

GALVESTON BAY ESTUARY PROGRAM (GBEP) PROJECT PROPOSALS

(Click to follow link)

1. [Fiscal 2025 Section 320/State Recommended Project List](#)
2. [Fiscal 2025 Section 320/State Recommended Project Summaries](#)
3. [Fiscal 2025 Section 320/State Recommended Project Table](#)
4. [Fiscal 2025 Section 320/State Recommended Project Budget \(\\$750K EPA Budget\)](#)
5. [Fiscal 2025 Section 320/State Recommended Project Budget \(\\$800K EPA Budget\)](#)
6. [Fiscal 2025 Section 320/State Recommended Project Budget \(\\$850K EPA Budget\)](#)
7. [Federal Fiscal 2024 Bipartisan Infrastructure Law Recommended Project List](#)
8. [Federal Fiscal 2024 Bipartisan Infrastructure Law Recommended Project Summaries](#)
9. [Federal Fiscal 2024 Bipartisan Infrastructure Law Recommended Project Budget](#)

GALVESTON BAY ESTUARY PROGRAM (GBEP) PROJECT PROPOSALS
SECTION 320/STATE RECOMMENDATION
FISCAL 2025 WORK PLAN
(Click to follow link)

| |
|--|
| <u>GBEP Programmatic Proposals</u> |
| 1. <u>Annual Website Hosting & Maintenance</u> |
| 2. <u>Mickey Leland Environmental Internship Program</u> |
| 3. <u>State of the Bay Symposium</u> |
| <u>Water & Sediment Quality (WSQ) Subcommittee Proposals</u> |
| 4. <u>Enhancing Clear Creek Watershed Protection and Galveston Bay Plan through Community Engagement and Monitoring</u> |
| 5. <u>Supporting Permeable Alternatives to Conventional Pavement in the Lower Galveston Bay Watershed</u> |
| 6. <u>Application of Rapid Methods of Microbial Source Tracking to Assess the Source of Fecal Contamination to Western Galveston Bay</u> |
| 7. <u>Alternative: Watershed Protection Plan Development for Greens Bayou</u> |
| 8. <u>Alternative: Distribution of Key Emergent Pollutants in the Aquatic Biota (Oysters and Fish), Sediments, and Surface Waters of Galveston Bay</u> |
| <u>Natural Resource Uses (NRU) Subcommittee Proposals</u> |
| 9. <u>Conservation Assistance Program</u> |
| 10. <u>Wetland Planting Assistance and Cordgrass Planting for Coastal Resiliency</u> |
| 11. <u>Bay Harbor Island Stabilization (Adaptative Management & Enhancement)</u> |
| 12. <u>Monitoring and Managing the Threatened Eastern Black Rails in the Galveston Bay Area</u> |
| 13. <u>Alternative: Greens Bayou Riparian Restoration Project</u> |
| 14. <u>Alternative: Salt Lake Native Marsh Shoreline Protection Project</u> |
| <u>Public Participation and Education (PPE) Subcommittee Proposals</u> |
| 15. <u>Wetlands Connections</u> |
| 16. <u>Engaging Diverse Communities in Conservation</u> |
| 17. <u>Mobilizing the Environmental Education Community through Prairie Education</u> |
| 18. <u>Regional Coordination of the Rivers, Lakes, Bays, 'N Bayous Trash Bash</u> |
| 19. <u>Alternative: Watershed Connections Continued: Engaging K-8th Grade Students in Sustained Watersmart Nativescaping, Habitat Restoration, and Experiential Learning Developed in Pasadena, Galveston, and Bolivar</u> |
| 20. <u>Alternative: Resilience in Schools and Communities</u> |
| 21. <u>Alternative: Green Infrastructure HS Intern Program Expansion and Learn Now Green Infrastructure Courses</u> |
| 22. <u>Alternative: Sustainable Ecological Ambassadors for Stewardship and STEM Careers</u> |
| <u>Monitoring & Research (M&R) Subcommittee Proposals</u> |
| 23. <u>Monitoring to Assess Long-Term Restoration Success in Galveston Bay Wetlands</u> |
| 24. <u>Establishment Of an Oyster Sentinel Program for Tracking <i>Perkinsus marinus</i> (Dermo) in Oysters of Galveston Bay</u> |
| 25. <u>Tracking <i>Perkinsus marinus</i> (Dermo) Infection in Sun-Cured Oysters: Informing Oyster Shell Recycling Programs in Galveston Bay</u> |
| 26. <u>Alternative: Microplastic and Per-/polyfluoroalkyl (PFAS) Substance Bioaccumulation in Diamondback Terrapin (<i>Malaclemys terrapin</i>) from Galveston Bay</u> |
| 27. <u>Alternative: Ecological Distribution and Associated Biomarkers of Toxicity of Microplastics Exposure in Galveston Bay</u> |
| 28. <u>Alternative: Distribution of Key Emergent Pollutants in the Aquatic Biota (Oysters and Fish), Sediments, and Surface Waters of Galveston Bay</u> |

GBEP PROGRAMMATIC SUMMARIES

1. Annual Website Hosting & Maintenance

Project Lead: Wilkins Group

Proposed Funding: \$5,868

Project Description: This project provides support for two websites maintained by GBEP.

- <https://gbep.texas.gov>. Tasks for the GBEP website include maintenance and updates as needed throughout the year, hosting, and domain name registration.
- <https://backthebay.org>. Tasks for the Back the Bay website include maintenance and updates as needed throughout the year, hosting, and domain name registration.

2. Micky Leland Environmental Internship Program

Project Lead: Goodwill Staffing Services/TCEQ

Proposed Funding: \$7,500

Project Description: The Mickey Leland Environmental Intern will generate a white paper and final presentation that summarizes their efforts at the end of the summer internship period. The intern will work on a project that helps to implement or track implementation of the GBP.

3. State of the Bay Symposium

Project Lead: Galveston Bay Estuary Program/TCEQ

Proposed Funding: \$30,000

Project Description: The symposium will be a two-day event and will take place in late January or early February 2025. Two general sessions are proposed, with six breakout sessions in the morning and in the afternoon. As many as 80-100 speakers could be accommodated with a minimum of four speakers per session and morning and lunch keynote speakers.

WSQ PROJECT SUMMARIES

4. Enhancing Clear Creek Watershed Protection and Galveston Bay Plan through Community Engagement and Monitoring

Project Lead: Bayou Preservation Association

Proposed Funding: \$30,000

Project Description: The proposed project aims to implement and elevate the Clear Creek Watershed Protection Plan through community engagement and monitoring. By focusing on pet waste education and Texas Stream Team monitoring, the project seeks to improve water quality, reduce pollution, and enhance the ecological health of the Clear Creek watershed and Galveston Bay. Key activities include distributing educational materials, installing pet waste stations, and training volunteers to conduct water quality monitoring and riparian evaluations. Through these efforts, the project aims to foster environmental stewardship and strengthen collaborations among stakeholders to better protect the Clear Creek Watershed. Bayou Preservation Association is already actively engaged in the watershed through the Clear Creek Riparian Restoration project at Challenger Seven Memorial Park: https://www.bayoupreservation.org/_files/ugd/98befb_cf19ecdc8adf4ce89e16587b0178b51f.pdf. This project included educational workshops, field tours, and installation of educational signage in high traffic areas of the park.

Notes: The proposed 1.5-year project leverages around \$15,000 in private funds acquired for community engagement in watershed stewardship. While this project will be engaged in

ongoing efforts in the watershed, supporting these measures in conjunction with the development of the Clear Creek Watershed Protection Plan presents an excellent opportunity to promote the completed plan to the public and create momentum in implementation efforts. Project partners include Houston-Galveston Area Council, local homeowner associations, and local jurisdictions.

