

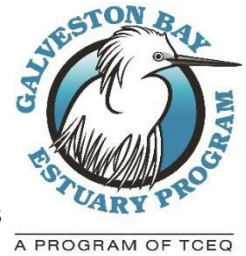
Federal Bipartisan Infrastructure Law Proposals for FFY25



The proposal number, grantee, and project name are linked to the respective proposal. The GBEP logo on each proposal title page will link you back to the Table of Contents.

#	Grantee	Project Name	Total Request	Duration (months)
1	Children's Environmental Literacy Foundation (CELF)	Cultivating a Generation of Watershed Ambassadors through Civic Science in grades 6-12	\$154,217.00	33
2	HARC/GTRI	Developing a Community Water Risk Dashboard to Integrate Environmental and Social Indicators for the Lower Galveston Bay Watershed	\$647,837.00	24
3	Houston Parks Board (HPB)	Houston Parks Board Comprehensive Conservation Plan	\$150,000.00	12
4	Native Prairies Association of Texas (NPAT)	Deer Park Prairie Learning Center - Phases II & III	\$200,000.00	9
5	TAMUG	High-Tech Monitoring and Assessing Galveston Bay Ecosystems in Support of Resilience Implementation and Management Decisions	\$572,020.00	33
6	University of Texas at Arlington	Critical Source Areas Identification for Nonpoint Pollutant in Village Creek-Lake Arlington Watershed	\$488,711.00	33
7	Vision Galveston	Renovating Jones Park: Building Galveston's First Climate-Ready Stormwater Park	\$899,535.50	27
TOTAL REQUEST			\$3,112,320.50	

**Galveston Bay Estuary Program
Federal Bipartisan Infrastructure Law (BIL) Project Proposal – Federal Fiscal 2025**



Please complete the proposal form and submit to gbep@tceq.texas.gov by **August 26, 2024**. No late submittals will be considered for funding.

This Call for Project Proposals complies with 30 Texas Administrative Code (TAC) § 14.7, which lays out requirements for a competitive solicitation by TCEQ for grant awards. For convenience, specific citations to 30 TAC § 14.7 are identified in the text.

SECTION ONE: INTRODUCTION

Purpose [required by 30 TAC § 14.7(1)]: The purpose of the proposed grant from the Galveston Bay Estuary Program (GBEP), a program of the Texas Commission on Environmental Quality (TCEQ), is to implement *The Galveston Bay Plan, 2nd Edition* (the Plan), a comprehensive conservation and management plan falling under Section 320, of the Federal Water Pollution Control Act (33 U.S.C. Section 1330), for a designated national estuary in the State of Texas.

Objective and Allowable Activities [see 30 TAC § 14.7(4)]: The objective of this grant is to implement the GBEP stakeholder developed priorities for federal fiscal 2025 (FFY2025 Priority Area Actions) that were developed by the GBEP Budget and Priorities subcommittee for federal fiscal 2025 at the July 2024 meeting. Any proposal implementing the Plan may be submitted, but proposals implementing the FFY2025 Priority Area Actions will be considered above others.

Authority [see 30 TAC § 14.7(2)]: Grants issued by GBEP under this solicitation are authorized by: the Federal Water Pollution Control Act (Clean Water Act) § 320 (33 UNITED STATES CODE § 1330), commonly referred to as the National Estuary Program; TEX. WATER CODE § 5.124; and 30 TAC ch. 14.

Match Requirement [see 30 TAC § 14.7(10) and 30 TAC § 14.7(11)]: No matching funds are required. Therefore, there is no need to adjust or waive any matching funds requirement.

Multiple Awards [see 30 TAC § 14.7(7)]: GBEP anticipates awarding funds for multiple proposals. GBEP intends to award grants to that combination of proposals which best implements the Plan, factoring in all criteria identified in this Call for Project Proposals, the availability of funds, and the most effective division of funds between awards.

SECTION TWO: SUBMITTAL – GENERAL INFORMATION

Subcommittee:

Federal Bipartisan Infrastructure Law (BIL) Project

Project Name:

Cultivating a Generation of Watershed Ambassadors through Civic Science in grades 6-12

Project Previously Funded by GBEP? Yes No

Lead Implementer / Categories of Eligible Recipients [see 30 TAC § 14.7(3)]:

The lead implementer must be in one of the following categories of eligible recipients. Please indicate which category applies to your entity. If the proposing party is not already paired with a lead implementer in one of the categories listed below, the proposing party will need to partner with an eligible recipient in one of these categories to be selected for funding. Please reach out to GBEP staff with any questions.

- Federal, State, or Local Government Council of Government Public ISDs or Universities X
 Nonprofit Other*

The Children’s Environmental Literacy Foundation (CELf) is a 501c3 non-profit organization.

Unique Entity ID (UEI) Number:

ZWDKEFNQNKM5

AND: VIN or Tax ID:

CELf’s EIN is 36-4540146

Contact Information:

Project Representative Name	Lisa Gianukos
Project Representative Phone	832-477-4583
Project Representative Email	lisagianukos@celfeducation.org

Amount Requested from GBEP (\$150,000 minimum):

\$154,217

Federal State No Preference

Is the project scalable?

Amount Requested per year (if applicable):

FY 2026 (09/01/2025-08/31/2026)	\$46,398
FY 2027 (09/01/2026-05/31/2027)	\$51,129
FY 2028 (09/01/2027-05/31/2028)	\$56,690
Total	\$154,217

Project Dates / Duration (beginning no earlier than September 1, 2025 – ending no later than May 31, 2028) [see 30 TAC § 14.7(5)]:

September 2025 - May 31 2028, aligning to 3 academic years.

Project Urgency:

CELf is hopeful to receive this funding as a recent two-year grant supporting our Civic Science program is ending at the end of August 2024. We are currently in Year 1 of a 3-year EPA grant that is supporting 15 teachers per year to take part in our Civic Science program, and want to ensure we are able to continue supporting new cohorts of teachers with access to resources, professional development, and experiential learning opportunities for their students that lead to concrete actions taken in their school communities, and students becoming lifelong watershed stewards. This grant will help us to supplement our EPA grant to extend the reach of our program. and extend the program beyond our currently funded timeline.

Total Project Cost (including Leveraging Amounts, if any; provide leveraging information where indicated below):

\$183,842

Is this an estimate? X

Leveraging (in-kind and/or cash):

This project will be leveraged by a multi-year (2024-2027) grant award received this year from the EPA. Details as follows:

Project Title: Engaging K-12 communities in Civic Science to Monitor Air Quality and Watershed Health in Greater Houston

EPA Grant Project #: 5B-02F50501-1

Portion of 3 yr Project Budget applicable toward this grant: \$29,625

This leveraging amount includes a portion of staff time that can be shared to prepare and deliver similar content to cohorts of teachers supported with each grant. It also includes a portion of food costs for student field trips and Student Symposium costs for Year 2 that the EPA grant will support in Year 2.

Partners* and Their Roles:

New Hope Housing (NHH) will serve as a partner by hosting teacher professional learning events (2/year), student field trips (2/year), and community events (2/year) at their urban prairie site. The Urban Prairie and Park Resilience Project was first announced as a joint project by the City of Houston and NHH on December 1, 2020 as a strategy to integrate green stormwater infrastructure and restore the urban prairie ecosystem by transforming seven acres of undeveloped land within New Hope Housing and Star of Hope's Cornerstone Community Campus, an affordable supportive housing development in Houston's Sunnyside community. CELF and NHH have been partnering to bring educational content and programming to the urban prairie since 2022. In addition to hosting these events, NHH will further support the program's objectives by recruiting program participants from their community of residents - primarily women and children - who are working to rebuild their lives after experiencing homelessness and/or domestic violence.

American Bird Conservancy (ABC), under the Stopping Plastics and Litter Along Shorelines (SPLASH) Program partnership, is prepared to support CELF in carrying out the project through the following key activities:

- Co-facilitating waste audit and clean-up activities during student field trips to local green spaces (3-4 field trips/year)

- Co-facilitating activities during teacher professional learning sessions (1-2/year)

- Attending the annual Student Symposium event as a field expert audience member to provide students constructive guidance on taking their action ideas forward

- Supporting the planning and implementation of a culminating Watershed Resilience Summit in Years 2 and 3.

SPLASH envisions a Texas coast where local communities and natural resource managers are working together to reduce coastal trash pollution, creating an environment where people, birds, and other wildlife thrive. We are on a mission to create a cleaner environment for people, birds, and other wildlife in the greater Houston-Galveston region through community science, education, and outreach. SPLASH has been collaborating with CELF since 2021, helping to facilitate field events with teachers, serving as a green careers guest speakers, and engaging students in impactful environmental stewardship practices.

***If partners are subgrantees completing work reimbursable under GBEP funding, a letter of commitment from the partner must be submitted under the application.**

SECTION THREE: GALVESTON BAY PLAN, 2ND EDITION IMPLEMENTATION

Grant recipient activities, allowed or required to be performed, must implement Galveston Bay Plan 2nd Edition Priority Area Actions. All proposals must implement these actions. This selection criterion provides for the selection of multiple recipients as needed.

Galveston Bay Plan, 2nd Edition References

<https://gbep.texas.gov/ensure-safe-human-and-aquatic-life-use/>

<https://gbep.texas.gov/protect-and-sustain-living-resources/>

<https://gbep.texas.gov/engage-communities/>

<https://gbep.texas.gov/inform-science-based-decision-making/>

Galveston Bay Plan Priority Area Actions Addressed:

Plan Priority 1: Ensure Safe Human and Aquatic Life Use

- NPS-1 **NPS-2 X** NPS-3 **NPS-4 X**
- PS-1 PS-2 PS-3
- PHA-1 PHA-2 PHA-3 PHA-4 PHA-5

Plan Priority 2: Protect and Sustain Living Resources

- HC-1 X **HC-2 X** HC-3
- SC-1 X SC-2 X
- FWI-1 FWI-2 FWI-3

Plan Priority 3: Engage Communities

- SPO-1 X** **SPO-2 X** **SPO-3 X** **SPO-4 X**
- PEA-1 PEA-2 **PEA-3 X**

Plan Priority 4: Inform Science-based Decision Making

- RES-1 RES-2 RES-3 RES-4
- RES-5 RES-6 RES-7 RES-8
- ACS-1 X** ACS-2 ACS-3

Priority Area Actions Detail:

CELFF will address the above selected action areas through the following core activities:

- 1) Field-based and in-service professional development with 30+ teachers and administrators over three years focused on applying a place- and project-based framework to engage students in inquiry projects around their local watersheds. Field-based locations will include the urban prairie at New Hope Housing to learn about native prairies' role in green stormwater infrastructure, and Sylvan Beach to learn about nonpoint sources of water pollution and mitigation, and the role of coastal ecosystems in climate resilience (PEA-3, NPS-2, NPS-4);
- 2) Field trips for 30+ classrooms to local green spaces and waterways for data collection and stewardship activities, along with provision of water testing kits, native seeds and gardening supplies, mapping tools, and other project supplies (NPS-2, NPS-4, PS-1, HC-2, SC-1, SC-2, SPO-1, SPO-3, ACS-1)
- 3) Connect classrooms with green career guest speakers from local government agencies and environment-focused organizations from under-resourced communities, including bilingual/multilingual guest speakers (PEA-3, SPO-1, SPO-4, NPS-2)
- 4) Engagement of family, community, and local government stakeholders in student action plans, including through participation in the Texas Plastic Pollution Symposium and through a Watershed Resilience Summit event to be held in the fall of years 2 and 3 of the project (PEA-3, SPO-1, SPO-2, SPO-3, SPO-4)
- 5) Culminating Student Symposium held annually to showcase 50+ students' research and inspire action among collaborating families, coalition partners, industry professionals, and policy-makers. (PEA-3, SPO-1, SPO-2, SPO-4)

SECTION FOUR: BIL PRIORITIES / FACTORS TO BE USED TO SELECT AWARDS [see 30 TAC § 14.7(6)]

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. This selection criteria provides for the selection of multiple recipients as needed.

Projects must incorporate the implementation of the [Estuary Resilience Action Plan](#) and the [GBEP Equity Strategy](#) (including having physical presence or connection to the targeted communities).

The project addresses the Estuary Resilience Action Plan (ERAP) by engaging K-12 teachers, administrators, students, and school communities in education, data collection, and stewardship activities that align to the following stakeholder-identified adaptation/mitigation actions:

- Stakeholder Outreach: Education
- Preservation/Conservation/Restoration
- Promote Water Conservation and Reuse
- Promote Native Habitat

Since launching in Houston in 2019, CELF has been supporting Greater Houston educators to integrate sustainability across K-12 curriculum and school culture through professional development and student experiential learning opportunities that have so far reached over 1,000 teachers and 30,000 students in Greater Houston to date. As an approved professional development provider in several Region 4 school districts, including Houston Independent School District (HISD), Channelview ISD, Spring ISD, Spring Branch ISD, and Katy ISD, CELF is well-positioned to support systemic integration of sustainability themes into core curriculum through place- and project-based pedagogical approaches. This project will engage students in inquiry projects focused on exploring watershed health and climate resilience. CELF will guide teachers to apply an inquiry-to-action framework that will develop students' skills for collecting and analyzing data that can contribute to watershed monitoring and stakeholder education efforts. During field trips, students will learn about climate resilience strategies such as preservation/conservation/restoration of coastal ecosystems, promotion of water conservation and reuse, and promotion of native habitat through activities such as native prairie seed stomps, waste clean-ups, water use labs, and dune grass planting.

While not identified among the first actions that this project will address, monitoring and research are also among the action areas that this project will help build toward as students develop desirable workforce skills of data monitoring and research through their data collection and analysis activities, using tools such as the TCEQ GeoTAM mapping tool, Air Now, and IQAir. CELF will extend this learning by connecting students to green career professionals, including bilingual professionals, who can help students see how their emerging data and research skills can translate to potential careers in watershed protection and management, and climate resilience more broadly.

