREBONNE INVESTIGATIONS: INTEGRATING LOCAL PHENOMENA INTO TEACHER TRAINING

Budget: \$37,818

Performing Organization: BayouSTEM (LASTEM Region 3 STEM Center)

Partners: Louisiana Sea Grant (LSG), Fletcher Technical Community College (Fletcher), Louisiana Science Teachers Association (LSTA)

Project Period: subaward not executed

Objective: To enhance 6th-12th grade science teachers' ability to deliver hands-on, place-based STEM instruction by:

- Integrating intensive content with real-world, local phenomena
- Providing standards-aligned, inquiry-based instructional models
- Supporting lesson planning and grant writing
- Expanding resources for student-driven, field-based learning

Description: The project team will develop and implement a four-day teacher training designed for 6th-12th grade science teachers in the BTNE, with priority given to educators in LASTEM Region 3 (Assumption, Lafourche, Terrebonne Parishes). The training will incorporate place-based learning and Louisiana State Science Standard (LSSS) aligned instruction, providing teachers with resources to integrate local environmental phenomena into their classrooms. Participants will engage in field-based investigations, explore environmental education resources, and develop lesson plans, activities, and grant applications to support STEM instruction.

Each day will focus on a different scientific discipline, guiding teachers through field observations, data collection, instructional modeling, and collaborative discussions. Mornings will be spent outdoors conducting hands-on investigations, while afternoons will be dedicated to content instruction, inquiry-based learning strategies, and curriculum development.

Outcomes/Final Deliverables: Participants in the four-day immersive workshop will gain a deeper understanding of current research in the Barataria-Terrebonne watershed and develop the skills to integrate standards-aligned, place-based instruction into their science classrooms. Through hands-on experiences and professional development, teachers will be better equipped to engage students in scientific inquiry and environmental education.

The knowledge and strategies acquired during the workshop will lead to the creation and implementation of high-quality lesson plans that emphasize local environmental phenomena. Additionally, participating educators will be prepared to seek grant opportunities that support continued innovation in science instruction, ultimately benefiting grades 6-12 students and strengthening STEM education in the region. Teachers will be encouraged to attend and present at the 2026 Joint Louisiana Science Teacher Association (LSTA) and Louisiana Association of Teachers of Mathematics Conference.

How the Project Supports the CWA: Teachers will gain a deeper understanding of the importance of clean water, learn how to conduct water quality testing, and explore best environmental practices—equipping them to bring these valuable lessons and hands-on experiences back to their classrooms.

How this Project Supports EPA’s “Powering the Great American Comeback Initiative”:

This project directly strengthens STEM education and integrates cutting-edge research and inquiry-based learning into classrooms, advancing **Pillar 4: Make the U.S. the Artificial Intelligence Capital of the World**, by preparing the next generation for data-driven environmental science.

CCMP Action Plans:

1. Estuarine Curriculum Development (SR-5)
2. Continuing Education Program and Informal Education Programs (SR-6)
3. Place-Based Benefits of the Barataria-Terrebonne Estuary System (PE-1)

IV. FY 2022-2025 Projects Completed Since FY 2026 Work Plan Submission

<u>Workplan Project</u>	<u>Workplan</u>	<u>Budget</u>	<u>Performing Organization</u>	<u>Period of Performance</u>	<u>Date Completed</u>
Tracking Swallow-tailed Kite Use of the Barataria-Terrebonne Basin and Beyond	FY23	\$23,879	Orleans Audubon Society, Inc.	01/01/2023 - 09/30/2025	9/30/2025
Upper Barataria-Terrebonne Watershed Education Project	FY23	\$10,000	Board of Supervisors of Louisiana State University and Agricultural and Mechanical College/Doug Daigle	3/1/2024 - 9/30/2025	9/30/2025
Our Changing Louisiana Professional Development	FY23	\$8,000	Louisiana State University College of Human Science and Education	8/1/2024 - 9/30/2025	9/30/2025
Temperature Sensitivity in Relation to Invasive Potential of Apple Snails (Pomacea maculata)	FY23	\$41,576	Nicholls State University	01/01/2023 - 9/30/2025	9/30/2025
Management of Coral Ardisia in Louisiana: Use as a model for research and education on invasive species	FY23	\$50,000	Southern University A&M	10/01/2022 - 09/30/2025	9/30/2025

Education of Coastal Ecosystem Services and Diversity through plantings in Barataria-Terrebonne Estuary	FY24	\$11,592	Louisiana Sea Grant	2/02/2024 - 8/31/2025	8/11/2025
Wetlands Radio	FY24	\$49,989	Eve Abrams	4/15/2024 - 9/30/2025	9/30/2025
Swamp Camp	FY24	\$15,000	SLWDC	1/1/2024-12/31/2025	12/31/2025
Native Plants Poster for Public Outreach	FY24	\$7,800	Diane Baker	6/01/2024 - 5/30/2025	5/30/2025
Louisiana Professional Native Landscape Certification Program	FY24	\$10,000	Louisiana Native Plant Society	3/20/2024 - 5/30/2025	5/30/2025
The Human Dimension in Environmental Planning: Engaging People Through the Bayou Culture Collaborative	FY24	\$25,000	Louisiana Folklore Society	3/01/2024 - 4/30/2025	4/30/2025
Survey for tilapia (Oreochromis sp.) in Port Sulphur 2009 rotenone impact zone	FY24	\$48,303	UNO - Martin O'Connell, Ph.D	11/27/23 - 09/30/2025	09/30/2025

Nutria Excluder Device Removal at Jean Lafitte National Historic Park	FY25	\$36,224	Coalition to Restore Coastal Louisiana	1/1/2025 - 8/30/2025	8/7/2025
Rougarou Fest Folklife Village	FY25	\$34,800	SLWDC	1/1/2025 – 1/31/2026	1/31/2026