5. Supporting Permeable Alternatives to Conventional Pavement in the Lower Galveston Bay Watershed.

Project Lead: Texas A&M AgriLife Extension Service

Proposed Funding: \$63,847

Project Description: Increasing pressure from development is converting native landscapes to other uses, adding impervious cover and degrading the water quality of coastal bayous and Galveston Bay. The use of nature-based green infrastructure solutions is increasing along the Texas Coast and as more entities are exploring these ideas, it is important that available resources continue to expand and fill knowledge gaps.

This project will deliver resources to local government leaders on permeable alternatives to conventional pavement to support wider implementation of permeable materials in infrastructure projects. A white paper will be developed following engagement with local decision makers and practitioners, providing a financial comparison of permeable and conventional options to arm local governments in furthering permeable pavement adoption in the Lower Galveston Bay watershed.

Notes: The proposed 1-year project leverages \$167,000 in secured Section 319 grant funds. The Galveston Bay Coalition of Watersheds will reconvene for 36 months; anticipated start is 9/1/23. This project will utilize Coalition synergy and deliver implementation actions separate from those funded under the TCEQ 319 grant. Project partners include the Galveston County Health District, Keep Dickinson Beautiful, and the cities of Hitchcock, Lake Jackson, and League City.

6. Application of Rapid Methods of Microbial Source Tracking to Assess the Source of Fecal Contamination to Western Galveston Bay

Project Lead: University of Houston-Clear Lake

Proposed Funding: \$104,859

Project Description: Communities along the coast of Galveston Bay depend on the health of this system for their livelihood. Several locations in this estuary have chronically high levels of fecal indicator bacteria (FIB) and this metric of fecal contamination is increasing with sea-level rise and population growth. Human waste in receiving waters presents a particular health threat because it is laden with host-specific pathogens and high levels of antibiotic-resistant bacteria. In urban, northern regions of Galveston Bay, high levels of FIB appear linked to runoff of stormwater. In suburban, southwestern regions of the bay, high levels of FIB may reflect failing on-site wastewater treatment systems.

The objective of this project is to bring water quality monitoring into the 21st century by making microbial source tracking, with rapid, validated, molecular techniques, routine. To achieve this end, the team will evaluate a rapid method of concentrating microbes for water samples and validate this approach in a system, Mustang Bayou, which is chronically contaminated with fecal indicator bacteria. Methods and results will be shared with local and regional watershed stakeholders and resource agencies.

Notes: The proposed 1-year project leverages over \$465,016 in a secured EPA grant. This funding currently supports a project to track the source of fecal contamination of two watersheds that feed into Clear Creek and Dickinson Bayou. This project proposes to expand the scope of sampling to include tributaries that feed into Chocolate Bay. By

collecting samples in these two projects in parallel, the team will be able to leverage resources for molecular analysis. Project partners include Houston-Galveston Area Council and University of North Texas Health Science Center.

7. *Alternative: Watershed Protection Plan Development for Greens Bayou*

Project Lead: Houston-Galveston Area Council

Proposed Funding: \$30,000

Project Description: The Greens Bayou watershed covers 208 square miles of densely developed area in Harris County. Much of the watershed area represents disadvantaged and underserved communities. Over 60% of the watershed population is considered low to moderate income. Greens Bayou and its tributaries face water quality challenges similar to many waterways in the greater Galveston Bay Watershed including elevated fecal bacteria levels, depressed dissolved oxygen, and elevated nutrient concentrations which impact recreation, local economies, public health, and the environment.

This project will engage stakeholders to develop a watershed protection plan (WPP) to address listed impairments, concerns, and stakeholder-identified water quality priorities in the waterways of the Greens Bayou watershed. The WPP will be developed to conform to the EPA's nine-element watershed-based plan standard and will utilize existing data for technical analysis.

Notes: The proposed 1–3-year project leverages \$397,831.50: \$238,698.90 in a TCEQ 319 grant, and \$159,132.60 in additional local match (Clean Rivers Program monitoring value, local partner time, volunteer value, etc., not inclusive of the requested amount). Early match supplement is crucial to leverage federal dollars before additional longer-term match sources accumulate. Project partners include TCEQ (319 project sponsor), TSSWCB (technical advisor and formal 319 reviewer), Bayou Preservation Association, City of Houston Public Works, Harris County Flood Control District, Port of Houston Authority, Greens Bayou Coalition, and the Houston Parks and Recreation Department.

8. *Alternative: Distribution of Key Emergent Pollutants in the Aquatic Biota (Oysters and Fish), Sediments, and Surface Waters of Galveston Bay*

Project Lead: Texas A&M University at Galveston

Proposed Funding: \$203,660

Project Description: Contaminants of emerging concern (CEC) is a term used by water quality professionals to describe pollutants that have been detected in environmental monitoring samples, that may cause ecological or human health impacts, and typically are not regulated under current environmental laws. CECs of greatest concern are per- and polyfluoroalkyl substances (PFAS) chemicals, pharmaceuticals, and micro-plastics. EPA attempts to nationally regulate CECs is struggling because of the paucity of available data yet we know these chemicals maybe present in the drinking water and biota that we consume.

This project will measure the exposure response across trophic levels to a selection of CECs and then translate the results to both plain language/practical knowledge. At low doses, these CECs may exert a wide range of adverse effects on the biota and perhaps, the humans that consume the biota. These CEC's are present in aquatic biota (oysters and fish), sediments and surface waters, but we do not know the spatial extent, nor do we know what "typical" concentrations are occurring in Galveston Bay. A meta-analysis is proposed to bring together available data on these and other CEC's as well as measuring their concentrations in newly collected materials.

Notes: The proposed 2-year project will assess emergent pollutants in Galveston Bay biota, sediments, and water. These contaminants of emerging concern may cause ecological or

human health impacts and are typically not regulated. Project partners include Texas Parks and Wildlife Department (oyster and fish samples), University of Houston, Clear Lake (oyster samples), Texas A&M at Galveston (sediment, plant, and fish samples), and Texas Marine Mammal Stranding Network (dolphin blubber/tissue).

NRU PROJECT SUMMARIES

9. Conservation Assistance Program

Project Lead: Galveston Bay Foundation

Proposed Funding: \$115,000.00

Project Description: The Conservation Assistance Program (CAP) was initiated in 2011 and has been reauthorized in several phases through 2024. This proposal includes funding to continue the program and build upon successful land conservation efforts in the Galveston Bay Watershed and complete the ongoing projects underway.

The overall goal of the CAP is to support GBEP and its partners' efforts to preserve wetlands, prairies, and other important coastal habitats to protect the long-term health and productivity of Galveston Bay. CAP will continue to accomplish these goals by:

- Identifying priority conservation properties with the help and consensus of conservation partners
- Building funding strategies through grant identification, grant writing, and fundraising
- Working with willing sellers to negotiate fee simple or conservation easement transactions
- Carrying out legal, title, and other due diligence transaction support
- Finalizing the sale and transfer of title to a third-party organization or government entity

Notes: Funding is for year one of a new contract for the CAP. State, federal, and private funding for land acquisition projects and associated due diligence will be secured as part of the grant deliverables. Historically these funds leverage hundreds of thousands, or even millions, of state and federal grants each year as part of various land protection projects throughout the region.

10. Wetland Planting Assistance and Cordgrass Planting for Coastal Resiliency

Project Lead: Galveston Bay Foundation (partnered with Friends Group of Brazoria National Wildlife Refuge)

Proposed Funding: \$175,000.00

Project Description: The proposed project aims to kickstart intertidal fringe wetland restoration by contractually transplanting smooth cordgrass along bay shoreline at up to three upcoming shoreline protection projects (Brazoria National Wildlife Refuge, Gordy Marsh and Oyster Lake Phase III). The project will allow partners to enter into agreements with contractors to plant project sites that provide logistical challenges making it difficult to get volunteer planters to the project location.

Notes: Two projects were combined and scaled due to similar methodology and geography, to be managed by Galveston Bay Foundation for consistency.