By leveraging CELF's Civic Science framework to train teachers and guide student inquiry projects, this program will address the GBEP Equity Project through ongoing stakeholder engagement, including student-driven stakeholder engagement that will be a core part of their civic science project implementation. In alignment with the GBEP Equity Strategy's focus on investing in under-resourced communities, the proposed program will direct resources to Title 1 middle and high school communities in areas of Greater Houston that are impacted by environmental and climate justice issues, including along the Houston Ship Channel and in neighborhoods designated among Houston's [Complete Communities](#). The vast majority of the students CELF serves through our programs come from under-resourced communities, as evidenced by data from 2023 showing that, among the Greater Houston educators participating in CELF professional development programs, 93% were from schoolwide Title 1 programs, with 81% of their students qualifying for free or reduced lunch. Additional demographics of Greater Houston students served by CELF in 2023 include the following (based on [NCES](#) data of schools where CELF-trained teachers serve:

- American Indian/Alaska Native: 0.42%
- Asian: 2.41%
- Black: 26.5%
- Hispanic: 61.26%
- Native Hawaiian/Pacific Islander: 0.15%
- White: 6.81%
- Two or more races: 1.23%
- Not available: 1.21%

Action Priorities

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. **Proposals must address one or more of the following actions:**

- Habitat protection & enhancement, including adaptive management
- Projects in support of management measures (e.g., green infrastructure, watershed and human health, water reuse and conservation) and watershed-based plans.
- Projects that support research and monitoring related to the plan priorities of *Ensure Safe Human & Aquatic Life Use* and *Protect and Sustain Living Resources*.

Support Priorities

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. **Proposals must address at least one supporting action developed by the subcommittees, but preference will be given to projects that are able to incorporate multiple supporting actions.**

- Engaging K-12 students and/or adults in hands-on, place-based environmental education.
- Diversifying strategic partners with environmental and non-environmental community organizations working within targeted communities.
- Monitoring and research that produces environmental data applicable to future implementation and management decisions and made available to the public.

Stakeholder Priority Detail:

This project is designed to support habitat protection, enhancement, and management by cultivating a generation of young watershed resilience ambassadors through hands-on environmental education with teachers and students from Title 1 schools in Greater Houston, and in partnership with diversified community stakeholders. The project will address the identified priorities as follows:

1. Habitat Protection & Enhancement: The project will enhance local habitats by educating students about green stormwater infrastructure concepts through field trips to sites like the urban prairie and New Hope Housing that has been restored as part of the City of Houston’s green stormwater infrastructure initiative, and coastal areas like Sylvan Beach. During these field trips, students will learn about the role of native prairies and coastal ecosystems in mitigating water pollution and enhancing climate resilience. Activities such as water quality monitoring and ecosystem restoration will contribute to the conservation of critical habitats and improve local environmental conditions.

2. Support for Management Measures: By equipping students and teachers with Science, Technology, Engineering, Arts, and Math (STEAM) skills, the project supports students in learning about how ongoing data monitoring of key watershed health indicators can inform adaptive decision-making regarding the effective management of local watersheds. Professional development for teachers and hands-on student activities will include data collection and analysis, and engagement with green careers speakers who work in watershed management who can speak about how data informs their process. The project also aligns with watershed-based plans by incorporating green infrastructure and water conservation principles into educational content and student projects.

3. Place-Based Environmental Education: The project will engage students in place-based environmental education through a series of field trips, hands-on activities, and community engagement events. Students will visit local green spaces and waterways to learn about environmental issues and solutions. This approach will help students connect with their local environment, develop a deeper understanding of watershed dynamics, and actively participate in habitat protection efforts alongside a diverse array of community stakeholders.

4. Diversified Community Partnerships: The project will diversify strategic partnerships by collaborating with school staff, families, grassroots community organizations, corporate sustainability experts, and local and regional government agencies. Key partners include Region 4 school districts such as Channelview ISD, Aldine ISD, and Houston ISD, as well as New Hope Housing, which will host events at their urban prairie, and Stopping Plastic Litter Along Shorelines (SPLASH), which will co-facilitate educational activities at local beaches. These partnerships will enhance the project’s reach and impact, fostering a collaborative approach to environmental education and advocacy.

Does the Project work with new, smaller communities/partnerships?

Yes

No

In addition to deepening our partnerships with Channelview ISD, Aldine ISD, Houston ISD, New Hope Housing and American Bird Conservancy through work, this grant will also enable CELF to pursue new partnerships with Sheldon ISD to engage teachers in this scope of work, and with the East Harris County Empowerment Council who will be engaged in Years 2-3 when we begin to scale-up the visibility of the teachers’ and students’ research and community outreach plans through Watershed Resilience Summit events modeled on CELF’s successful Zero-Waste Education Summit model implemented in June 2024.

SECTION FIVE: BIL CONSIDERATIONS / FACTORS TO BE USED TO SELECT AWARDS [see 30 TAC § 14.7(6)]

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. This selection criteria provides for the selection of multiple recipients as needed.

Does the Project align with any EPA Areas of Special Interest?

- Reduction in nutrient pollution
- Water reuse and conservation
- Marine litter reduction

X Green infrastructure and resiliency

Because of the proposed project’s focus engaging teachers and students in stewardship actions in local green spaces and waterways to protect watershed health and promote climate resilience, we believe this project qualifies for the Green Infrastructure and Resiliency Special Consideration. By involving teachers, students, and communities in exploring how the City of Houston is developing green stormwater infrastructure, and supporting these efforts by helping to maintain local green spaces through stewardship actions, this project will help raise awareness, promote education, and foster community engagement around how green infrastructure can support climate resilience.

Build America, Buy America Act (BABA)

Build America, Buy America provisions only apply to awards over \$250,000, and where more than 5% of the award is spent on iron, steel, manufactured products, and construction materials permanently incorporated into construction, maintenance, or repair projects. Under the law, construction materials exclude cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives.

Will the Build America, Buy America Law apply to this application? Yes **No X**
If yes, will you comply with the law or submit a waiver? Yes No
Comments (if any):

N/A

Does the Project incorporate Federal Flood Risk Management Standards?

FFRMS – EPA Green Infrastructure Managing Flood Risks

Yes **No X**

N/A

Infrastructure Investment and Jobs Act (IIJA) Signage

The recipient will ensure that a sign is placed at construction sites supported under this award displaying EPA logo and the official Building a Better America emblem and must identify the project as a “project funded by President Biden’s

Bipartisan Infrastructure Law.” Construction is defined at 40 CFR 33.103 as “erection, alteration, or repair (including dredging, excavating, and painting) of buildings, structures, or other improvements to real property, and activities in response to a release or a threat of a release of a hazardous substance into the environment, or activities to prevent the introduction of a hazardous substance into a water supply.” The sign must be placed at construction sites in an easily visible location that can be directly linked to the work taking place and must be maintained in good condition throughout the construction period.

Does the proposal implement construction subject to signage requirements?

[Building A Better America Brand Guide – Using the EPA Seal and Logo](#)

Yes No

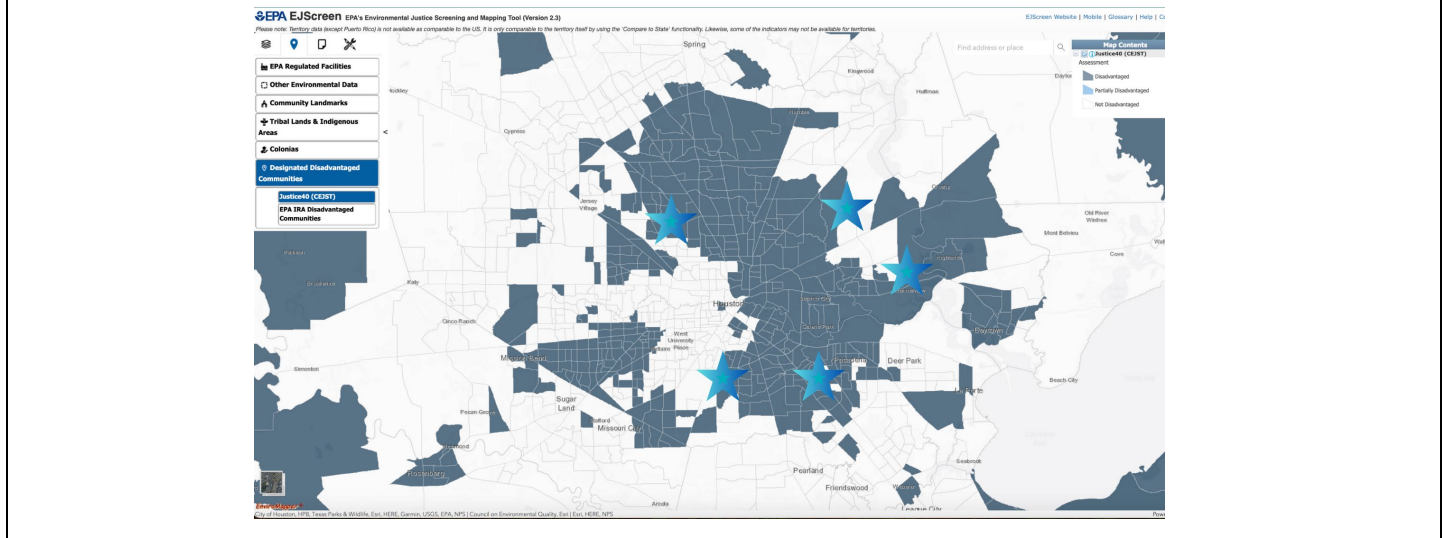
Does the Project Address the [Justice 40 Initiative](#)?

NEP’s have a target of ensuring that at least 40% of the benefits of investments from the five years of BIL funding flow to disadvantaged communities.

[Climate and Economic Justice Screening Tool \(CEJST\)](#)

Yes No

This proposal addresses the Justice40 initiative by targeting the Civic Science professional learning services and student experiential learning opportunities to schools located within communities designated by the Justice40 initiative and the CLimate and Economic Justice Screening Tool as “disadvantaged communities”. These include schools in Channelview ISD, Aldine ISD, Sheldon ISD, and eastern parts of Houston ISD. This also includes the community at New Hope Housing’s Reed campus where we will hold events in the urban prairie that is part of the City of Houston’s green stormwater infrastructure. The image below shows where several of our proposal school partners and event sites are located within Justice40 communities.



Does the Project Address geographies above the 80th percentile as identified in [EJScreen](#) in the following demographics?

Yes No

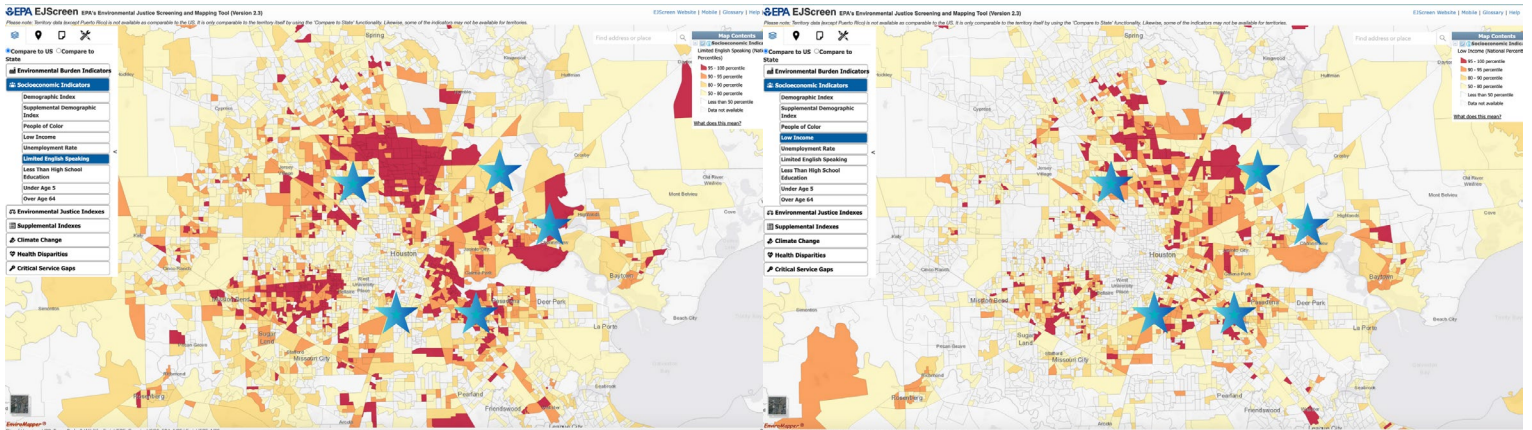
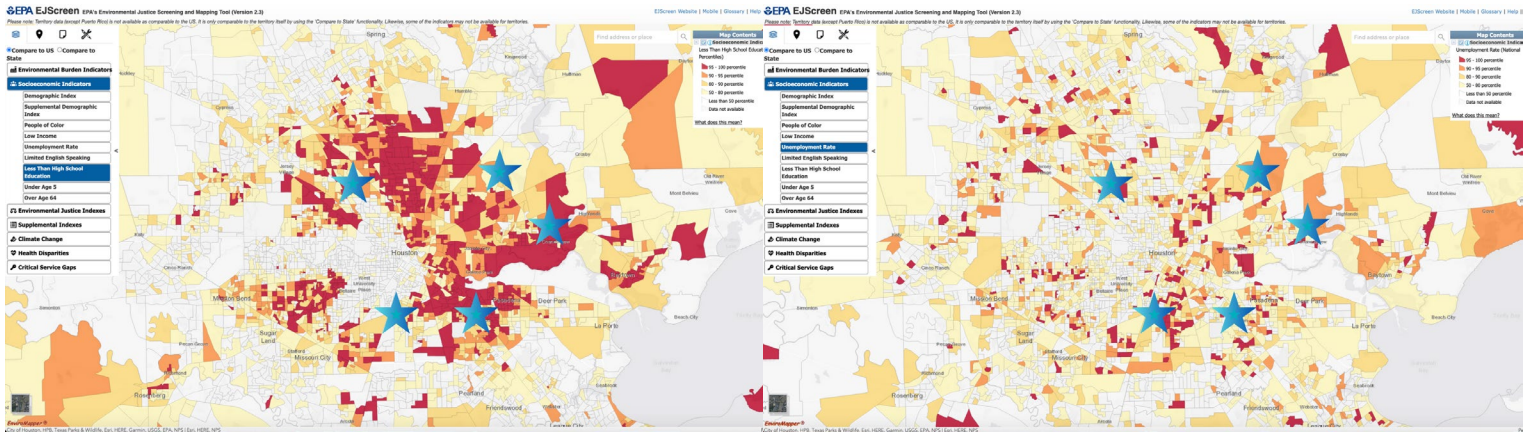
- X % Low income
- X % Linguistically isolated
- X % Less than high school education
- X % Unemployed
- X % Low life expectancy

Schools and districts with whom we seek to collaborate in this program are located in areas of Greater Houston that each meet at least 2-3 of the following demographic and environmental justice criteria as identified in the EPA EJ SCREEN tool:

- 80th percentile and above in terms of populations that are considered low-income, limited English speaking, less than a high school education, unemployed, and low life expectancy (based on locations of Channelview High School, Carver High School, Stevenson Middle School, C.E. King High School, and the urban prairie at New Hope Housing’s Star of Hope campus.

The schools and field sites we’re targeting for this project are among the most impacted areas of Greater Houston in terms of the above indicators. As examples, EJ SCREEN shows the following key indicators for these selected school communities:

- In Channelview ISD, Channelview and Endeavor High Schools in area with 80th-90th percentile for exposure to wastewater discharge, and 9th-100th percentile for low life expectancy and less than a high school education, and the 90th-95th percentile for limited English speaking
- C.E. King High School in Sheldon ISD is above the 80% percentile for limited English speaking and less than a high school education



SECTION SIX: PROPOSAL DETAILS

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority.

Project Summary:

This project aims to empower middle and high school students in Greater Houston to become watershed resilience advocates through immersive, place-based STEAM education and hands-on activities. Applying CELF's Civic Science Inquiry to Action framework, the program will engage teachers, students, and community stakeholders in field trips for data collection and stewardship actions, teacher professional development, and student symposium events, cultivating a generation of committed environmental stewards with workforce ready skills, and promoting equity in addressing local water and climate challenges.

Full Project Description (1,000 words or less):

This project will cultivate the next generation of watershed resilience advocates through place-based inquiry projects that engage middle and high school students in exploration of their local watersheds. Through teacher professional learning, student field trips to local green spaces and waterways, community engagement activities, and culminating Student Symposium events, middle and high school students will become equipped with Science, Technology, Engineering, Arts, and Math (STEAM) skills to protect local watersheds and enhance climate resilience. Leveraging CELF's Civic Science Inquiry to Action Framework, this project will deliver teacher training focused on facilitating student data collection and analysis, crafting compelling stories and action plans to help advance students' ideas for a resilient Galveston Bay.

Activities and outputs will include:

- 1) Field-based and in-service professional development with 30+ teachers and administrators over three years (10/year) focused on applying a place- and project-based framework to engage students in inquiry projects around their local watersheds. Field-based locations will include the urban prairie at New Hope Housing to learn about native prairies' role in green stormwater infrastructure, and Sylvan Beach to learn about nonpoint sources of water pollution and mitigation, and the role of coastal ecosystems in climate resilience;
- 2) Field trips for 30+ classrooms (10/year) to local green spaces and waterways for data collection and stewardship activities, along with provision of water testing kits, native seeds and gardening supplies, mapping tools, and other project supplies;
- 3) Connect classrooms with green career guest speakers from local government agencies and environment-focused organizations from under-resourced communities, including bilingual/multilingual guest speakers
- 4) Engagement of family, community, and local government stakeholders in student action plans, including through a Watershed Resilience Summit event to be held in the fall of years 2 and 3 of the project;
- 5) Culminating Student Symposium held annually to showcase 50+ students' research and inspire action among collaborating families, coalition partners, industry professionals, and policy-makers.

By educating students on sources of pollution, associated health risks, and ways to reduce pollution, the program aims to empower students to act as watershed ambassadors, translating their data into compelling stories and tangible actions that they can share with their communities. The program seeks to cultivate student and community engagement in implementation of practical solutions to improve local water quality and climate resilience through activities like air and water quality monitoring, waste audit and clean-up activities, and management/restoration of local ecosystems that are critical for climate resilience, such as coastal wetlands and urban prairies. The project also promotes equity and social justice by engaging underserved communities in environmental education and advocacy, ensuring access to opportunities for developing knowledge and skills to address environmental issues, and promoting improved health outcomes, community resilience, and inclusivity in environmental education.

Communities to be engaged in this project over the course of three academic years include Title 1 middle and high school communities in areas of Greater Houston that are impacted by environmental and climate justice issues, including along the Houston Ship Channel and in neighborhoods designated among Houston's [Complete Communities](#). School districts with which CELF has existing relationships that will be deepened through this project include Channelview ISD, Aldine ISD, and Houston ISD, extending to new district partners including Sheldon ISD. The project will also engage key partners in hosting and co-facilitating the educational activities. These key partners include New Hope Housing who will host events at their urban prairie that is part of the City of Houston's green stormwater initiative, and the Stopping Plastic Litter Along Shorelines (SPLASH) initiative of the American Bird Conservancy, who will co-facilitate some of the teacher professional development and student field trip events at Sylvan Beach.

Outcomes include teachers gaining skills for facilitating student inquiry activities aligned with the revised Texas Essential Knowledge and Skills. Students will develop their data literacy and understanding of data-driven decision-making, leading to a broader pool of young people interested in potential careers in watershed management and climate resilience. By sharing their learning during the annual student symposium events and culminating Watershed Resilience Summit events, students will also cultivate their sense of agency for contributing to public education on local watershed and climate resilience issues.

CELF will monitor program progress with data collection methods for tracking program participation and outcomes that will include:

- Collecting pre- and post- survey data from participating teachers and administrators at the beginning and end of each academic year
- Collecting Exit Slips from participating teachers at the close of each workshop
- Collecting artifacts of student learning and research findings (i.e. presentations, reports, stories, photos, journal entries)
- Conducting structured observations of classroom proceedings and student activities performed during excursions and field trips
- Developing case studies by interviewing participating teachers to understand how the program has impacted their teaching practice and their perceptions of student learning.

Latitude/Longitude (Optional):

Multiple locations - see map below.

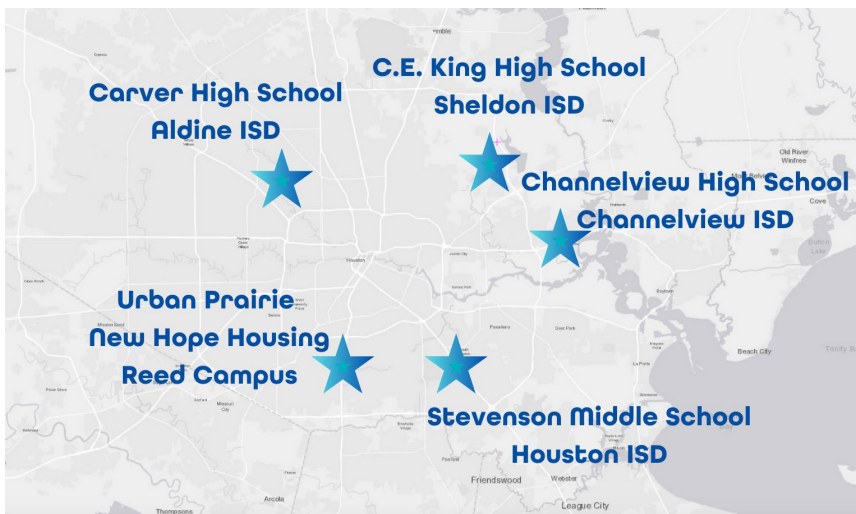
Location:

The program will be delivered to middle and high school teachers in the following target districts: Channelview Independent School District, Houston Independent School District, Aldine Independent School District, and Sheldon Independent School District. The will also take place at field trip locations including the urban prairie at New Hope Housing’s Reed Campus that is part of the City of Houston’s Green Stormwater initiative, and Sylvan Beach for clean-up and waste audit activities.

Other Plans Implemented:

This project aligns to the education of schoolchildren component of the Texas Wetland Conservation Plan, as well as the education and outreach component of the Texas Watershed Planning project. The project also aligns to the City of Houston’s Green Stormwater Initiative, and the EPA’s Environmental Justice Collaborative Problem Solving initiative.

Projects Map



Supplemental Photos/Graphics (Optional):

The following are included as appendices with this proposal:

- [Support letter from New Hope Housing](#)
- [Support letter from American Bird Conservancy](#)
- Teacher [recruitment flyer](#) for our 2024-25 Civic Science teacher cohort
- [Case study](#) of our Civic Science work with teachers in Channelview ISD teachers during the 2022-23 school year

SECTION SEVEN: BUDGET DETAILS

Grant Payments [see 30 TAC § 14.7(12)]: All grant payments will be made on the basis of reimbursement for allowable costs (as defined in 2 CFR Part 200, Subpart E). All payments for awarded proposals will be reimbursements of allowable costs incurred after both parties have entered (signed) a grant agreement for the project.

Budget. Authorized budgeted expenditures for work performed are as follows:

Budget Category	Cost for Work to be Performed
Salary / Wages	\$71,390
Fringe Benefits (9.6%)	\$6,877
Travel	\$2,485
Supplies	\$3,000
Equipment	\$0.00
Contractual	\$44,030
Construction	\$0.00
Other	\$26,435
Total Direct Cost	\$154,217
Indirect Costs	\$0.00
Total	\$154,217

Indirect Cost Agreement

Please note: If using a rate different from your entity Indirect Cost Agreement; a letter of exemption from the appropriate authority must be provided with the application, or a statement must be included certifying that the recipient has elected to be reimbursed for an amount less than its total indirect costs, that unreimbursed indirect costs are part of the recipient’s contribution to the success of the project, and that the recipient will pay for all unreimbursed indirect costs using funds available to it for that purpose.

[Insert Indirect Cost Agreement or Attach as an Appendix if Applicable]

Indirect Cost Reimbursable Rate. The reimbursable rate for this Contract is 0%* of (check one):

*Note: The American Bird Conservancy subaward includes a 19.2% Indirect Cost rate based on Modified Total Direct Costs.

Salary and fringe benefits

Modified total direct costs

Other direct costs base

If other direct cost base, identify:

This rate is less than or equal to (check one):

Predetermined Rate— an indirect rate that is negotiated between the Performing Party and its federal cognizant agency and supported by a current Negotiated Indirect Cost Rate Agreement (NICRA) letter. A Predetermined Rate is not subject to adjustment except as provided by 2 Code of Federal Regulations (CFR) § 200.411.

De Minimis Rate— if Performing Party does not have a current negotiated indirect rate, Performing Party may use a standard rate of ten percent of Modified Total Direct Costs (MTDC) in lieu of determining the actual indirect costs of the service. Costs must be consistently charged as either indirect or direct costs.

Provisional Rate— an experienced-based rate agreed to by Performing Party and TCEQ in the absence of a NICRA rate negotiated with the applicable federal cognizant agency.

Partial Reimbursement Rate— a reimbursement rate agreed to between TCEQ and Performing Party that is less than the rate authorized under TxGMS or, where applicable, 2 CFR Part 200. Performing Party contributes all of its unreimbursed indirect costs to the successful performance of the project or projects funded under this Contract, in accordance with Article 9 of this section.

Other:

Other. If Budget Category “Other” is greater than \$25,000 or more than 10% of total Contract budget, identify the main constituents:

Components of “Other” Budget Category:

Category	Budgeted Amount	Notes
School Project & Field Trip Support Costs	\$ 10,000	Support for school bus rentals for participating teachers to bring their students to local green spaces @ \$500/class (5 classes in Year 1 and 2; 10 classes in Year 3)
Teacher Stipends	\$ 8,750	Teacher stipends (10*\$250 in Year 1; 15*\$250 in Year 2 and 3 for (a) participation in Civic Science trainings and implementation in curriculum; (b) completion of teacher and students pre/post-assessments; (c) coordination of field trips to local green spaces and coordination of green career speaker series; (d) coordination of Watershed Resilience Summit (yrs 2 and 3); (e) coordination of student data exchanges; and (f) prep for students and participation in Student Symposium
Teacher Stipends for Case Studies	\$ 900	Stipends for teachers conducting project case studies (@\$450/teacher/year)
Venue rental	\$ 2,500	Venue rental for teacher training and symposium events
Meals for Teacher Training/Symposium	\$ 3,100	Meals for teachers participating in Civic Science trainings (@ \$15x 10 teachers x 4 events in Yr 1 and 15 teachers in Year 3) and for students participating in annual Symposium events in Yrs 1 and 3 (@ \$10 meal x 50)

Communications	\$ 1,185	Costs related to annual padlet software licensing; used to coordinate training workshops
Total	\$ 26,435	

SECTION EIGHT: CONTRACT REQUIREMENT [see 30 TAC § 14.7(15)]:

- By submitting this Project Proposal, you acknowledge that, if you become a successful grant recipient selected for a grant award, you must enter into a signed grant agreement or contract with TCEQ following the announcement of that award.

SECTION NINE: ACKNOWLEDGMENTS

Please read and understand the following:

- By submitting this Project Proposal, you acknowledge that information on how grant payments will be made is contained in the Budget Details section describing direct and possibly indirect costs. You further acknowledge that grant payments will be reimbursements on the basis of allowable costs incurred and that selected recipients will receive contract documents addressing allowable costs, unallowable costs, and reimbursement.
- By submitting this Project Proposal, you acknowledge your understanding that Project Proposals do not require matching funds and that a TCEQ director does not need to adjust or waive any matching funds requirement.
- By submitting this Project Proposal, you acknowledge that, if GBEP elects to hold a pre-submittal meeting relating to this Project Proposal, GBEP will notify you of the meeting’s time and location indicating whether attendance is mandatory.

SECTION TEN: QUESTIONS AND PRE-SUBMITTAL MEETINGS [see 30 TAC § 14.7(13) and 30 TAC § 14.7(14)]:

- There are no pre-submittal meetings scheduled.
- For requests for additional, pre-submittal information [see 30 TAC § 14.7(13)], please contact gbep@tceq.texas.gov.

SECTION ELEVEN: ADDITIONAL INSTRUCTIONS

In submitting your Project Proposal, please refer and adhere to the following instructions and guidelines concerning materials and information required to be submitted by potential grant recipients:

- GBEP intends to accept only complete Projected Proposals in a layout and format constituting a filled version of this proposal document with all applicable sections therein addressed; however, GBEP may, in its sole discretion, consider and accept nonconforming Project Proposals in the best interest of the state.
- Unless otherwise specified by GBEP, formal signatures are not required on Project Proposals.
- Unless otherwise communicated or implied, GBEP requires 1 (one) completed copy of your Project Proposal.
- Project Proposals must be received electronically, through the email address listed on this page, by the deadline listed on both this page and the first page of this Project Proposal document.

Please Submit Project Proposals (Microsoft Word Only – No PDFs) by August 26, 2024 to gbep@tceq.texas.gov.