11. Bay Harbor Island Stabilization (Adaptative Management & Enhancement)

Project Lead: Galveston Bay Foundation

Proposed Funding: \$132,700.00

Project Description: The Bay Harbor Rookery Island was originally restored in 2010, resulting in the creation of 2.20 acres of nesting habitat for colonial waterbirds. While the

island continues to serve as valuable nesting habitat, ongoing erosion has decreased the island's footprint and elevation. This proposal requests funding to support the engineering and design phase (produce 30-50% design plans and secure the necessary state and federal permits) of the Bay Harbor Island Stabilization project to expand the island footprint by up to 3.50 acres, restore nesting elevations, and further stabilize the northern shoreline.

Notes: The total project cost of \$1.3 million includes planning, engineering & design, permitting, and the estimated cost for construction. \$33,200 has been leveraged to date. Please note, the cost for construction is preliminary and will become more defined upon finalization of the design plans.

12. Monitoring and Managing the Threatened Eastern Black Rails in the Galveston Bay Area

Project Lead: Texas A&M University

Proposed Funding: \$174,235.00

Project Description: The project aims to study and conserve the Eastern Black Rail (*Laterallus jamaicensis*), a threatened species heavily reliant on high salt marsh habitats. Leveraging multiple grants, the research involves using Autonomous Recording Devices (ARUs) and a Forward Looking Infrared (FLIR)-equipped drone to evaluate management techniques and response effects on Black Rail populations, as well as conducting mark-recapture studies and fecal metagenomics to understand their diet.

Notes: The proposed project leverages over \$4.5 million in ongoing Black Rail research from U.S. Fish and Wildlife Service, Texas Parks and Wildlife Department, National Oceanic and Atmospheric Administration RESTORE, and National Park Service. Partners on this project include U.S. Fish and Wildlife Service, Texas Parks and Wildlife Department, Houston Audubon, and Ducks Unlimited.

13. Alternative: Greens Bayou Riparian Restoration Project

Project Lead: Houston Parks and Recreation Department

Proposed Funding: \$150,000.00

Project Description: The Houston Parks and Recreation Department would restore 46.5 acres of riparian forest habitat within two parks adjacent to Greens Bayou (Maxey Park and Crooker Moody Park). The habitat restoration will improve wildlife habitat, enhance the ecosystem services of these areas, and provide community engagement during the restoration process.

The parks contain historic riparian habitat along Greens Bayou, as seen on aerial imagery from the 1940's, with some disturbance in portions of each park. The 35.5-acre Nature Preserve at Maxey Park and the 11-acre Nature Preserve at Crooker Moody Park now contain a mix of native and invasive trees and understory.

14. Alternative: Salt Lake Native Marsh Shoreline Protection Project

Project Lead: Friends Group of Brazoria National Wildlife Refuge

Proposed Funding: \$100,000.00

Project Description: This project would fund a contract to survey, design, and permit plans to protect Salt Lake Marsh Shoreline. The Friends Group of Brazoria National Wildlife Refuge would work with the Refuge to seek a contract to begin Bathymetric Surveys of the project area. Once surveying is complete, refuge staff will determine which method of breakwater will be used based on the surveyors' report. Project design will begin immediately after and should be completed within a few months to support permit applications. The completed breakwater will protect the marsh by reducing wave action that has caused erosion issues. The cordgrass planting will take place after all construction is complete and will create marsh habitat and a living shoreline to armor the nearly two miles of shoreline in Salt Lake.

PPE PROJECT SUMMARIES

15. Wetland Connections

Project Lead: Galveston Bay Foundation

Proposed Funding: \$173,300

Project Description: Wetland Connections is a year-long program that connects 6-12th grade students to the bay through nature journaling and data collection with mini-campus wetlands, a series of STEM classroom workshops highlighting the importance of wetlands and human impacts on them, and a spring field experience at a local wetland on Galveston Bay. This proposal is for two years of funding, including two teacher workshops where teachers learn about various conservation and environmental career pathways from experts in their fields.

Notes: The proposed 2-year project leverages in-kind volunteer time and \$28,120 in outside funding. The proposed project is existing, and project will allow free programing to continue with existing schools as well as full funding for new schools. Schools will field supplies and professional development for teachers. Project partners include Student Conservation Association.

16. Engaging Diverse Communities in Conservation

Project Lead: Bayou Preservation Association

Proposed Funding: \$64,140

Project Description: Bayou Preservation's Bayou Stewards for Engaging Diverse Communities in Conservation program is an innovative initiative aimed at empowering community stakeholders and fostering meaningful connections between conservation efforts and diverse communities in the Galveston Bay area. Over the course of 18 months, this program will recruit, select, and train four dedicated community stakeholders to become watershed stewards, equipped with the knowledge and skills to drive science-based impactful change. One of the key objectives of this program is to promote equity and remove financial barriers for community stakeholders from diverse backgrounds. The host nonprofits, with direct support from Bayou Preservation Association, will actively work towards advancing equity by providing mentorship opportunities and support to selected Bayou Stewards. This mentorship will enable the stewards to develop interpretive programming tailored to target audiences, emphasizing the interdependence between the well-being of their communities and the preservation of native habitats. Additionally, cultural relevance will be integrated into the engagement experiences, ensuring that they resonate deeply with the diverse communities they serve.

Notes: The proposed 1.5-year project leverages \$5,000 in outside funding. Urgency of the project is to increase accessibility to conservation education, resources, information, and financial support for the Black, Indigenous, and People of Color community members. Partners include Armand Bayou Nature Center, Brays Bayou Association, Greens Bayou Coalition, and Coastal Prairie Conservancy.

17. Mobilizing the Environmental Education Community through Prairie Education

Project Lead: Native Prairie Association of Texas

Proposed Funding: \$80,210

Project Description: Native Prairie Association of Texas (NPAT) and Environmental Institute of Houston (EIH) will provide quality prairie education to underserved audiences in the Houston-Galveston region. Prairies are one of the most endangered ecosystems in North America and they play an important role in the Galveston Bay watershed. They are often overlooked and undervalued. They have disappeared because of the ease in which they can

be destroyed through agriculture and development. NPAT and EIH were part of the previous GBEP-PPE grant utilizing resources to identify underserved school districts (and students) that do not currently receive (and could greatly benefit from) quality informal environmental education programming.

Notes: The proposed 2-year project leverages \$104,259 in outside funding. Urgency of this existing project is to use newly acquired information researched by EcoRise on which districts are underserved in environmental education. Partners include University of Houston Clear Lake's EIH and Lawther-Deer Park Prairie.

18. Regional Coordination of the Rivers, Lakes, Bays, 'N Bayous Trash Bash

Project Lead: Houston-Galveston Area Council

Proposed Funding: \$10,000

Project Description: The River, Lakes, Bays 'N Bayous Trash Bash® - the largest, single day volunteer-based waterway cleanup - is set to celebrate its 31st annual event in 2025. This proposal seeks support for coordination of the event to allow for continuation of its award-winning cleanup efforts in the lower Galveston Bay watershed and its efforts to reach more audiences through the event and its educational materials.

Notes: The proposed 1-year project leverages countless hours of volunteer time and \$5,000 in cash or in-kind donations. Dedicated funding is vital to the continuity of the event, maintenance, and expansion of event education and outreach. Project partners include the Galveston Bay Foundation, Bayou Preservation Association, Gulf Coast Authority, City of Houston Health Department Bureau of Pollution Control and Prevention, Greater Northside Management District, Greater Houston YMCA, Harris County Flood Control District, Sam Houston Area Council of Boy Scouts, Girl Scouts of San Jacinto Council, several Keep Texas Beautiful affiliates, local governments, civic organizations, and nearly four dozen businesses and corporations.

19. *Alternative: Watershed Connections Continued: Engaging K-8th Grade Students in Sustained Watersmart Nativescaping, Habitat Restoration, and Experiential Learning Developed in Pasadena, Galveston, and Bolivar*

Project Lead: Artist Boat, Inc.