August 22, 2024

Dear Galveston Bay Estuary Program Team,

American Bird Conservancy (ABC) enthusiastically submits this letter of support for the proposal submitted by the Children's Environmental Literacy Foundation (CELf) entitled "*Cultivating a Generation of Watershed Ambassadors through Civic Science in grades 6-12.*" ABC, under the Stopping Plastics and Litter Along Shorelines (SPLASh) Program partnership, is prepared to support CELf's educator team in carrying out the project through the following key activities:

- Co-facilitating waste audit and clean-up activities during student field trips to local green spaces (3-4 field trips/year)
- Co-facilitating activities during teacher professional learning sessions (1-2/year)
- Attending the annual Student Symposium event as a field expert audience member to provide students constructive guidance on taking their action ideas forward
- Supporting the planning and implementation of a culminating Watershed Resilience Summit in Years 2 and 3.

SPLASh envisions a Texas coast where local communities and natural resource managers are working together to reduce coastal trash pollution, creating an environment where people, birds, and other wildlife thrive. We are on a mission to create a cleaner environment for people, birds, and other wildlife in the greater Houston-Galveston region through community science, education, and outreach. SPLASh has been collaborating with CELf since 2021, helping to facilitate field events with teachers, serving as a green careers guest speakers, and engaging students in impactful environmental stewardship practices.

The SPLASh team looks forward to the opportunity to support and collaborate with the CELf team and education community stakeholders to help foster inclusive, equitable access to place-based outdoor learning and action opportunities to help young people in our region see themselves as lifelong ambassadors of our local watershed.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

Anna Deichmann

Anna Deichmann
Gulf Coastal Program Director
American Bird Conservancy
Phone: (972) 948-3359
Email: ADeichmann@abcbirds.org



New Hope Housing

August 21, 2024

Galveston Bay Estuary Program
17041 El Camino Real, Suite 210
Houston, Texas 77058

Dear Grant Selection Team,

New Hope Housing enthusiastically supports Children's Environmental Literacy Foundation's (CELF) proposal titled "Cultivating a Generation of Watershed Ambassadors through Civic Science in grades 6-12." We are prepared to support CELF's educator team by:

- Hosting teacher professional learning events, student field trips, and community events at the urban prairie located on our Star of Hope campus in Sunnyside.
- Recruiting our community of residents to take part in our events at the urban prairie to spread awareness of watershed resilience strategies and actions they can take.
- Attending the annual Student Symposium event as a field expert to provide students constructive guidance on taking their action ideas forward.
- Supporting the planning and implementation of a culminating Watershed Resilience Summit in Years 2 and 3.

New Hope provides life-stabilizing, affordable, permanent housing with support services for people who live on very low incomes. Since 1993, we have helped 13,000 people mend their lives and recover their dignity by providing more than just a roof with four walls; 1,578 apartments at 11 single room occupancy (SRO) and multifamily communities are safe havens amidst substandard housing and gentrification.

New Hope began partnering with CELF in 2022 to deliver educational content and programming to formerly homeless families living at NHH Reed in South Houston's Sunnyside neighborhood. The 187-unit property became the site of an urban prairie in 2023 as a joint effort with the City of Houston and made possible by a grant from the National Fish and Wildlife Foundation. This project promotes access to green space for our community and supports the City's green stormwater infrastructure initiative.

Our collaboration with CELF bolsters New Hope's ability to foster inclusive, equitable access to place-based outdoor learning and action opportunities to help young people in our region see themselves as lifelong ambassadors of our local watershed. We look forward to the opportunity to further collaborate with CELF and education community stakeholders.

Should you have any questions, please do not hesitate to contact me.

Sincerely,



Joy Horak-Brown
President and CEO

Galveston Bay Estuary Program Federal Bipartisan Infrastructure Law (BIL) Project Proposal – Federal Fiscal 2025



A PROGRAM OF TCEQ

Please complete the proposal form and submit to gbep@tceq.texas.gov by **August 26, 2024**. No late submittals will be considered for funding.

This Call for Project Proposals complies with 30 Texas Administrative Code (TAC) § 14.7, which lays out requirements for a competitive solicitation by TCEQ for grant awards. For convenience, specific citations to 30 TAC § 14.7 are identified in the text.

SECTION ONE: INTRODUCTION

Purpose [required by 30 TAC § 14.7(1)]: The purpose of the proposed grant from the Galveston Bay Estuary Program (GBEP), a program of the Texas Commission on Environmental Quality (TCEQ), is to implement *The Galveston Bay Plan, 2nd Edition* (the Plan), a comprehensive conservation and management plan falling under Section 320, of the Federal Water Pollution Control Act (33 U.S.C. Section 1330), for a designated national estuary in the State of Texas.

Objective and Allowable Activities [see 30 TAC § 14.7(4)]: The objective of this grant is to implement the GBEP stakeholder developed priorities for federal fiscal 2025 (FFY2025 Priority Area Actions) that were developed by the GBEP Budget and Priorities subcommittee for federal fiscal 2025 at the July 2024 meeting. Any proposal implementing the Plan may be submitted, but proposals implementing the FFY2025 Priority Area Actions will be considered above others.

Authority [see 30 TAC § 14.7(2)]: Grants issued by GBEP under this solicitation are authorized by: the Federal Water Pollution Control Act (Clean Water Act) § 320 (33 UNITED STATES CODE § 1330), commonly referred to as the National Estuary Program; TEX. WATER CODE § 5.124; and 30 TAC ch. 14.

Match Requirement [see 30 TAC § 14.7(10) and 30 TAC § 14.7(11)]: No matching funds are required. Therefore, there is no need to adjust or waive any matching funds requirement.

Multiple Awards [see 30 TAC § 14.7(7)]: GBEP anticipates awarding funds for multiple proposals. GBEP intends to award grants to that combination of proposals which best implements the Plan, factoring in all criteria identified in this Call for Project Proposals, the availability of funds, and the most effective division of funds between awards.

SECTION TWO: SUBMITTAL - GENERAL INFORMATION

Subcommittee:

PPE

Project Name:

Developing a Community Water Risk Dashboard to integrate environmental and social indicators for the lower Galveston Bay watershed

Project Previously Funded by GBEP? Yes No

Lead Implementer / Categories of Eligible Recipients [see 30 TAC § 14.7(3)]:

The lead implementer must be in one of the following categories of eligible recipients. Please indicate which category applies to your entity. If the proposing party is not already paired with a lead implementer in one of the categories listed below, the proposing party will need to partner with an eligible recipient in one of these categories to be selected for funding. Please reach out to GBEP staff with any questions.

Nonprofit and/or state entity (GTRI)

Unique Entity ID (UEI) Number:

AND:

VIN or Tax ID:

MLKKJ9MNDN63

76-0038315

Contact Information:

Project Representative Name	Erin Kinney
Project Representative Phone	281-364-6040
Project Representative Email	ekinney@harcresearch.org

Amount Requested from GBEP (\$150,000 minimum):

\$647,837

Federal State No Preference

Is the project scalable?

Amount Requested per year (if applicable):

FY 2026 (09/01/2025-08/31/2026)	\$335,497.00
FY 2027 (09/01/2026-05/31/2027)	\$312,340.00
FY 2028 (09/01/2027-05/31/2028)	\$0.00
Total	\$647,837.00

Project Dates / Duration (beginning no earlier than September 1, 2025 - ending no later than May 31, 2028) [see 30 TAC § 14.7(5)]:

September 1, 2025 - August 31, 2027

Project Urgency:

N/A

Total Project Cost (including Leveraging Amounts, if any; provide leveraging information where indicated below):

\$683,032

Is this an estimate?

Leveraging (in-kind and/or cash)

HARC has voluntarily reduced our federally approved indirect rate to 40% from 53% to allow more funds available for project work. The uncaptured IDC = \$35,194.

Partners* and Their Roles:

HARC: project management, collaborating with stakeholders through workshops (3/year) and other community meetings, collecting indicator data, creating indicators (as needed), creating dashboard, publicizing results

Bayou City Waterkeeper will lead and coordinate community engagement, community science, and communications. This will entail: 1) Leading community workshops and listening sessions with community members (2/year) and decision-makers (1/year). BCWK will leverage its community advisory board, Community Research and Action Network (CRANE) to facilitate these meetings. 2) Engagement with other CBOs through surveys and one-on-one meetings, 3) communications and promotions at other community meetings/events to get feedback and awareness of the dashboard.

***If partners are subgrantees completing work reimbursable under GBEP funding, a letter of commitment from the partner must be submitted under the application.**

SECTION THREE: GALVESTON BAY PLAN, 2ND EDITION IMPLEMENTATION

Grant recipient activities, allowed or required to be performed, must implement Galveston Bay Plan 2nd Edition Priority Area Actions. All proposals must implement these actions. This selection criterion provides for the selection of multiple recipients as needed.

Galveston Bay Plan, 2nd Edition References

<https://gbep.texas.gov/ensure-safe-human-and-aquatic-life-use/>

<https://gbep.texas.gov/protect-and-sustain-living-resources/>

<https://gbep.texas.gov/engage-communities/>

<https://gbep.texas.gov/inform-science-based-decision-making/>

Galveston Bay Plan Priority Area Actions Addressed:

Plan Priority 1: Ensure Safe Human and Aquatic Life Use

NPS-1 NPS-2 NPS-3 NPS-4
PS-1 PS-2 PS-3
PHA-1 PHA-2 PHA-3 PHA-4 PHA-5

Plan Priority 2: Protect and Sustain Living Resources

HC-1 HC-2 HC-3
SC-1 SC-2
FWI-1 FWI-2 FWI-3

Plan Priority 3: Engage Communities

SPO-1 SPO-2 SPO-3 SPO-4
PEA-1 PEA-2 PEA-3

Plan Priority 4: Inform Science-based Decision Making

RES-1 RES-2 RES-3 RES-4
RES-5 RES-6 RES-7 RES-8
ACS-1 ACS-2 ACS-3

Priority Area Actions Detail:

NPS-1: Support Watershed-Based Plan Development and Implementation - The dashboard will support watershed-based plan development and implementation in by making it easier for users to identify issues such as water quality impairments at the local (census tract) scale. Areas that have existing watershed-based plans can also be added as a map layer on the dashboard.

NPS-2: Support Nonpoint Source Education and Outreach Campaigns - The data, maps, and charts included in the dashboard will be an excellent tool for outreach and education, especially for 6th-12th grade students that could access them for independent projects. It will also be useful for groups looking to target outreach and education to specific demographics or geographies, such as areas identified as disadvantaged by the CEJST tool.

PS -2: Support Nonpoint Source Education and Outreach Campaigns- We plan to include data from BCWK's sewer overflow map, which displays City of Houston's sewer releases
<https://bayoucitywaterkeeper.org/justice-in-the-sewers-map/>.

SPO-1: Stewardship Programs and Volunteer Opportunities - The dashboard will help support stewardship programs and volunteer opportunities by making it easier for users to identify new or underserved geographies and communities. A layer could also be added to the dashboard showing where previous and existing outreach and education events have occurred.

SPO-2: Workshops and Events - BCWK will host workshops to gather input from communities who are currently under-represented in the current group of GBRC stakeholders to guide development of the dashboard. HARC will attend workshops to collaborate with community members, community-based organizations, and local governments when possible.

SP-3: Support Regional Initiatives - The dashboard can be used to support regional initiatives like Back the Bay, the Galveston Bay Plan, regional water quality programs, freshwater inflow education and outreach and education programs through GBF and other community-based organizations.

SPO-4: Local Government Outreach - The dashboard will make an excellent tool for local government outreach. Smaller jurisdictional boundaries can easily be added to the dashboard, helping local governments easily see census tracts in their jurisdictions that have water quality or other challenges covered by indicators included in the dashboard.

PEA -1: Key Issue Engagement - The potential indicators cover many key issues that are specifically targeted by the Galveston Bay Plan and the Estuary Resilience Action Plan, including water quality, bacteria contamination of recreational waters, freshwater inflows, flooding, legacy pollutants, habitat loss and conservation, and green infrastructure.

PEA-2: Adult Education - Adults in the lower Galveston Bay watershed from under resourced communities will be invited to workshops to solicit input to guide development of the dashboard.,

ACS-1: Track Ecosystem Health Indicators - A primary source of data for the dashboard will be the Regional Monitoring Database, which already includes some ecosystem health indicators. In addition, the community engagement and workshops to inform the dashboard development will provide crucial feedback on which indicators are most relevant to stakeholders from under resourced communities and new indicators that may be needed to better support with those groups.

ACS-2: Provide Access to Monitoring and Research Data - The Water Priority Index, which will be the central feature of the Community Water Risk Dashboard is a novel way to share monitoring and research data in a way that is accessible to diverse audiences.

ACS-3: Track Galveston Bay Plan Implementation - The dashboard will also provide an easy way to track implementation activities that have a spatial component. For example, a layer with locations of restoration projects and outreach events could be added to the dashboard.

SECTION FOUR: BIL PRIORITIES / FACTORS TO BE USED TO SELECT AWARDS [see 30 TAC § 14.7(6)]

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. This selection criteria provides for the selection of multiple recipients as needed.

Projects must incorporate the implementation of the [Estuary Resilience Action Plan](#) and the [GBEP Equity Strategy](#) (including having physical presence or connection to the targeted communities).

This proposal will integrate the priorities of the Equity Strategy with the Estuary Resilience Action Plan by soliciting feedback from under-represented groups about which environmental indicators, including those related to the Estuary Resilience Action Plan, they would like to see included in the Water Priority Index and Community Water Risk Dashboard. When the index and dashboard are complete, it will be possible to view indicators for social vulnerability with indicators for climate stressors and risks on one integrated dashboard.

Equity Strategy Implementation

One of the primary goals of this project is to connect with and collaborate with under-resourced communities and community-based organizations located in the lower Galveston Bay watershed and create relationships with these stakeholders that will strengthen over time in support of the Galveston Bay Estuary Program's mission. We also plan to include the five supplemental demographic indicators highlighted in the Equity Strategy (% Low Income, % Unemployed, % Limited English Speaking, % Less than High School Education, and Low Life Expectancy) in the Water Priority Index and have a census tracts CEJST status displayed on the dashboard.

Estuary Resilience Action Plan Implementation

The project supports the implementation of the GBEP Estuary Resilience Action Plan by bringing together indicators that address multiple stressors, risks, and potential mitigation strategies to make them easier to understand in spatial and social context. There are several different indicators that address climate stressors on Galveston Bay, as well as data around under-resourced communities, which are often at higher risk from climate stressors like coastal and freshwater flooding, sea level rise and subsidence, increasing population, warming waters and the associated impacts like increased flooding, increased bacteria contamination, and habitat loss. Mitigation strategies that are in place within or around communities, like watershed protection plans, resilience plans, and flood mitigation strategies like green infrastructure can also be included on the dashboard.

Action Priorities

*Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. **Proposals must address one or more of the following actions:***

- Habitat protection & enhancement, including adaptive management
- Projects in support of management measures (e.g., green infrastructure, watershed and human health, water reuse and conservation) and watershed-based plans.
- Projects that support research and monitoring related to the plan priorities of *Ensure Safe Human & Aquatic Life Use* and *Protect and Sustain Living Resources*.

Support Priorities

*Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. **Proposals must address at least one supporting action developed by the subcommittees, but preference will be given to projects that are able to incorporate multiple supporting actions.***

- Engaging K-12 students and/or adults in hands-on, place-based environmental education.
- Diversifying strategic partners with environmental and non-environmental community organizations working within targeted communities.
- Monitoring and research that produces environmental data applicable to future implementation and management decisions and made available to the public.

Stakeholder Priority Detail:

The Community Water Risk Dashboard project will begin with communities: diversifying strategic partners with environmental and non-environmental community organizations working within targeted communities. BCWK has established relationships with under-resourced communities, community-based organizations, and local governments in and around Houston and Galveston Bay. Their experience connecting communities

with policies, resources, and actions will enable them to meet communities where they are and interpret their needs and desires to HARC's data and dashboard development team. HARC has years of experience utilizing monitoring and research data applicable to future implementation and management decisions and making it available to the public. HARC specializes in collaborating with community members and decision-makers and creating accessible, easy to use data visualization tools. Pathways to action will be incorporated into the dashboard, making it useful to individuals as well as community groups who are looking for access to mitigation strategies.

Does the Project work with new, smaller communities/partnerships?

- Yes
- No

One of the project goals is to reach out to under-resourced communities who have not been part of the GBEP dialog previously. HARC and BCWK will identify those communities who are interested in collaborating with the project team on developing the Community Water Risk Dashboard and potentially developing new indicators. In addition to working with new communities to get feedback for the development of the dashboard, the scale at which the data will be aggregated to is the census tract. Census tracts typically have an average population of 4,000, which will allow for very targeted outreach, education, and engagement.

SECTION FIVE: BIL CONSIDERATIONS / FACTORS TO BE USED TO SELECT AWARDS [see 30 TAC § 14.7(6)]

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. This selection criteria provides for the selection of multiple recipients as needed.

Does the Project align with any EPA Areas of Special Interest?

- Reduction in nutrient pollution
- Water reuse and conservation
- Marine litter reduction
- Green infrastructure and resiliency

This proposal seeks to address nutrient pollution, water conservation, and green infrastructure and resiliency by making information about those three areas of special interest easier to access and tie them to actions like watershed protection plans, resiliency plans, flood mitigation activities like green infrastructure, and programs aimed and improving infrastructure.

Build America, Buy America Act (BABA)

Build America, Buy America provisions only apply to awards over \$250,000, and where more than 5% of the award is spent on iron, steel, manufactured products, and construction materials permanently incorporated into construction, maintenance, or repair projects. Under the law, construction materials exclude cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives.

Will the Build America, Buy America Law apply to this application? Yes No
If yes, will you comply with the law or submit a waiver? Yes No
Comments (if any):

NA

Does the Project incorporate Federal Flood Risk Management Standards?

FFRMS - EPA Green Infrastructure Managing Flood Risks

Yes No

It can, if that is requested by stakeholders

Infrastructure Investment and Jobs Act (IIJA) Signage

The recipient will ensure that a sign is placed at construction sites supported under this award displaying EPA logo and the official Building a Better America emblem and must identify the project as a “project funded by President Biden’s Bipartisan Infrastructure Law.” Construction is defined at 40 CFR 33.103 as “erection, alteration, or repair (including dredging, excavating, and painting) of buildings, structures, or other improvements to real property, and activities in response to a release or a threat of a release of a hazardous substance into the environment, or activities to prevent the introduction of a hazardous substance into a water supply.” The sign must be placed at construction sites in an easily visible location that can be directly linked to the work taking place and must be maintained in good condition throughout the construction period.

Does the proposal implement construction subject to signage requirements?

Building A Better America Brand Guide - Using the EPA Seal and Logo

Yes No

Does the Project Address the [Justice 40 Initiative](#)?

NEP's have a target of ensuring that at least 40% of the benefits of investments from the five years of BIL funding flow to disadvantaged communities.

[Climate and Economic Justice Screening Tool \(CEJST\)](#)

Yes No

The under-served communities that HARC and BCWK will engage with will fall into the CEJST census tracts. In addition to the engagement with CEJST disadvantaged communities, the Community Water Risk Dashboard and the Priority Water Index will allow other GBEP stakeholder groups to identify disadvantaged census tracts with specific needs, such as surface water impairments or high flood risk. We anticipate that the type of data integration we are proposing will help GBEP address the Justice 40 Initiative and implement the Bipartisan Infrastructure Law.

Does the Project Address geographies above the 80th percentile as identified in [EJScreen](#) in the following demographics?

Yes No

- % Low income
- % Linguistically isolated
- % Less than high school education
- % Unemployed
- % Low life expectancy

The engagement component of the project will specifically focus on communities within the lower Galveston Bay watershed that fall into the 80th percentile of these demographics according to EJScreen. In addition, indicators for % Low income, % Linguistically isolated, % Less than high school education, % unemployed, and % Low life expectancy will be included in the Water Priority Score, allowing users to easily identify census tracts that fall into these categories AND have other challenges related water quality, habitat quality and access, water infrastructure and affordability, and climate risk and resilience.

SECTION SIX: PROPOSAL DETAILS

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority.

Project Summary:

The objective of this proposal is to develop a composite Water Priority Index and a Community Water Risk Dashboard that integrate diverse water-related data at the census tract level. These tools will help users identify and address water quality, accessibility, and infrastructure challenges, thereby supporting science-based decision-making and facilitating the implementation of the Justice40 Initiative and the Bipartisan Infrastructure Law.

Full Project Description (1,000 words or less):

Many recently developed decision support tools have integrated information about environmental exposures, social vulnerability, and characteristics of the built environment into a composite index.¹⁻¹¹ Composite indices are useful for developing rankings and communicating with stakeholders. The maps produced using composite indices' scores are powerful data visualization tools.¹² Some tools address specific environmental concerns such as tree canopy coverage¹³ or heat vulnerability¹⁴ while others cover broad topics such as environmental health and community resilience.^{15,16} To date, there are no tools in the Galveston Bay region that specifically address water.¹⁷ Our proposal aims to address this gap by creating a composite Water Priority Index and a Community Water Risk Dashboard to identify water quality, accessibility, and infrastructure risks for communities. The volume of available datasets to evaluate community risks associated with water can be overwhelming. A dashboard that brings together indicators that are of the most value to communities would make prioritizing, decision making, and grant writing more accessible, feasible, and likely to be funded.

We propose developing hierarchical composite index, like the CDC's Social Vulnerability Index (SVI),⁵ but for water. A hierarchical composite index is a structured tool used to measure complex, multi-dimensional concepts by aggregating multiple indicators into broader categories known as dimensions, which are then combined to produce an overall score.¹⁸ The score can be used to develop thresholds to identify priority areas for management strategies. The project team identified five dimensions and preliminary indicators for the Water Priority Index (See Table 1). The dimensions are social vulnerability, water quality, habitat quality and access, infrastructure and affordability, and risk and resilience. The initial index development consists of the following steps:

1. Develop a Conceptual Framework
 - Identify the dimensions that are most valuable to communities
 - Identify potential variables that exist or could be developed
2. Data Collection and Standardization
 - Gather data - Use QA/QC sources already aggregated to the census tract level
 - Process data - Some data identified by community groups and stakeholders will likely need to be processed and aggregated to the census tract level
 - Standardize data - Transform indicator data into statistical percentiles to make the indicators more comparable
3. Calculate Dimension Scores and Construct the Composite Index
 - Aggregate the standardized indicators within each dimension
 - Combine dimension scores to calculate the overall index score

The Water Priority Index will be the central feature of the Community Water Risk Dashboard. The dashboard provides a solution for the tradeoff between ease of communication and interpretation of a composite index and the richness and complexity of data covered by many individual indicators. The dashboard will feature a map that shows the index score by census tract and a graph that breaks down the composite index into its individual indicators. This visual representation allows users to easily see how each indicator contributes to the overall score. For example, darker colors on the map and longer bars on the graph correspond to census tracts that have greater water priority challenges or have the highest percentile rank for the individual indicators. Other potential elements to include on the dashboard are a census tracts' CJEST disadvantaged status, which watershed it belongs to, and its priority ranking. The location of restoration projects and outreach activities or other spatial data identified during the engagement process could also be included on the map. A mock-up of the dashboard is included as a supplementary figure (Figure 1). A dashboard that includes similar elements that can be used to illustrate the utility of this type of tool is the Tree Equity Score National Explorer.

The community and stakeholder engagement process will ensure that the index and dashboard incorporate input from watershed users and decision makers. We will partner with Bayou City Waterkeeper (BCWK) to identify groups that have been traditionally left out of the engagement process, thereby diversifying partners and ensuring that perspectives from targeted and under-resourced communities are prioritized. BCWK will also engage other community-based organizations (CBOs) and potential end users to identify how they would utilize the tool.

We propose a two-part process:

1. Pre-development work:

- a. Workshops and/or qualitative interviews to elicit observations about water equity considerations in the GBEP watershed with emphasis on data needs for the Water Priority Index and dashboard.
 - b. Surveys asking respondents to rank the importance of potential indicators and data sets. Indicator options will include the data used in the initial index, data from the regional monitoring database, and data that stakeholders identified during the qualitative phase. These may be paper, digital, or phone surveys, depending on community preference.
2. Mid and post-development work:
- a. Workshops to showcase the dashboard for communities and receive feedback
 - b. Workshops with CBOs, researchers, MUDs, etc. to demonstrate the dashboard and receive feedback
 - c. Travel to conference to promote and share with wider Gulf community

The final index and dashboard will be constructed from indicators vetted during the engagement process. The project team will balance community and stakeholder input with index construction best practices.^{18,19} For example, we will prioritize datasets with more complete coverage and avoid using indicators that are highly correlated with each other ($r \leq 0.8$) to ensure the integrity of the index. The resulting Water Priority Index will reflect a thoughtful integration of diverse perspectives and data sources, producing a tool that is both scientifically sound and deeply relevant to the communities it serves.

This proposal advances the priorities of the GBEP CCMP by creating a Community Water Risk Dashboard that integrates diverse water-related data into the Water Priority Index at the census tract level. This tool will support science-based decision making by allowing users to easily identify water quality, water equity, infrastructure, and resilience challenges. By incorporating CEJST data, the dashboard will facilitate implementation of the Justice40 initiative and the Bipartisan Infrastructure Law. The Water Priority Index and the Community Water Risk Dashboard can be used as a model for other Estuary Programs and water management organizations.

Latitude/Longitude (Optional):

[degrees, minutes, and seconds format]

Location:

Lower Galveston Bay watershed

Other Plans Implemented:

NA

Projects Map

Attached

Supplemental Photos/Graphics (Optional):

Attached

SECTION SEVEN: BUDGET DETAILS

Grant Payments [see 30 TAC § 14.7(12)]: All grant payments will be made on the basis of reimbursement for allowable costs (as defined in 2 CFR Part 200, Subpart E). All payments for awarded proposals will be reimbursements of allowable costs incurred after both parties have entered (signed) a grant agreement for the project.

Budget. Authorized budgeted expenditures for work performed are as follows:

Budget Category	Cost for Work to be Performed
Salary / Wages	\$133,912.00
Fringe Benefits (48%)¹	\$64,278.00
Travel	\$7,533.00
Supplies	\$0.00
Equipment	\$0.00
Contractual	\$300,000.00
Construction	\$0.00
Other	\$33,825.00
Total Direct Cost	\$539,548.00
Indirect Costs	\$108,289.00
Total	\$647,837.00

Indirect Cost Agreement

Please note: If using a rate different from your entity Indirect Cost Agreement; a letter of exemption from the appropriate authority must be provided with the application, or a statement must be included certifying that the recipient has elected to be reimbursed for an amount less than its total indirect costs, that unreimbursed indirect costs are part of the recipient’s contribution to the success of the project, and that the recipient will pay for all unreimbursed indirect costs using funds available to it for that purpose.

Indirect Cost Agreement Attached

Indirect Cost Reimbursable Rate. The reimbursable rate for this Contract is 40% of (check one):

- Salary and fringe benefits
- Modified total direct costs
- Other direct costs base

If other direct cost base, identify:

This rate is less than or equal to (check one):

- Predetermined Rate**— an indirect rate that is negotiated between the Performing Party and its federal cognizant agency and supported by a current Negotiated Indirect Cost Rate Agreement (NICRA) letter. A Predetermined Rate is not subject to adjustment except as provided by 2 Code of Federal Regulations (CFR) § 200.411.
- De Minimis Rate**— if Performing Party does not have a current negotiated indirect rate, Performing Party may use a standard rate of ten percent of Modified Total Direct Costs (MTDC) in lieu of determining

¹ If fringe is not a single rate, please attach calculation or explanation as an appendix.

the actual indirect costs of the service. Costs must be consistently charged as either indirect or direct costs.

Provisional Rate— an experienced-based rate agreed to by Performing Party and TCEQ in the absence of a NICRA rate negotiated with the applicable federal cognizant agency.

Partial Reimbursement Rate— a reimbursement rate agreed to between TCEQ and Performing Party that is less than the rate authorized under TxGMS or, where applicable, 2 CFR Part 200. Performing Party contributes all of its unreimbursed indirect costs to the successful performance of the project or projects funded under this Contract, in accordance with Article 9 of this section.

Other:

Other. If Budget Category “Other” is greater than \$25,000 or more than 10% of total Contract budget, identify the main constituents:

IT & Facilities fee, calculated as \$7.50/manhour

GTRI/HARC maintains an indirect cost rate with our cognizant agency, U.S. Department of Energy. Our current negotiated indirect rate agreement (NICRA) extends through 2026 and provides for a predetermined IDC rate of 53% of modified total direct costs (MTC). A copy of that agreement will be supplied with this proposal. For this project, however, GTRI/HARC has proposed to voluntarily limit its indirect cost reimbursement to 40% of MTDC in order to maximize the amount of funds available for direct costs. We reserve the right to propose our full approved IDC rate for future applications.