Proposed Funding: \$115,000

Project Description: Watershed Connections Continued - Engaging K-8th grade students in sustained watersmart nativescaping, habitat restoration, and experiential learning developed in Pasadena, Galveston, and Bolivar will enable continued environmental education services and programming by Artist Boat on 12 campuses in the Galveston Bay Watershed that have received substantial investments in environmental education, stewardship, and conservation since 2019. Students (1,900), teachers (25) and campuses (12) will be engaged in experiential learning in the watershed through Eco-Art Workshops and Adventures (kayaking, walking, or birding), stewardship-based learning through sustaining 25+ acres of nativescapes on their campuses and restoring 10 acres of endangered coastal prairie habitat.

20. *Alternative: Resilience in Schools and Communities*

Project Lead: National Wildlife Federation

Proposed Funding: \$200,000

Project Description: Resilience in Schools and Communities (RiSC) will use project-based learning and place-based education via environmental learning experiences to empower middle/high school students, teachers, and community members in marginalized communities to be watershed stewards by designing nature-based solutions to flooding that

will reduce storm water run-off and the associated pollutants from entering the water supply. Participants will build environmental literacy and environmental stewardship through project-based and place-based projects occurring both outdoors and, in the classroom, which will focus on how their hands-on efforts to make Houston more resilient to real and increasing threats of flooding will also contribute to the health of Galveston Bay and the watershed. Year one student projects are campus-based, and Year two projects enhance existing projects by increasing the biodiversity of the site and adding elements such as benches, tables, white boards, etc. to help make the site more accessible as an outdoor classroom. Additionally, thanks to National Oceanic and Atmospheric Administration funding, we are piloting an intentional community engagement component with two of our Year one schools during the 2023-2024 school year. These schools will be implementing projects in their neighboring school communities during the 2024-2025 school year at the same time as we bring on a new set of Year one schools. We will continue this model through the 2025-2026 school year.

21. Alternative: Green Infrastructure HS Intern Program Expansion and Learn Now Green Infrastructure Courses

Project Lead: Texas A&M Agrilife Extension

Proposed Funding: \$138,023

Project Description: The objectives of this project are to engage high school students in green infrastructure projects to build job skills and interest in green industry jobs through hands-on experiences in the internship program. Additionally, more students will be reached through the online course options that can be self-sustaining and extend the length and reach of the program.

22. Alternative: Sustainable Ecological Ambassadors for Stewardship and STEM Careers

Project Lead: Promoters of Education, Awareness, and Community Engagement

Proposed Funding: \$115,364

Project Description: Promoters of Education, Awareness, and Community Engagement (PEACE) proposes to develop a new quality education plan that provides educator training in community stewardship, environmental literacy, critical thinking, and will provide support for the core group of high school students to enroll in dual credit college courses, while in high school to prepare for ecological careers or workforce training within the green industry. This program will be measured for long-term results with high school student enrollment into STEM careers after high school graduation.

M&R PROJECT SUMMARIES

23. Monitoring to Assess Long-term Restoration Success in Galveston Bay Wetlands

Project Lead: Texas A&M University at Galveston

Proposed Funding: \$151,161

Project Description: The goal of this project is to fill an information gap in evaluating the provision of ecosystem services in older wetland restoration sites across a range of soil configurations. This study will conduct research to understand the links between coastal wetland restoration design and the successful long-term provision of ecosystem services, thus providing rigorous scientific support for future restoration projects.

Notes: The proposed 2.5-year project leverages previous GBEP funded work, secured funds from Ducks Unlimited, and in-kind resources. Funding during this cycle will generate data that can be applied to improve upcoming restoration projects and allow leveraging of existing funding. Project partners include Texas Parks and Wildlife Department, Texas

General land Office, US Fish and Wildlife Service, Galveston Bay Foundation, and the Gulf Coast Joint Venture.

24. Establishment of an Oyster Sentinel Program for Tracking *Perkinsus marinus* (Dermo) in Oysters of Galveston Bay

Project Lead: University of Houston-Clear Lake

Proposed Funding: \$297,404

Project Description: This project will establish an Oyster Sentinel Program for tracking *Perkinsus marinus* (Dermo) in Oysters within Galveston Bay. Dermo presence, prevalence and intensity will be monitored along with estimates of freshwater inflow, salinity, water temperature, and auxiliary variables to evaluate how Dermo responds to freshwater inflow in comparison to projected TCEQ environmental flow standards for adaptive management use.

Notes: The proposed 2 to 2.5-year project leverages in-kind time and resources across numerous partners. The adoption of a monitoring program for Dermo in oysters is urgently needed, as data has not been collected since 2015 even though environmental flow standards were adopted in 2012. Project partners include Texas Parks and Wildlife Department and Prestige Oysters.

25. Tracking *Perkinsus marinus* (Dermo) Infection in Sun-Cured Oysters: Informing Oyster Shell Recycling Programs in Galveston Bay

Project Lead: University of Houston-Clear Lake

Proposed Funding: \$166,898

Project Description: The proposed study will provide a characterization of current oyster shell recycling practices in Texas and provide outreach and education related to oyster restoration. It will also expand on on-going research to track the prevalence and severity of Dermo in commercially sourced sun-cured oysters, resulting in a best practices publication for oyster restoration efforts in Galveston Bay.

Notes: The proposed 2-year project leverages in-kind time and resources, and an estimated \$150,000 in outside funding. The proposed project is urgently needed to ensure that future projects which utilize recycled oyster shell are completed using best management practices informed by best available science to minimize the risk of infecting native oyster reefs with Dermo from the sun-cured recycled shell material without delaying the use of recycled materials for future restoration projects. Project partners include other University of Houston at Clear Lake staff and Galveston Bay Foundation.

26. Alternative: Microplastic and Per-/polyfluoroalkyl (PFAS) Substance Bioaccumulation in Diamondback Terrapin (*Malaclemys terrapin*) from Galveston Bay

Project Lead: University of Houston-Clear Lake

Proposed Funding: \$178,200

Project Description: This project aims to evaluate and inform researchers, conservation managers, and the public about contaminant build-up in a sentinel species (the Texas Diamondback Terrapin, *Malaclemys terrapin littoralis*) in Galveston Bay. Our primary objective is to evaluate trophic bioaccumulation of contaminants (specifically microplastics and per- and polyfluoroalkyl substances compounds) in terrapin and their primary prey sources (periwinkle snails, *Littorina* sp., and *Spartina alterniflora* grasses). A secondary objective is to expand ongoing education and outreach efforts about this Species of Greatest Conservation, including details about how these compounds accumulate across trophic levels.

27. *Alternative: Ecological Distribution and Associated Biomarkers of Toxicity of Microplastics Exposure in Galveston Bay*

Project Lead: Texas A&M University at Galveston

Proposed Funding: \$118,306

Project Description: This project will assess the extent of microplastics pollution in the surface waters of Galveston Bay and their bioaccumulation in resident biota (oysters, fish). In addition, stress enzyme biomarker activity in biota will also be measured to assess whether there are adverse health effects related to microplastics exposure.

28. *Alternative: Distribution of Key Emergent Pollutants in the Aquatic Biota (Oysters and Fish), Sediments, and Surface Waters of Galveston Bay*

Project Lead: Texas A&M University at Galveston

Proposed Funding: \$203,660

Project Description: Contaminants of emerging concern (CEC) is a term used by water quality professionals to describe pollutants that have been detected in environmental monitoring samples, that may cause ecological or human health impacts, and typically are not regulated under current environmental laws. CECs of greatest concern are per- and polyfluoroalkyl substances (PFAS) chemicals, pharmaceuticals, and micro-plastics. US EPA attempts to nationally regulate CECs is struggling because of the paucity of available data, yet it is known that these chemicals may be present in the drinking water and biota that is consumed.

This project will measure the exposure response across trophic levels to a selection of CECs and then translate the results to both plain language/ practical knowledge. At low doses, these CECs may exert a wide range of adverse effects on the biota and perhaps, the humans that consume the biota. These CEC's are present in aquatic biota (oysters and fish), sediments and surface waters, but the spatial extent, nor the "typical" concentrations occurring in Galveston Bay are not known. A meta-analysis is proposed to bring together available data on these and other CEC's as well as measuring their concentrations in newly collected materials.