SECTION EIGHT: CONTRACT REQUIREMENT [see 30 TAC § 14.7(15)]:

- By submitting this Project Proposal, you acknowledge that, if you become a successful grant recipient selected for a grant award, you must enter into a signed grant agreement or contract with TCEQ following the announcement of that award.

SECTION NINE: ACKNOWLEDGMENTS

Please read and understand the following:

- By submitting this Project Proposal, you acknowledge that information on how grant payments will be made is contained in the Budget Details section describing direct and possibly indirect costs. You further acknowledge that grant payments will be reimbursements on the basis of allowable costs incurred and that selected recipients will receive contract documents addressing allowable costs, unallowable costs, and reimbursement.
- By submitting this Project Proposal, you acknowledge your understanding that Project Proposals do not require matching funds and that a TCEQ director does not need to adjust or waive any matching funds requirement.
- By submitting this Project Proposal, you acknowledge that, if GBEP elects to hold a pre-submittal meeting relating to this Project Proposal, GBEP will notify you of the meeting’s time and location indicating whether attendance is mandatory.

SECTION TEN: QUESTIONS AND PRE-SUBMITTAL MEETINGS [see 30 TAC § 14.7(13) and 30 TAC § 14.7(14)]:

- There are no pre-submittal meetings scheduled.
- For requests for additional, pre-submittal information [see 30 TAC § 14.7(13)], please contact gbep@tceq.texas.gov.

SECTION ELEVEN: ADDITIONAL INSTRUCTIONS

In submitting your Project Proposal, please refer and adhere to the following instructions and guidelines concerning materials and information required to be submitted by potential grant recipients:

- GBEP intends to accept only complete Projected Proposals in a layout and format constituting a filled version of this proposal document with all applicable sections therein addressed; however, GBEP may,

in its sole discretion, consider and accept nonconforming Project Proposals in the best interest of the state.

- Unless otherwise specified by GBEP, formal signatures are not required on Project Proposals.
- Unless otherwise communicated or implied, GBEP requires 1 (one) completed copy of your Project Proposal.
- Project Proposals must be received electronically, through the email address listed on this page, by the deadline listed on both this page and the first page of this Project Proposal document.

Please Submit Project Proposals (Microsoft Word Only – No PDFs) by **August 26, 2024** to gbep@tceq.texas.gov.

Appendices:

Figure 1. Mock-up of Community Water Risk Dashboard with the Water Priorities Score visible as colors on map. Darker colors on the map and longer bars on the graph correspond to census tracts that have greater water priority challenges or have the highest percentile rank for the individual indicators. The location of restoration projects and outreach activities or other spatial data identified during the engagement process could also be included on the map. Indicators listed as examples will be changed according to stakeholder input.

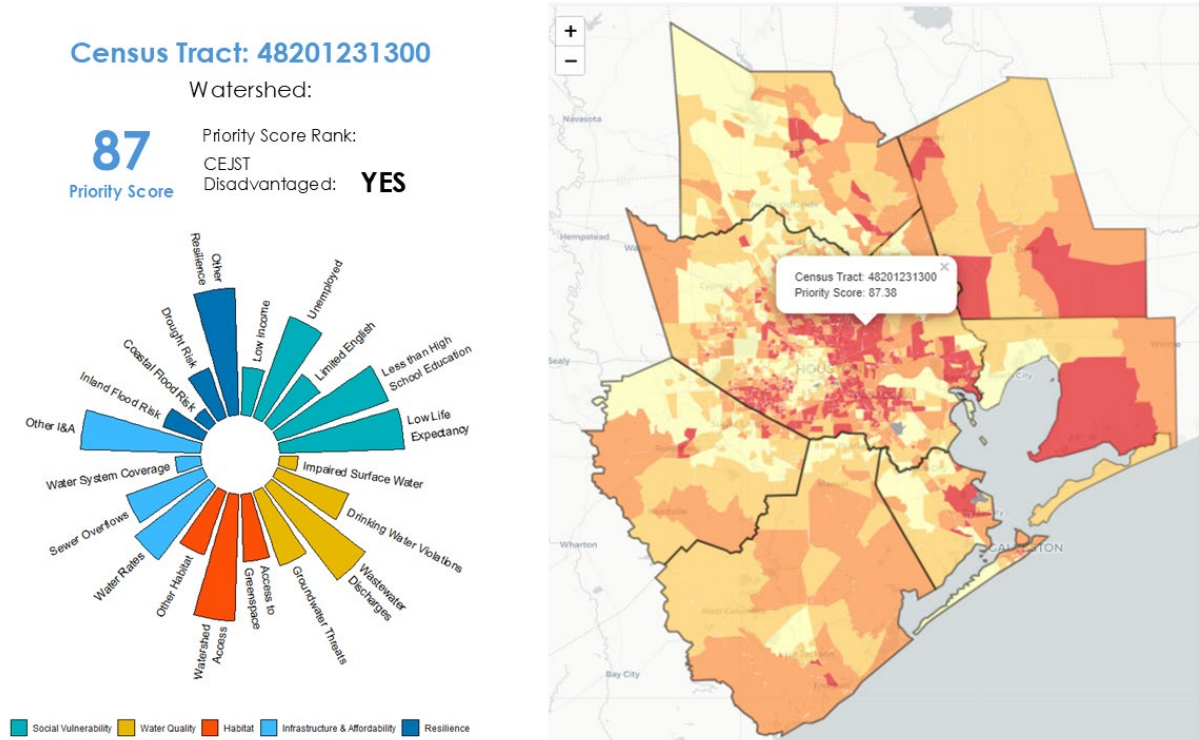


Table 1. Categories of potential indicators for the Water Equity Index (**bold = existing; italics = needs to be developed**) and other resources for the Community Water Risk Dashboard

Social Vulnerability (use the 5 included in the GBEP Equity strategy to start with)	
	Low Income (EJScreen)
	Unemployment (EJScreen)
	Less than High School Education (EJScreen)
	Limited English (EJScreen)
Water Quality	
	Low Life Expectancy (EJScreen)
	Impaired Surface Water (indicator in CDC's Environmental Justice Index)
	Drinking Water Non-compliance (indicator in EJScreen 2024 update)
	Wastewater Discharges (EJScreen)
	Groundwater Threats (EJScreen leaking underground storage threat indicator)
	<i>Other Water Quality Indicator (developed with community input)</i>
Habitat	
	Access to Green Space (indicator in CDC's Environmental Justice Index)
	<i>Watershed Access (developed with community input)</i>
	<i>Other Habitat Quality or Access Indicator (developed with community input)</i>
Infrastructure & Affordability	
	<i>Water rates (developed with community input)</i>
	<i>Sewer Overflows (developed with community input)</i>
	<i>Percent served by Public Water Supply (developed with community input)</i>
	<i>Other Infrastructure & Affordability Indicator (developed with community input)</i>
Risk & Resilience	
	Flood Risk (NOAA NCEI Risk and Vulnerability Mapping)
	Drought Risk (NOAA NCEI Risk and Vulnerability Mapping)
	Tropical Cyclone Risk (NOAA NCEI Risk and Vulnerability Mapping)
	Severe Storm Risk (NOAA NCEI Risk and Vulnerability Mapping)
	<i>Other Risk Indicator (to be developed with community feedback)</i>
Other resources that could be included on the Community Water Risk Dashboard	
	Watershed Protection Plan
	Community Resilience Plan
	Water quality improvement
	Location of GBEP projects
	CEJST disadvantaged status

References

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3. Messer LC, Jagai JS, Rappazzo KM, Lobdell DT. Construction of an environmental quality index for public health research. *Environmental Health*. 2014;13(1):39.
4. Burwell-Naney K, Wilson SM, He X, Sapkota A, Puett R. Development of a cumulative stressors and resiliency index to examine environmental health risk: A South Carolina assessment. *Environmental Justice*. 2018;11(4):165-75.
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August 22, 2024

Lisa Marshall
Program Manager, Galveston Bay Estuary Program
17041 El Camino Real, Suite 210
Houston, TX 77058

RE: GBEP BIL Proposal: Developing a Community Water Risk Dashboard

Dear Ms. Marshal:

I am writing this letter on behalf of Bayou City Waterkeeper (BCWK), expressing our commitment to actively collaborate and participate in Houston Advanced Research Center's (HARC) proposal, "Developing a Community Water Risk Dashboard to integrate environmental and social indicators for the lower Galveston Bay watershed" submitted for the GBEP BIL funding.

BCWK's mission is to protect the waters and people of the Houston region through bold legal action, community science, and creative, grassroots policy to further justice, health, and safety for our region. BCWK is actively involved in collaboration, outreach, and education in Houston and the watersheds of Galveston Bay. Our experience has shown us that the best way for us to support regional residents in taking action toward healthier communities and a healthier Galveston Bay is to collaborate with them and empower them with information and tools that meet them where they are and connect them to actions like establishing goals and programs that work for them within their communities.

BCWK is looking forward to working with HARC on creating an integrative dashboard that has the capacity to connect communities with local community based organizations, governments, policy makers, and funding opportunities. Our extensive network of community partners and understanding of local water issues will be valuable in ensuring the dashboard is both relevant and user-friendly for the communities it aims to serve.

We commit to participating in the project by: 1) Facilitating community engagement sessions to gather input on dashboard design and use; 2) Providing insights on local water quality concerns and community priorities; and 3) Assisting in the interpretation and contextualization of data for community use.

We look forward to the opportunity to contribute to the collective efforts aimed at enhancing climate resilience in the Gulf Coast region. If you require any additional information or clarification, please do not hesitate to contact us at 832-713-3727 or ayanna@bayoucitywaterkeeper.org if you have any further questions.

A handwritten signature in black ink, appearing to read "Ayanna Jolivet Mccloud".

Ayanna Jolivet Mccloud

Galveston Bay Estuary Program Federal Bipartisan Infrastructure Law (BIL) Project Proposal – Federal Fiscal 2025



A PROGRAM OF TCEQ

Please complete the proposal form and submit to gbep@tceq.texas.gov by **August 26, 2024**. No late submittals will be considered for funding.

This Call for Project Proposals complies with 30 Texas Administrative Code (TAC) § 14.7, which lays out requirements for a competitive solicitation by TCEQ for grant awards. For convenience, specific citations to 30 TAC § 14.7 are identified in the text.

SECTION ONE: INTRODUCTION

Purpose [required by 30 TAC § 14.7(1)]: The purpose of the proposed grant from the Galveston Bay Estuary Program (GBEP), a program of the Texas Commission on Environmental Quality (TCEQ), is to implement *The Galveston Bay Plan, 2nd Edition* (the Plan), a comprehensive conservation and management plan falling under Section 320, of the Federal Water Pollution Control Act (33 U.S.C. Section 1330), for a designated national estuary in the State of Texas.

Objective and Allowable Activities [see 30 TAC § 14.7(4)]: The objective of this grant is to implement the GBEP stakeholder developed priorities for federal fiscal 2025 (FFY2025 Priority Area Actions) that were developed by the GBEP Budget and Priorities subcommittee for federal fiscal 2025 at the July 2024 meeting. Any proposal implementing the Plan may be submitted, but proposals implementing the FFY2025 Priority Area Actions will be considered above others.

Authority [see 30 TAC § 14.7(2)]: Grants issued by GBEP under this solicitation are authorized by: the Federal Water Pollution Control Act (Clean Water Act) § 320 (33 UNITED STATES CODE § 1330), commonly referred to as the National Estuary Program; TEX. WATER CODE § 5.124; and 30 TAC ch. 14.

Match Requirement [see 30 TAC § 14.7(10) and 30 TAC § 14.7(11)]: No matching funds are required. Therefore, there is no need to adjust or waive any matching funds requirement.

Multiple Awards [see 30 TAC § 14.7(7)]: GBEP anticipates awarding funds for multiple proposals. GBEP intends to award grants to that combination of proposals which best implements the Plan, factoring in all criteria identified in this Call for Project Proposals, the availability of funds, and the most effective division of funds between awards.

SECTION TWO: SUBMITTAL – GENERAL INFORMATION

Subcommittee:

Houston Parks Board

Project Name:

Houston Parks Board Comprehensive Conservation Plan

Project Previously Funded by GBEP? Yes No

Lead Implementer / Categories of Eligible Recipients [see 30 TAC § 14.7(3)]:

The lead implementer must be in one of the following categories of eligible recipients. Please indicate which category applies to your entity. If the proposing party is not already paired with a lead implementer in one of the categories listed below, the proposing party will need to partner with an eligible recipient in one of these categories to be selected for funding. Please reach out to GBEP staff with any questions.

- Federal, State, or Local Government Council of Government Public ISDs or Universities
 Nonprofit Other*

[Please also indicate entity category (state, local, public university, nonprofit, etc.)]

[Unique Entity ID \(UEI\) Number:](#)

AND:

G319BV5MFZX3

74-1860046

VIN or Tax ID:

Contact Information:

Project Representative Name	Marissa Llosa
Project Representative Phone	713-942-8500
Project Representative Email	marissallosa@houstonparksboard.org

Amount Requested from GBEP (\$150,000 minimum):

\$150,000

Federal State No Preference

Is the project scalable?

Amount Requested per year (if applicable):

FY 2026 (09/01/2025-08/31/2026)	\$150,000
FY 2027 (09/01/2026-05/31/2027)	\$0.00
FY 2028 (09/01/2027-05/31/2028)	\$0.00
Total	\$0.00

Project Dates / Duration (beginning no earlier than September 1, 2025 - ending no later than May 31, 2028) [see 30 TAC § 14.7(5)]:

September 1, 2025- August 31, 2026

Project Urgency:

This project is not contingent on other funding and can be completed withing the funding cycle of September 1, 2025-August 31, 2026.

Total Project Cost (including Leveraging Amounts, if any; provide leveraging information where indicated below):

\$150,000

Is this an estimate?

Leveraging (in-kind and/or cash):

[Please indicate source, amount, and status (secured, potential, etc.)]

In-kind funds will be leveraged for the labor of Conservation Technicians, the Conservation Coordinator, the Conservation Manager, and the Conservation and Maintenance Director. The funding for these positions comes from the Operating Account of the Economic Development Agreement.

Partners* and Their Roles:

The following partners will be engaged to provide historical, programmatic, and technical review during this project, and to assist with implementation of the comprehensive plan. Partners may include: TPWD, HPARD, HCFCD, GBEP, Galveston Bay Foundation, Houston Audubon, etc.

***If partners are subgrantees completing work reimbursable under GBEP funding, a letter of commitment from the partner must be submitted under the application.**

SECTION THREE: GALVESTON BAY PLAN, 2ND EDITION IMPLEMENTATION

Grant recipient activities, allowed or required to be performed, must implement Galveston Bay Plan 2nd Edition Priority Area Actions. All proposals must implement these actions. This selection criterion provides for the selection of multiple recipients as needed.

Galveston Bay Plan, 2nd Edition References

<https://gbep.texas.gov/ensure-safe-human-and-aquatic-life-use/>

<https://gbep.texas.gov/protect-and-sustain-living-resources/>

<https://gbep.texas.gov/engage-communities/>

<https://gbep.texas.gov/inform-science-based-decision-making/>

Galveston Bay Plan Priority Area Actions Addressed:

Plan Priority 1: Ensure Safe Human and Aquatic Life Use

- NPS-1 NPS-2 NPS-3 NPS-4
PS-1 PS-2 PS-3
PHA-1 PHA-2 PHA-3 PHA-4 PHA-5

Plan Priority 2: Protect and Sustain Living Resources

- HC-1 HC-2 HC-3
SC-1 SC-2
FWI-1 FWI-2 FWI-3

Plan Priority 3: Engage Communities

- SPO-1 SPO-2 SPO-3 SPO-4
PEA-1 PEA-2 PEA-3

Plan Priority 4: Inform Science-based Decision Making

- RES-1 RES-2 RES-3 RES-4
RES-5 RES-6 RES-7 RES-8
ACS-1 ACS-2 ACS-3

Priority Area Actions Detail:

The creation of the Houston Parks Board Comprehensive Conservation Plan (CCP) will serve as a fundamental guidance document for the HPB’s conservation program—providing a specific roadmap for conservation projects. This plan will assess and identify all potential grassland, wetland, and woodland habitat creation/restoration sites along the Bayou Greenways (BG). The Bayou Greenways initiative, which began in 2012 to create a connected system of linear parks and trails throughout Houston, covers over 150 miles of trails with 3,000 acres of greenspace, and exemplifies Houston Parks Board’s mission to expand, improve, and protect parks and greenspaces. The BG not only enhances recreation and connectivity but also contributes significantly to the ecological and economic vitality of the region, aligning with GBEP’s broader environmental goals.

1. Watershed-Based Plan Development and Implementation

The CCP will identify and outline conservation sites with the highest ecological value associated with BG and along our major waterways. The planning and mapping effort will directly support watershed-based plans (WBPs) like the Galveston Bay Plan. By creating/restoring natural habitats that filter pollutants and manage stormwater, the CCP will provide the foundational tool to mitigate non-point source (NPS) pollution, a key concern for GBEP. This effort is particularly significant in parklands and/or greenspaces adjacent to our impaired water bodies.

2. Land Acquisition

Although HPB is not planning on acquiring land as part of this effort, the plan would assess, restore, and conserve land acquired by HPB for the BG system and other lands along the major bayous. HPB does anticipate acquiring more land as it continues to expand the Bayou Greenways system, and the CCP will serve as a resource for best practices in conservation work conducted on that land.

3. Habitat Restoration

The CCP will include habitat restoration initiatives along BG and major bayous, focusing on restoring native vegetation and improving ecological functions. These bayous are located in the upper part of the watershed and directly impact downstream waters, supporting GBEP's mission to restore the environmental health of the Galveston Bay watershed.

4. Native and Invasive Species Management

The CCP will be crucial in sustaining native species and managing invasive species within and along BG parks and greenspaces. By creating refuges for wildlife and reducing invasive species, the CCP enhances biodiversity and supports GBEP's goals of sustaining native species and improving ecosystem health.

5. Water Conservation and Education

The CCP will promote water conservation by restoring native vegetation typically adapted to our local climate (i.e., drought-tolerant). This aligns with GBEP's efforts to improve the upper part of the watershed, which impacts Galveston Bay. This is critical for sustaining the bay's productivity and ecosystem services.

6. Community Stewardship and Education

The CCP will engage the community in the planning process to understand what the local communities consider important and valuable in a conservation plan. The stakeholder process will further promote future stewardship activities, foster a sense of ownership for local parks, and directly support GBEP's goal of enhancing long-term stewardship through public engagement.

7. Tracking and Collaboration

The CCP will contribute data and outcomes related to its conservation efforts to GBEP's implementation tracking system. The CCP will identify and track all the habitats created/restored/protected within the BG system and share that info with HPB's Galveston partners. By aligning its goals with the Galveston Bay Plan, the CCP helps GBEP monitor the success of regional conservation initiatives, ensuring both programs work towards shared environmental objectives.

In summary, the Houston Parks Board CCP will complement GBEP's priorities through its focus on land acquisition, habitat restoration, public education, and community engagement, all contributing to the health and sustainability of the Galveston Bay watershed.

SECTION FOUR: BIL PRIORITIES / FACTORS TO BE USED TO SELECT AWARDS [see 30 TAC § 14.7(6)]

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. This selection criteria provides for the selection of multiple recipients as needed.

Projects must incorporate the implementation of the [Estuary Resilience Action Plan](#) and the [GBEP Equity Strategy](#) (including having physical presence or connection to the targeted communities).

The project to design the Houston Parks Board Comprehensive Conservation Plan (CCP) aligns closely with the Estuary Resilience Action Plan and the Galveston Bay Estuary Program (GBEP) Equity Strategy through its multifaceted approach to environmental conservation, community engagement, and equity integration.

Ecosystem Protection and Enhancement:

The CCP will emphasize the protection and restoration of natural habitats within and along the Bayou Greenways' parks and greenspaces, which contributes directly to the goals of the Estuary Resilience Action

Plan. By focusing on habitat conservation and green infrastructure—both of which can indirectly improve water quality--the plan supports the resilience of the Galveston Bay estuary. The CCP's strategies for restoring grassland, wetlands and woodlands align with the Estuary Resilience Action Plan's objectives to enhance natural buffers against environmental stressors such as flooding and erosion.

Green Infrastructure:

The plan will incorporate green infrastructure solutions such as the identification of specific locations for creating wetland swales to improve stormwater management. These measures mitigate nonpoint source pollution and enhance estuarine resilience, addressing a key aspect of the Estuary Resilience Action Plan.

Climate Resilience:

The CCP will include actions to increase the climate resilience of Bayou Greenways associated parks, trails, and greenspace by enhancing ecological functions and biodiversity. It will specifically rank locations that provide heat mitigation, increased biodiversity, and habitat connectivity as high priorities. These efforts are consistent with the Estuary Resilience Action Plan's focus on adapting to climate change impacts and ensuring the long-term health of estuarine ecosystems.

Alignment with the GBEP Equity Strategy

Equitable Distribution of Resources:

The GBEP Equity Strategy aims to invest in under-resourced communities (URCs) and ensure that these communities benefit from environmental projects. The CCP supports this goal by identifying and prioritizing conservation measures in historically underserved areas. By installing habitats, we are increasing and improving access to greenspace to these low-income neighborhoods, thereby addressing equity concerns and contributing to a more inclusive approach to conservation.

Community Engagement:

The CCP will strongly emphasize engaging local communities, including URCs, in the planning and implementation processes. This aligns with GBEP's focus on meaningful partnerships and stakeholder involvement. The plan proposes regular community consultations and/or workshops, and feedback mechanisms to ensure that conservation measures reflect the needs and priorities of diverse populations.

Addressing Environmental Justice:

The CCP aligns with the GBEP Equity Strategy's objectives by prioritizing projects that benefit communities with high pollution burdens and low water quality. The plan's targeted action of creating new habitats (i.e. grassland buffers, wetlands, woodlands) which can act to intercept pollutants prior to entering receiving waters, also aims to mitigate environmental inequities and enhance public health outcomes in these areas, thus supporting the broader goals of environmental justice.

Monitoring and Evaluation:

The CCP will include a robust framework for monitoring and evaluating the impacts of conservation measures on both ecological and community health. This aligns with GBEP's approach to tracking the distribution of funds and measuring the benefits to URCs. The plan's commitment to assessing the effectiveness of its initiatives ensures accountability and continuous improvement in achieving equity goals.

Action Priorities

*Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. **Proposals must address one or more of the following actions:***

- Habitat protection & enhancement, including adaptive management

- Projects in support of management measures (e.g., green infrastructure, watershed and human health, water reuse and conservation) and watershed-based plans.
- Projects that support research and monitoring related to the plan priorities of *Ensure Safe Human & Aquatic Life Use* and *Protect and Sustain Living Resources*.

Support Priorities

*Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. **Proposals must address at least one supporting action developed by the subcommittees, but preference will be given to projects that are able to incorporate multiple supporting actions.***

- Engaging K-12 students and/or adults in hands-on, place-based environmental education.
- Diversifying strategic partners with environmental and non-environmental community organizations working within targeted communities.
- Monitoring and research that produces environmental data applicable to future implementation and management decisions and made available to the public.

Stakeholder Priority Detail:

1. Habitat Protection & Enhancement, Including Adaptive Management

Habitat Restoration and Enhancement:
 The CCP will be used to identify habitat restoration projects such as reforestation, wetland restoration, and native plantings. These efforts will enhance biodiversity, stabilize soil, and improve ecosystem services. The plan will incorporate adaptive management principles into the planning of each conservation site. This will ensure that each potential conservation project will remain effective and responsive to environmental changes.

2. Projects in Support of Management Measures

Green Infrastructure:
 The CCP will prioritize the creation/restoration of habitats such as rain gardens and bioswales. These projects will manage stormwater runoff, reduce pollution, and improve watershed health. It will also enhance human health indirectly with the reduction in pollutant load received by adjacent bayous and waterways."
 The CCP will support watershed-based planning for the creation and restoration of habitat. It will align with comprehensive watershed management strategies to achieve long-term conservation goals.

3. Monitoring and Research

The CCP will include regular assessments of habitat health and biodiversity. This monitoring will inform future management decisions and ensure the effectiveness of conservation actions.
 The plan will support research initiatives that generate valuable environmental data. Findings will be shared with the public through reports, online platforms, and community outreach, promoting transparency and engagement.
 The CCP will ensure that management decisions are based on accurate, up-to-date information. This approach will facilitate adaptive management and continuous improvement, using actionable data for future planning.

Does the Project work with new, smaller communities/partnerships?

- Yes
- No

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. This selection criteria provides for the selection of multiple recipients as needed.

Does the Project align with any EPA Areas of Special Interest?

- Reduction in nutrient pollution
- Water reuse and conservation
- Marine litter reduction
- Green infrastructure and resiliency

The proposed CCP will align with EPA Areas of Special Interest by assessing all green infrastructure projects such as bioswales and other native habitats to enhance resiliency and manage stormwater. Our habitats will act as interceptors for NPS pollution prior to entering adjacent waterways, thereby offering nutrient reduction.

Build America, Buy America Act (BABA)

Build America, Buy America provisions only apply to awards over \$250,000, and where more than 5% of the award is spent on iron, steel, manufactured products, and construction materials permanently incorporated into construction, maintenance, or repair projects. Under the law, construction materials exclude cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives.

Will the Build America, Buy America Law apply to this application? Yes No X
If yes, will you comply with the law or submit a waiver? Yes No
Comments (if any):

N/A

Does the Project incorporate Federal Flood Risk Management Standards?

FFRMS - EPA Green Infrastructure Managing Flood Risks

Yes No

Yes, the CCP will align with the EPA's Federal Flood Risk Management Standards (FERMS) by integrating flood resilience principles into its green infrastructure projects, such as wetlands restoration and floodplain management. The plan will use flood resilience as a ranking category to determine priority project sites. By using this as a criterion, the plan will enhance the conservation area's ability to manage and mitigate flood risks.

These measures will enhance the BG system's ability to manage and mitigate flood risks, aligning with FERMS' goal of reducing flood vulnerabilities and improving overall flood resilience.

Infrastructure Investment and Jobs Act (IIJA) Signage

The recipient will ensure that a sign is placed at construction sites supported under this award displaying EPA logo and the official Building a Better America emblem and must identify the project as a "project funded by President Biden's Bipartisan Infrastructure Law." Construction is defined at 40 CFR 33.103 as "erection, alteration, or repair (including dredging, excavating, and painting) of buildings, structures, or other improvements to real property, and activities in response to a release or a threat of a release of a hazardous substance into the environment, or activities to prevent the introduction of a hazardous substance into a water supply." The sign must be placed at construction sites in an easily visible location that can be directly linked to the work taking place and must be maintained in good condition throughout the construction period.

Does the proposal implement construction subject to signage requirements?

[Building A Better America Brand Guide – Using the EPA Seal and Logo](#)

Yes No

Does the Project Address the [Justice 40 Initiative](#)?

NEP's have a target of ensuring that at least 40% of the benefits of investments from the five years of BIL funding flow to disadvantaged communities.

[Climate and Economic Justice Screening Tool \(CEJST\)](#)

Yes No

Yes, the CCP will align with the Justice40 Initiative by focusing on high-priority conservation projects in disadvantaged communities. By identifying and prioritizing projects along the nine bayous of the Bayou Greenways system that benefit these communities, the CCP will ensure that investments in climate resilience and green infrastructure directly support areas most affected by pollution and underinvestment.

Does the Project Address geographies above the 80th percentile as identified in [EJScreen](#) in the following demographics?

Yes No

- % Low income
- % Linguistically isolated
- % Less than high school education
- % Unemployed
- % Low life expectancy

The Comprehensive Conservation Plan will be implemented on all Houston Parks Board work sites, especially along the Bayou Greenways system. The linear park and trail system touches nine bayous throughout the city. Each bayou runs through areas that score above the 80th percentile on each of these indicators. The trails along Halls and Greens Bayou in northeast Houston are in communities that are above the 80th percentile on all five indicators.

SECTION SIX: PROPOSAL DETAILS

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority.

Project Summary:

The Comprehensive Conservation Plan aims to inventory, assess, and prioritize conservation and restoration opportunities within the Bayou Greenways system, enhancing key ecological functions such as flood mitigation, biodiversity, and habitat connectivity. The plan will enable Houston Parks Board to strategically allocate resources and improve ecosystem resilience across the region by developing a prioritized list of project sites and providing initial design guidance.