Fiscal 2025 Section 320/State Recommended Project List

| | | | FY 2025 Recommendation | | FY 2026 |
|--|---------------|--------------------------|------------------------|-----------------|---------|
| Category | Grantee | Original Funding Request | State Funding | Federal Funding | |
| | | | | | |
| Baseline Costs | | | | | |
| Salaries, Fringe, and Indirect | N/A | \$758,435.25 | 87785.30* | \$758,435.25 | \$0.00 |
| General Operational Costs | N/A | \$37,500.00 | \$33,638.00 | \$8,046.00 | \$0.00 |
| Programmatic Costs | | | | | |
| 1. Annual Website Hosting & Maintenance (2 websites) | Wilkins Group | \$5,868.00 | \$0.00 | \$5,868.00 | \$0.00 |
| 2. Mickey Leland Environmental Internship Program | Workquest | \$7,500.00 | \$0.00 | \$7,500.00 | \$0.00 |
| 3. State of the Bay Symposium | TBD | \$30,000.00 | \$0.00 | \$30,000.00 | \$0.00 |
| WSQ | | | | | |
| 4. Enhancing Clear Creek Watershed Protection and Galveston Bay Plan through Community Engagement and Monitoring | BPA | \$30,000.00 | \$0.00 | \$30,000.00 | \$0.00 |
| 5. Supporting Permeable Alternatives to Conventional Pavement in the Lower Galveston Bay Watershed | AgriLife | \$63,847.00 | \$0.00 | \$63,847.00 | \$0.00 |
| 6. Application of Rapid Methods of Microbial Source Tracking to Assess the Source of Fecal Contamination to Western Galveston Bay | UHCL | \$104,859.00 | \$0.00 | \$104,859.00 | \$0.00 |
| 7. Alternative: Watershed Protection Plan Development for Greens Bayou | H-GAC | \$30,000.00 | \$0.00 | \$0.00 | \$0.00 |
| 8. Alternative: Distribution of Key Emergent Pollutants in the Aquatic Biota (Oysters and Fish), Sediments, and Surface Waters of Galveston Bay | TAMUG | \$203,660.00 | \$0.00 | \$0.00 | \$0.00 |
| NRU | | | | | |
| 9. Conservation Assistance Program | GBF | \$230,000.00 | \$115,000.00 | \$0.00 | \$0.00 |
| 10. Wetland Planting Assistance and Cordgrass Planting for Coastal Resiliency | GBF | \$293,840.00 | \$175,000.00 | \$0.00 | \$0.00 |
| 11. Bay Harbor Island Stabilization (Adaptative Management & Enhancement) | GBF | \$132,700.00 | \$132,700.00 | \$0.00 | \$0.00 |
| 12. Monitoring and Managing the Threatened Eastern Black Rails in the Galveston Bay Area | TAMU | \$174,235.00 | \$0.00 | \$174,235.00 | \$0.00 |
| 13. Alternative: Greens Bayou Riparian Restoration Project | HPARD | \$150,000.00 | \$0.00 | \$0.00 | \$0.00 |
| 14. Alternative: Salt Lake Native Marsh Shoreline Protection Project | FBBNWR | \$100,000.00 | \$0.00 | \$0.00 | \$0.00 |
| PPE | | | | | |
| 15. Wetlands Connections | GBF | \$173,300.00 | \$0.00 | \$173,300.00 | \$0.00 |
| 16. Engaging Diverse Communities in Conservation | BPA | \$64,140.00 | \$0.00 | \$64,140.00 | \$0.00 |
| 17. Mobilizing the Environmental Education Community through Prairie Education | UHCL | \$80,210.00 | \$0.00 | \$80,210.00 | \$0.00 |
| 18. Regional Coordination of the Rivers, Lakes, Bays, 'N Bayous Trash Bash | H-GAC | \$10,000.00 | \$0.00 | \$10,000.00 | \$0.00 |
| 19. Alternative: Watersheds Connections Continued: Engaging K-8th Grade Students in Sustained Watersmart Nativescaping, Habitat Restoration, and Experiential Learning Developed in Pasadena, Galveston, and Bolivar | Artist Boat | \$115,000.00 | \$0.00 | \$0.00 | \$0.00 |
| 20. Alternative: Resilience in Schools and Communities | NWF | \$200,000.00 | \$0.00 | \$0.00 | |
| 21. Alternative: Green Infrastructure HS Intern Program Expansion and Learn Now Green Infrastructure Courses | AgriLife | \$138,023.00 | \$0.00 | \$0.00 | \$0.00 |
| 22. Alternative: Sustainable Ecological Ambassadors for Stewardship and STEM Careers | PEACE | \$307,637.00 | \$0.00 | \$0.00 | \$0.00 |
| M&R | | | | | |
| 23. Monitoring to Assess Long-Term Restoration Success in Galveston Bay Wetlands | TAMUG | \$151,161.00 | \$0.00 | \$151,161.00 | \$0.00 |
| 24. Establishment of an Oyster Sentinel Program for Tracking Perkinsus marinus (Dermo) in Oysters of Galveston Bay | UHCL/EIH | \$297,404.33 | \$0.00 | \$297,404.33 | \$0.00 |
| 25. Tracking Perkinsus marinus (Dermo) Infection in Sun-Cured Oysters: Informing Oyster Shell Recycling Programs in Galveston Bay | UHCL/EIH | \$166,898.11 | \$0.00 | \$166,898.11 | \$0.00 |
| 26. Alternative: Microplastic and Per-/polyfluoroalkyl (PFAS) Substance Bioaccumulation in Diamondback Terrapin (Malaclemys terrapin) from Galveston Bay | UHCL/EIH | \$178,200.92 | \$0.00 | \$0.00 | \$0.00 |
| 27. Alternative: Ecological Distribution and Associated Biomarkers of Toxicity of Microplastics Exposure in Galveston Bay | TAMUG | \$118,306.00 | \$0.00 | \$0.00 | \$0.00 |
| 28. Alternative: Distribution of Key Emergent Pollutants in the Aquatic Biota (Oysters and Fish), Sediments and Surface Waters of Galveston Bay | TAMUG | \$203,660.00 | \$0.00 | \$0.00 | \$0.00 |
| | | | | | |
| FY 2025 Funding Requests | | \$4,556,384.61 | \$456,338.00 | \$2,125,903.69 | \$0.00 |
| FY 2025 Anticipated Funding Allocation (Federal and State) | | \$2,424,484.00 | \$924,484.00 | \$1,500,000.00 | |
| Difference | | (\$157,757.69) | \$468,146.00 | (\$625,903.69) | |

EPA Section 320 Funds: \$ 750,000.00

TCEQ State Funds: \$ 1,674,484.00 (includes Section 320 match, general funds, and NEP rider)

*State funding for salary is from a different department (index) outside of GBEP and is not calculated as part of the GBEP budget.

Fiscal 2025 Section 320/State Recommended Project Budget (\$750K EPA Budget)

(Changes from Recommendations in Red)

| | | | FY 2025 Recommendation | | FY 2026 |
|--|---------------|--------------------------|------------------------|-----------------|--------------|
| Category | Grantee | Original Funding Request | State Funding | Federal Funding | |
| | | | | | |
| Baseline Costs | | | | | |
| Salaries, Fringe, and Indirect | N/A | \$758,435.25 | 87785.30* | \$758,435.25 | \$0.00 |
| General Operational Costs | N/A | \$37,500.00 | \$35,638.00 | \$8,046.00 | \$0.00 |
| Programmatic Costs | | | | | |
| 1. Annual Website Hosting & Maintenance (2 websites) | Wilkins Group | \$5,868.00 | \$0.00 | \$5,868.00 | \$0.00 |
| 2. Mickey Leland Environmental Internship Program | Workquest | \$7,500.00 | \$0.00 | \$7,500.00 | \$0.00 |
| 3. State of the Bay Symposium | TBD | \$30,000.00 | \$30,000.00 | \$0.00 | \$0.00 |
| WSQ | | | | | |
| 4. Enhancing Clear Creek Watershed Protection and Galveston Bay Plan through Community Engagement and Monitoring | BPA | \$30,000.00 | \$30,000.00 | \$0.00 | \$0.00 |
| 5. Supporting Permeable Alternatives to Conventional Pavement in the Lower Galveston Bay Watershed | AgriLife | \$63,847.00 | \$63,847.00 | \$0.00 | \$0.00 |
| 6. Application of Rapid Methods of Microbial Source Tracking to Assess the Source of Fecal Contamination to Western Galveston Bay | UHCL | \$104,859.00 | \$104,859.00 | \$0.00 | \$0.00 |
| 7. Alternative: Watershed Protection Plan Development for Greens Bayou | H-GAC | \$30,000.00 | \$0.00 | \$0.00 | \$0.00 |
| 8. Alternative: Distribution of Key Emergent Pollutants in the Aquatic Biota (Oysters and Fish), Sediments, and Surface Waters of Galveston Bay | TAMUG | \$203,660.00 | \$0.00 | \$0.00 | \$0.00 |
| NRU | | | | | |
| 9. Conservation Assistance Program | GBF | \$230,000.00 | \$115,000.00 | \$0.00 | \$0.00 |
| 10. Wetland Planting Assistance and Cordgrass Planting for Coastal Resiliency | GBF | \$293,840.00 | \$175,000.00 | \$0.00 | \$0.00 |
| 11. Bay Harbor Island Stabilization (Adaptative Management & Enhancement) | GBF | \$132,700.00 | \$132,700.00 | \$0.00 | \$0.00 |
| 12. Monitoring and Managing the Threatened Eastern Black Rails in the Galveston Bay Area | TAMU | \$174,235.00 | \$0.00 | \$105,888.00 | \$68,347.00 |
| 13. Alternative: Greens Bayou Riparian Restoration Project | HPARD | \$150,000.00 | \$0.00 | \$0.00 | \$0.00 |
| 14. Alternative: Salt Lake Native Marsh Shoreline Protection Project | FBBNWR | \$100,000.00 | \$0.00 | \$0.00 | \$0.00 |
| PPE | | | | | |
| 15. Wetlands Connections | GBF | \$173,300.00 | \$173,300.00 | \$0.00 | \$0.00 |
| 16. Engaging Diverse Communities in Conservation | BPA | \$64,140.00 | \$64,140.00 | \$0.00 | \$0.00 |
| 17. Mobilizing the Environmental Education Community through Prairie Education | UHCL | \$80,210.00 | \$0.00 | \$79,478.64 | \$0.00 |
| 18. Regional Coordination of the Rivers, Lakes, Bays, 'N Bayous Trash Bash | H-GAC | \$10,000.00 | \$0.00 | \$10,000.00 | \$0.00 |
| 19. Alternative: Watersheds Connections Continued: Engaging K-8th Grade Students in Sustained Watersmart Nativescaping, Habitat Restoration, and Experiential Learning Developed in Pasadena, Galveston, and Bolivar | Artist Boat | \$115,000.00 | \$0.00 | \$0.00 | \$0.00 |
| 20. Alternative: Resilience in Schools and Communities | NWF | \$200,000.00 | \$0.00 | \$0.00 | \$0.00 |
| 21. Alternative: Green Infrastructure HS Intern Program Expansion and Learn Now Green Infrastructure Courses | AgriLife | \$138,023.00 | \$0.00 | \$0.00 | \$0.00 |
| 22. Alternative: Sustainable Ecological Ambassadors for Stewardship and STEM Careers | PEACE | \$307,637.00 | \$0.00 | \$0.00 | \$0.00 |
| M&R | | | | | |
| 23. Monitoring to Assess Long-Term Restoration Success in Galveston Bay Wetlands | TAMUG | \$151,161.00 | \$0.00 | \$103,908.00 | \$47,253.00 |
| 24. Establishment of an Oyster Sentinel Program for Tracking Perkinsus marinus (Dermo) in Oysters of Galveston Bay | UHCL/EIH | \$297,404.33 | \$0.00 | \$253,978.00 | \$43,426.00 |
| 25. Tracking Perkinsus marinus (Dermo) Infection in Sun-Cured Oysters: Informing Oyster Shell Recycling Programs in Galveston Bay | UHCL/EIH | \$166,898.11 | \$0.00 | \$166,898.11 | \$0.00 |
| 26. Alternative: Microplastic and Per-/polyfluoroalkyl (PFAS) Substance Bioaccumulation in Diamondback Terrapin (Malaclemys terrapin) from Galveston Bay | UHCL/EIH | \$178,200.92 | \$0.00 | \$0.00 | \$0.00 |
| 27. Alternative: Ecological Distribution and Associated Biomarkers of Toxicity of Microplastics Exposure in Galveston Bay | TAMUG | \$118,306.00 | \$0.00 | \$0.00 | \$0.00 |
| 28. Alternative: Distribution of Key Emergent Pollutants in the Aquatic Biota (Oysters and Fish), Sediments and Surface Waters of Galveston Bay | TAMUG | \$203,660.00 | \$0.00 | \$0.00 | \$0.00 |
| FY 2025 Funding Requests | | \$4,556,384.61 | \$924,484.00 | \$1,500,000.00 | \$159,026.00 |
| FY 2025 Anticipated Funding Allocation (Federal and State) | | \$2,424,484.00 | \$924,484.00 | \$1,500,000.00 | |
| Difference | | \$0.00 | \$0.00 | \$0.00 | |

*State funding for salary is from a different department (index) outside of GBEP and is not calculated as part of the GBEP budget.

Fiscal 2025 Section 320/State Recommended Project Budget (\$800K EPA Budget)

(Changes from Recommendations in Red)

| | | | FY 2025 Recommendation | | FY 2026 |
|--|---------------|--------------------------|------------------------|-----------------|--------------|
| Category | Grantee | Original Funding Request | State Funding | Federal Funding | |
| | | | | | |
| Baseline Costs | | | | | |
| Salaries, Fringe, and Indirect | N/A | \$758,435.25 | 87785.30* | \$758,435.25 | \$0.00 |
| General Operational Costs | N/A | \$37,500.00 | \$35,638.00 | \$8,046.00 | \$0.00 |
| Programmatic Costs | | | | | |
| 1. Annual Website Hosting & Maintenance (2 websites) | Wilkins Group | \$5,868.00 | \$0.00 | \$5,868.00 | \$0.00 |
| 2. Mickey Leland Environmental Internship Program | Workquest | \$7,500.00 | \$0.00 | \$7,500.00 | \$0.00 |
| 3. State of the Bay Symposium | TBD | \$30,000.00 | \$0.00 | \$30,000.00 | \$0.00 |
| WSQ | | | | | |
| 4. Enhancing Clear Creek Watershed Protection and Galveston Bay Plan through Community Engagement and Monitoring | BPA | \$30,000.00 | \$10,000.00 | \$20,000.00 | \$0.00 |
| 5. Supporting Permeable Alternatives to Conventional Pavement in the Lower Galveston Bay Watershed | AgriLife | \$63,847.00 | \$63,847.00 | \$0.00 | \$0.00 |
| 6. Application of Rapid Methods of Microbial Source Tracking to Assess the Source of Fecal Contamination to Western Galveston Bay | UHCL | \$104,859.00 | \$104,859.00 | \$0.00 | \$0.00 |
| 7. Alternative: Watershed Protection Plan Development for Greens Bayou | H-GAC | \$30,000.00 | \$0.00 | \$0.00 | \$0.00 |
| 8. Alternative: Distribution of Key Emergent Pollutants in the Aquatic Biota (Oysters and Fish), Sediments, and Surface Waters of Galveston Bay | TAMUG | \$203,660.00 | \$0.00 | \$0.00 | \$0.00 |
| NRU | | | | | |
| 9. Conservation Assistance Program | GBF | \$230,000.00 | \$115,000.00 | \$0.00 | \$0.00 |
| 10. Wetland Planting Assistance and Cordgrass Planting for Coastal Resiliency | GBF | \$293,840.00 | \$175,000.00 | \$0.00 | \$0.00 |
| 11. Bay Harbor Island Stabilization (Adaptative Management & Enhancement) | GBF | \$132,700.00 | \$132,700.00 | \$0.00 | \$0.00 |
| 12. Monitoring and Managing the Threatened Eastern Black Rails in the Galveston Bay Area | TAMU | \$174,235.00 | \$0.00 | \$130,888.00 | \$43,347.00 |
| 13. Alternative: Greens Bayou Riparian Restoration Project | HPARD | \$150,000.00 | \$0.00 | \$0.00 | \$0.00 |
| 14. Alternative: Salt Lake Native Marsh Shoreline Protection Project | FBBNWR | \$100,000.00 | \$0.00 | \$0.00 | \$0.00 |
| PPE | | | | | |
| 15. Wetlands Connections | GBF | \$173,300.00 | \$173,300.00 | \$0.00 | \$0.00 |
| 16. Engaging Diverse Communities in Conservation | BPA | \$64,140.00 | \$64,140.00 | \$0.00 | \$0.00 |
| 17. Mobilizing the Environmental Education Community through Prairie Education | UHCL | \$80,210.00 | \$0.00 | \$79,478.64 | \$0.00 |
| 18. Regional Coordination of the Rivers, Lakes, Bays, 'N Bayous Trash Bash | H-GAC | \$10,000.00 | \$0.00 | \$10,000.00 | \$0.00 |
| 19. Alternative: Watersheds Connections Continued: Engaging K-8th Grade Students in Sustained Watersmart Nativescaping, Habitat Restoration, and Experiential Learning Developed in Pasadena, Galveston, and Bolivar | Artist Boat | \$115,000.00 | \$0.00 | \$0.00 | \$0.00 |
| 20. Alternative: Resilience in Schools and Communities | NWF | \$200,000.00 | \$0.00 | \$0.00 | \$0.00 |
| 21. Alternative: Green Infrastructure HS Intern Program Expansion and Learn Now Green Infrastructure Courses | AgriLife | \$138,023.00 | \$0.00 | \$0.00 | \$0.00 |
| 22. Alternative: Sustainable Ecological Ambassadors for Stewardship and STEM Careers | PEACE | \$307,637.00 | \$0.00 | \$0.00 | \$0.00 |
| M&R | | | | | |
| 23. Monitoring to Assess Long-Term Restoration Success in Galveston Bay Wetlands | TAMUG | \$151,161.00 | \$0.00 | \$103,908.00 | \$47,253.00 |
| 24. Establishment of an Oyster Sentinel Program for Tracking Perkinsus marinus (Dermo) in Oysters of Galveston Bay | UHCL/EIH | \$297,404.33 | \$0.00 | \$278,978.00 | \$18,426.00 |
| 25. Tracking Perkinsus marinus (Dermo) Infection in Sun-Cured Oysters: Informing Oyster Shell Recycling Programs in Galveston Bay | UHCL/EIH | \$166,898.11 | \$0.00 | \$166,898.11 | \$0.00 |
| 26. Alternative: Microplastic and Per-/polyfluoroalkyl (PFAS) Substance Bioaccumulation in Diamondback Terrapin (Malaclemys terrapin) from | UHCL/EIH | \$178,200.92 | \$0.00 | \$0.00 | \$0.00 |
| 27. Alternative: Ecological Distribution and Associated Biomarkers of Toxicity of Microplastics Exposure in Galveston Bay | TAMUG | \$118,306.00 | \$0.00 | \$0.00 | \$0.00 |
| 28. Alternative: Distribution of Key Emergent Pollutants in the Aquatic Biota (Oysters and Fish), Sediments and Surface Waters of Galveston Bay | TAMUG | \$203,660.00 | \$0.00 | \$0.00 | \$0.00 |
| | | | | | |
| FY 2025 Funding Requests | | \$4,556,384.61 | \$874,484.00 | \$1,600,000.00 | \$109,026.00 |
| FY 2025 Anticipated Funding Allocation (Federal and State) | | \$2,474,484.00 | \$874,484.00 | \$1,600,000.00 | |
| Difference | | \$0.00 | \$0.00 | \$0.00 | |

*State funding for salary is from a different department (index) outside of GBEP and is not calculated as part of the GBEP budget.

Fiscal 2025 Section 320/State Recommended Project Budget (\$850K EPA Budget)

(Changes from Recommendations in Red)

| Category | Grantee | Original Funding Request | FY 2025 Recommendation | | FY 2026 |
|--|---------------|--------------------------|------------------------|-----------------|-------------|
| | | | State Funding | Federal Funding | |
| | | | | | |
| Baseline Costs | | | | | |
| Salaries, Fringe, and Indirect | N/A | \$758,435.25 | 87785.30* | \$758,435.25 | \$0.00 |
| General Operational Costs | N/A | \$37,500.00 | \$35,638.00 | \$8,046.00 | \$0.00 |
| Programmatic Costs | | | | | |
| 1. Annual Website Hosting & Maintenance (2 websites) | Wilkins Group | \$5,868.00 | \$0.00 | \$5,868.00 | \$0.00 |
| 2. Mickey Leland Environmental Internship Program | Workquest | \$7,500.00 | \$0.00 | \$7,500.00 | \$0.00 |
| 3. State of the Bay Symposium | TBD | \$30,000.00 | \$30,000.00 | \$0.00 | \$0.00 |
| WSQ | | | | | |
| 4. Enhancing Clear Creek Watershed Protection and Galveston Bay Plan through Community Engagement and Monitoring | BPA | \$30,000.00 | \$0.00 | \$30,000.00 | \$0.00 |
| 5. Supporting Permeable Alternatives to Conventional Pavement in the Lower Galveston Bay Watershed | AgriLife | \$63,847.00 | \$63,847.00 | \$0.00 | \$0.00 |
| 6. Application of Rapid Methods of Microbial Source Tracking to Assess the Source of Fecal Contamination to Western Galveston Bay | UHCL | \$104,859.00 | \$104,859.00 | \$0.00 | \$0.00 |
| 7. Watershed Protection Plan Development for Greens Bayou | H-GAC | \$30,000.00 | \$30,000.00 | \$0.00 | \$0.00 |
| 8. Alternative: Distribution of Key Emergent Pollutants in the Aquatic Biota (Oysters and Fish), Sediments, and Surface Waters of Galveston Bay | TAMUG | \$203,660.00 | \$0.00 | \$0.00 | \$0.00 |
| NRU | | | | | |
| 9. Conservation Assistance Program | GBF | \$230,000.00 | \$15,000.00 | \$100,000.00 | \$0.00 |
| 10. Wetland Planting Assistance and Cordgrass Planting for Coastal Resiliency | GBF | \$293,840.00 | \$175,000.00 | \$0.00 | \$0.00 |
| 11. Bay Harbor Island Stabilization (Adaptative Management & Enhancement) | GBF | \$132,700.00 | \$132,700.00 | \$0.00 | \$0.00 |
| 12. Monitoring and Managing the Threatened Eastern Black Rails in the Galveston Bay Area | TAMU | \$174,235.00 | \$0.00 | \$130,888.00 | \$43,347.00 |
| 13. Alternative: Greens Bayou Riparian Restoration Project | HPARD | \$150,000.00 | \$0.00 | \$0.00 | \$0.00 |
| 14. Alternative: Salt Lake Native Marsh Shoreline Protection Project | FBBNWR | \$100,000.00 | \$0.00 | \$0.00 | \$0.00 |
| PPE | | | | | |
| 15. Wetlands Connections | GBF | \$173,300.00 | \$173,300.00 | | \$0.00 |
| 16. Engaging Diverse Communities in Conservation | BPA | \$64,140.00 | \$64,140.00 | | \$0.00 |
| 17. Mobilizing the Environmental Education Community through Prairie Education | UHCL | \$80,210.00 | \$0.00 | \$81,052.31 | \$0.00 |
| 18. Regional Coordination of the Rivers, Lakes, Bays, 'N Bayous Trash Bash | H-GAC | \$10,000.00 | \$0.00 | \$10,000.00 | \$0.00 |
| 19. Alternative: Watersheds Connections Continued: Engaging K-8th Grade Students in Sustained Watersmart Nativescaping, Habitat Restoration, and Experiential Learning Developed in Pasadena, Galveston, and Bolivar | Artist Boat | \$115,000.00 | \$0.00 | \$0.00 | \$0.00 |
| 20. Alternative: Resilience in Schools and Communities | NWF | \$200,000.00 | \$0.00 | \$0.00 | \$0.00 |
| 21. Alternative: Green Infrastructure HS Intern Program Expansion and Learn Now Green Infrastructure Courses | AgriLife | \$138,023.00 | \$0.00 | \$0.00 | \$0.00 |
| 22. Alternative: Sustainable Ecological Ambassadors for Stewardship and STEM Careers | PEACE | \$307,637.00 | \$0.00 | \$0.00 | \$0.00 |
| M&R | | | | | |
| 23. Monitoring to Assess Long-Term Restoration Success in Galveston Bay Wetlands | TAMUG | \$151,161.00 | \$0.00 | \$103,908.00 | \$47,253.00 |
| 24. Establishment of an Oyster Sentinel Program for Tracking Perkinsus marinus (Dermo) in Oysters of Galveston Bay | UHCL/EIH | \$297,404.33 | \$0.00 | \$297,404.33 | \$0.00 |
| 25. Tracking Perkinsus marinus (Dermo) Infection in Sun-Cured Oysters: Informing Oyster Shell Recycling Programs in Galveston Bay | UHCL/EIH | \$166,898.11 | \$0.00 | \$166,898.11 | \$0.00 |
| 26. Alternative: Microplastic and Per-/polyfluoroalkyl (PFAS) Substance Bioaccumulation in Diamondback Terrapin (Malaclemys terrapin) from | UHCL/EIH | \$178,200.92 | \$0.00 | \$0.00 | \$0.00 |
| 27. Alternative: Ecological Distribution and Associated Biomarkers of Toxicity of Microplastics Exposure in Galveston Bay | TAMUG | \$118,306.00 | \$0.00 | \$0.00 | \$0.00 |
| 28. Alternative: Distribution of Key Emergent Pollutants in the Aquatic Biota (Oysters and Fish), Sediments and Surface Waters of Galveston Bay | TAMUG | \$203,660.00 | \$0.00 | \$0.00 | \$0.00 |
| FY 2025 Funding Requests | | \$4,556,384.61 | \$824,484.00 | \$1,700,000.00 | \$90,600.00 |
| FY 2025 Anticipated Funding Allocation (Federal and State) | | \$2,524,484.00 | \$824,484.00 | \$1,700,000.00 | |
| Difference | | \$0.00 | \$0.00 | \$0.00 | |

*State funding for salary is from a different department (index) outside of GBEP and is not calculated as part of the GBEP budget.

GALVESTON BAY ESTUARY PROGRAM (GBEP) PROJECT PROPOSALS
BIPARTISAN INFRASTRUCTURE LAW RECOMMENDATION
FEDERAL FISCAL 2024 WORK PLAN
(Click to follow link)

| Bipartisan Infrastructure Law Proposals | Proposed Amount |
|---|------------------------|
| 1. Resiliency Education and Infrastructure | \$336,000 |
| 2. Evaluating Galveston Bay's Resilience to Ocean and Coastal Acidification | \$278,800 |
| 3. Herman Brown Park Riparian Restoration and Community Engagement Project- Phase I | \$295,000 |
| Total | \$909,800 |

BIPARTISAN INFRASTRUCTURE LAW SUMMARIES

1. Resiliency Education and Infrastructure

Project Lead: Galveston Bay Foundation

Proposed Funding: \$336,000.00

Meets [EJScreen](#) and GBEP Equity Strategy Goals: Yes

Project Description: The Galveston Bay Foundation (GBF) proposes to implement a two-year, multi-faceted project to establish a demonstration site (the Trinity Bay Discovery Center) for green infrastructure that promotes climate resiliency and restores native habitat. In an effort to equip the community with climate knowledge and practical tools, the proposed project will also expand GBF's environmental education initiatives within the Channelview community through the expansion of K-12 programming for Channelview ISD, week-long teacher development workshops, science nights, and community events at the Trinity Bay Discovery Center to showcase green infrastructure in action.

Notes: Five Title 1 Schools are identified for the project. GBF plans to reach over 4,000 students from these schools during the two-year project. Additionally, up to 24 teachers will be provided with targeted professional development opportunities each summer to learn about the watershed and impacts in the region. Due to BIL funding limitations, the inclusion of the Trinity Bay Discovery Center breakwater expansion was removed from the proposal.

2. Evaluating Galveston Bay's Resilience to Ocean and Coastal Acidification

Project Lead: Houston Advance Research Center

Proposed Funding: \$278,800.00

Meets [EJScreen](#) and GBEP Equity Strategy Goals: No

Project Description: Houston Advanced Research Center (HARC), in collaboration with the United States Geological Survey (USGS) and the Galveston Bay Foundation (GBF), will initiate a novel long-term, continuous monitoring program to establish baseline conditions and analyze estuary stressor scenarios for carbonate system stressors to develop a framework for coastal acidification in Galveston Bay. The framework will guide implementation of ocean and coastal acidification planning to build Galveston Bay's resilience; we will collaborate with stakeholders and coastal managers in vulnerable fishing communities who rely on critical shellfish habitat for economic stability and the health of the Bay in site selection, study design and outreach of outcomes.

Notes: Identified as a high risk/high probability issue of concern in the Galveston Bay Estuary Resilience Assessment and Action Plan. Due to BIL funding limitations, the project timeline was reduced from four years to two years.

3. Herman Brown Park Riparian Restoration and Community Engagement Project- Phase I

Project Lead: Houston Parks and Recreation Department

Proposed Funding: \$295,000.00

Meets [EJScreen](#) and GBEP Equity Strategy Goals: Yes

Project Description: Houston Parks and Recreation Department will restore up to 230 acres of riparian forest habitat by removing non-native species and creating a forest composition of native canopy, understory, shrub, and herbaceous species within Herman Brown Park, which is adjacent to Hunting Bayou. This project incorporates partners from the U.S. Fish and Wildlife Service (FWS), Student Conservation Association (SCA), Bayou Preservation Association, and local schools. Two SCA education interns will work directly with FWS to assist in community outreach, engagement, and education goals. An SCA summer crew recruited from Furr High School and other local schools will assist in management efforts at the site. Bayou Preservation Association will provide training to certify interns and crews as Certified Interpretive Guides (CIG) certified by the National Association of Interpretation.

Notes: One Title 1 School is identified for the project. Due to BIL funding limitations, the project was reduced from \$350,000 to \$295,000.

FEDERAL FISCAL 2024 BIPARTISAN INFRASTRUCTURE LAW RECOMMENDED PROJECT BUDGET

| BIL Projects | Grantee | Original Request | FFY 2024 Recommendation |
|---|----------------|-------------------------|--------------------------------|
| 1. Resiliency Education and Infrastructure | GBF | \$536,124.00 | \$336,000.00 |
| 2. Evaluating Galveston Bay's Resilience to Ocean and Coastal Acidification | HARC | \$548,608.00 | \$278,800.00 |
| 3. Herman Brown Park Riparian Restoration and Community Engagement Project- Phase I | HPARD | \$350,000.00 | \$295,000.00 |
| FFY 2024 Funding Requests | | \$4,161,143.52 | \$909,800.00 |
| FFY 2024 Anticipated Funding Allocation (BIL) | | | \$909,800.00 |
| Difference | | | \$0.00 |