Full Project Description (1,000 words or less):

Scope of Work for the Houston Parks Board Comprehensive Conservation Plan

Introduction

In 1912, urban planner Arthur Comey observed that “the backbone of a park system for Houston will naturally be its bayou or creek valleys, which furnish opportunities for parks of unusual value within a comparatively short distance of most residential areas.” Fast forward to 2012, and this vision was brought to life with the creation of Bayou Greenways (BG), an expansive network of linear parks and trails threading through the Houston Region. This green spine spans over 150 miles of trails and 3,000+ acres of greenspace. The system connects communities and is a crucial component of Houston’s environmental resilience and conservation efforts.

Objective

The proposed Houston Parks Board Comprehensive Conservation Plan (CCP) aims to develop a strategic framework that integrates the BG system’s ecological, recreational, and community benefits into a broader effort to conserve and enhance the natural resources of the Galveston Bay watershed. The CCP will align with the Galveston Bay Estuary Program (GBEP) priorities and actions outlined in the Galveston Bay Plan, ensuring that HPB’s initiatives contribute to the long-term health and sustainability of the region’s ecosystems.

1. Habitat and Species Conservation

The CCP will focus on habitat conservation (HC) and species conservation (SC) along the BG, aligning with the GBEP’s goals of protecting and sustaining living resources. The plan will identify and prioritize critical habitats within the BG, which are essential for conserving native species populations (PSGNS). By maintaining and enhancing these green corridors, the CCP will ensure that these areas continue to provide vital ecological functions, support biodiversity, and contribute to the overall health of the Galveston Bay watershed.

2. Science-Based Decision Making

The CCP will be informed by science-based decision-making (IS), a priority of the GBEP. This will involve collaborating with partners to identify relevant ranking criteria to determine the priority of habitat creation/restoration. These criteria will then be used to rank all conservation sites and determine those locations with the highest benefits. Each site will be evaluated, and the data collected will guide conservation efforts, ensuring that the actions taken under the CCP are grounded in the latest scientific research and contribute effectively to the resilience of the Galveston Bay ecosystem (ISG).

3. Addressing Environmental Stressors

The CCP will address critical environmental stressors identified in the GBP, such as increasing drought (ID), and changes to land use and infrastructure (LU). The BG will play a key role in mitigating these stressors by providing a list of shovel-ready conservation restoration and/or creation projects that potentially provide natural flood management, urban green cover, and reduce the impacts of inland flooding (IF) and nuisance flooding (NF).

4. Community Engagement and Education

Engaging communities (EC) is a critical component of the CCP. The BG will serve as a platform for public education and awareness (PEA), fostering a sense of stewardship among residents and encouraging community involvement in conservation efforts. The CCP will include strategies for increasing public awareness of the ecological value of the BG and promoting participation in conservation activities. By connecting people with nature, the CCP, through the stakeholder process, will help build a more environmentally conscious and engaged community, contributing to the long-term sustainability of the Galveston Bay watershed.

5. Ensuring Safe Human and Aquatic Life Use

The CCP will prioritize ensuring safe human and aquatic life use (SA) within the BG by utilizing nutrient load reduction as a project site selection criteria) This aligns with the GBEP’s goals (SAGWNPS) for reduction in NPS and PS pollution. The BG will be managed to reduce pollution by habitat creation/restoration, ensuring that these green spaces remain safe and healthy for both residents and wildlife.

6. Enhancing Climate Resilience

Climate resilience is a central focus of the CCP. The BG will be leveraged to enhance Houston’s resilience to climate change impacts, such as extreme weather events (EE) and warmer summers (WS). The CCP will

include strategies for using the BG as natural buffers against flooding, reducing the urban heat island effect, and supporting the city's overall climate adaptation efforts. This will align with the goals of the Galveston Bay Estuary Resilience Action Plan and ensure that Houston's natural and built environments are better prepared to withstand the challenges posed by a changing climate.

Conclusion

The Houston Parks Board Comprehensive Conservation Plan will integrate the ecological, recreational, and community benefits of the Bayou Greenways into a broader conservation strategy with the guidance to build priority habitats which support the long-term health and sustainability of the Galveston Bay watershed. By aligning with the Galveston Bay Plan, the CCP will ensure that the BG system contributes to the conservation of vital habitats, the engagement of communities, and the resilience of the region's natural resources. This plan will recommend creation/restoration/enhancement projects, rank their priority for implementation, and provide necessary guidance for management/maintenance in line with our Best Management Practices. It will establish HPB as a leader in urban conservation, ensuring that Bayou Greenways green spaces continue providing environmental, economic, and social benefits for future generations.

Latitude/Longitude (Optional):

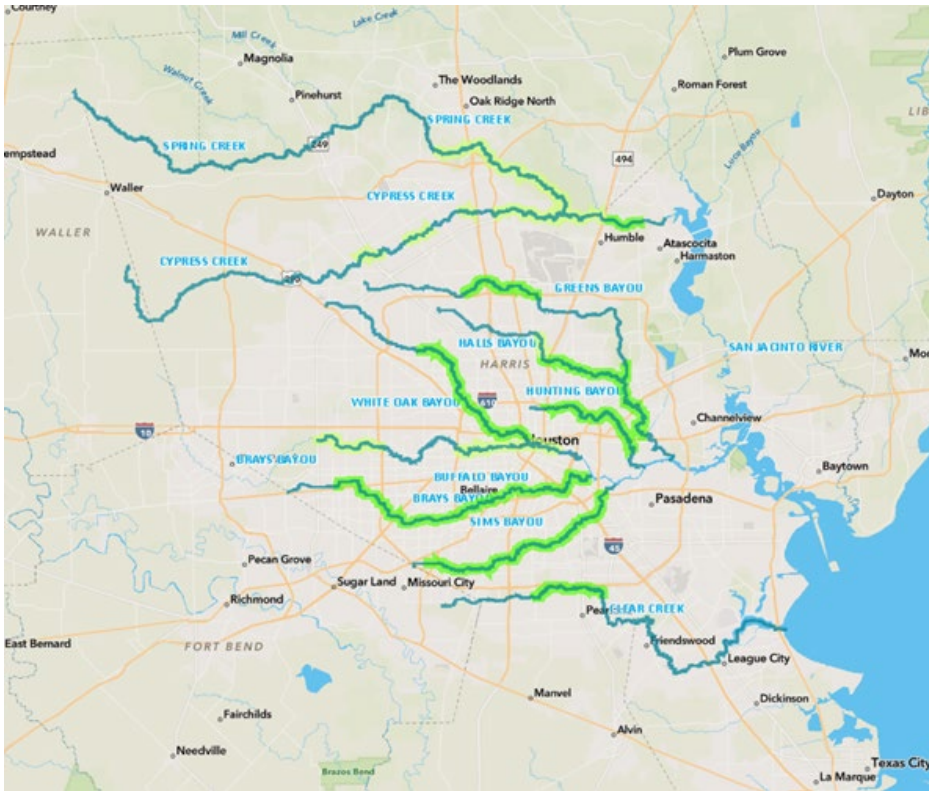
Location:

All parks and greenspace associated with the Bayou Greenways system in the Houston region.

Other Plans Implemented:

[Texas Coastal Management Plan, Texas Wetland Conservation Plan, GCJV Conservation Plans, etc.]

Projects Map



Supplemental Photos/Graphics (Optional):

[\[Insert Here or Attach as an Appendix\]](#)

SECTION SEVEN: BUDGET DETAILS

Grant Payments [see 30 TAC § 14.7(12)]: All grant payments will be made on the basis of reimbursement for allowable costs (as defined in 2 CFR Part 200, Subpart E). All payments for awarded proposals will be reimbursements of allowable costs incurred after both parties have entered (signed) a grant agreement for the project.

Budget. Authorized budgeted expenditures for work performed are as follows:

Budget Category	Cost for Work to be Performed
Salary / Wages	\$103,846
Fringe Benefits (##%) ¹	\$31,154
Travel	\$0.00
Supplies	\$0.00
Equipment	\$0.00
Contractual	\$0.00
Construction	\$0.00
Other	\$0.00
Total Direct Cost	\$0.00
Indirect Costs	\$15,000
Total	\$150,000

Indirect Cost Agreement

Please note: If using a rate different from your entity Indirect Cost Agreement; a letter of exemption from the appropriate authority must be provided with the application, or a statement must be included certifying that the recipient has elected to be reimbursed for an amount less than its total indirect costs, that unreimbursed indirect costs are part of the recipient’s contribution to the success of the project, and that the recipient will pay for all unreimbursed indirect costs using funds available to it for that purpose.

[\[Insert Indirect Cost Agreement or Attach as an Appendix if Applicable\]](#)

Indirect Cost Reimbursable Rate. The reimbursable rate for this Contract is ##% of (check one):

- Salary and fringe benefits
- Modified total direct costs
- Other direct costs base

If other direct cost base, identify:

This rate is less than or equal to (check one):

Predetermined Rate— an indirect rate that is negotiated between the Performing Party and its federal cognizant agency and supported by a current Negotiated Indirect Cost Rate Agreement (NICRA) letter. A Predetermined Rate is not subject to adjustment except as provided by 2 Code of Federal Regulations (CFR) § 200.411.

De Minimis Rate— if Performing Party does not have a current negotiated indirect rate, Performing Party may use a standard rate of ten percent of Modified Total Direct Costs (MTDC) in lieu of determining

¹ If fringe is not a single rate, please attach calculation or explanation as an appendix.

the actual indirect costs of the service. Costs must be consistently charged as either indirect or direct costs.

Provisional Rate— an experienced-based rate agreed to by Performing Party and TCEQ in the absence of a NICRA rate negotiated with the applicable federal cognizant agency.

Partial Reimbursement Rate— a reimbursement rate agreed to between TCEQ and Performing Party that is less than the rate authorized under TxGMS or, where applicable, 2 CFR Part 200. Performing Party contributes all of its unreimbursed indirect costs to the successful performance of the project or projects funded under this Contract, in accordance with Article 9 of this section.

Other:

Other. If Budget Category “Other” is greater than \$25,000 or more than 10% of total Contract budget, identify the main constituents:

N/A

SECTION EIGHT: CONTRACT REQUIREMENT [see 30 TAC § 14.7(15)]:

- By submitting this Project Proposal, you acknowledge that, if you become a successful grant recipient selected for a grant award, you must enter into a signed grant agreement or contract with TCEQ following the announcement of that award.

SECTION NINE: ACKNOWLEDGMENTS

Please read and understand the following:

- By submitting this Project Proposal, you acknowledge that information on how grant payments will be made is contained in the Budget Details section describing direct and possibly indirect costs. You further acknowledge that grant payments will be reimbursements on the basis of allowable costs incurred and that selected recipients will receive contract documents addressing allowable costs, unallowable costs, and reimbursement.
- By submitting this Project Proposal, you acknowledge your understanding that Project Proposals do not require matching funds and that a TCEQ director does not need to adjust or waive any matching funds requirement.
- By submitting this Project Proposal, you acknowledge that, if GBEP elects to hold a pre-submittal meeting relating to this Project Proposal, GBEP will notify you of the meeting’s time and location indicating whether attendance is mandatory.

SECTION TEN: QUESTIONS AND PRE-SUBMITTAL MEETINGS [see 30 TAC § 14.7(13) and 30 TAC § 14.7(14)]:

- There are no pre-submittal meetings scheduled.
- For requests for additional, pre-submittal information [see 30 TAC § 14.7(13)], please contact gbep@tceq.texas.gov.

SECTION ELEVEN: ADDITIONAL INSTRUCTIONS

In submitting your Project Proposal, please refer and adhere to the following instructions and guidelines concerning materials and information required to be submitted by potential grant recipients:

- GBEP intends to accept only complete Projected Proposals in a layout and format constituting a filled version of this proposal document with all applicable sections therein addressed; however, GBEP may, in its sole discretion, consider and accept nonconforming Project Proposals in the best interest of the state.
- Unless otherwise specified by GBEP, formal signatures are not required on Project Proposals.
- Unless otherwise communicated or implied, GBEP requires 1 (one) completed copy of your Project Proposal.

- Project Proposals must be received electronically, through the email address listed on this page, by the deadline listed on both this page and the first page of this Project Proposal document.

Please Submit Project Proposals (Microsoft Word Only – No PDFs) by August 26, 2024 to gbep@tceq.texas.gov.

Galveston Bay Estuary Program Federal Bipartisan Infrastructure Law (BIL) Project Proposal – Federal Fiscal 2025



A PROGRAM OF TCEQ

Please complete the proposal form and submit to gbep@tceq.texas.gov by **August 26, 2024**. No late submittals will be considered for funding.

This Call for Project Proposals complies with 30 Texas Administrative Code (TAC) § 14.7, which lays out requirements for a competitive solicitation by TCEQ for grant awards. For convenience, specific citations to 30 TAC § 14.7 are identified in the text.

SECTION ONE: INTRODUCTION

Purpose [required by 30 TAC § 14.7(1)]: The purpose of the proposed grant from the Galveston Bay Estuary Program (GBEP), a program of the Texas Commission on Environmental Quality (TCEQ), is to implement *The Galveston Bay Plan, 2nd Edition* (the Plan), a comprehensive conservation and management plan falling under Section 320, of the Federal Water Pollution Control Act (33 U.S.C. Section 1330), for a designated national estuary in the State of Texas.

Objective and Allowable Activities [see 30 TAC § 14.7(4)]: The objective of this grant is to implement the GBEP stakeholder developed priorities for federal fiscal 2025 (FFY2025 Priority Area Actions) that were developed by the GBEP Budget and Priorities subcommittee for federal fiscal 2025 at the July 2024 meeting. Any proposal implementing the Plan may be submitted, but proposals implementing the FFY2025 Priority Area Actions will be considered above others.

Authority [see 30 TAC § 14.7(2)]: Grants issued by GBEP under this solicitation are authorized by: the Federal Water Pollution Control Act (Clean Water Act) § 320 (33 UNITED STATES CODE § 1330), commonly referred to as the National Estuary Program; TEX. WATER CODE § 5.124; and 30 TAC ch. 14.

Match Requirement [see 30 TAC § 14.7(10) and 30 TAC § 14.7(11)]: No matching funds are required. Therefore, there is no need to adjust or waive any matching funds requirement.

Multiple Awards [see 30 TAC § 14.7(7)]: GBEP anticipates awarding funds for multiple proposals. GBEP intends to award grants to that combination of proposals which best implements the Plan, factoring in all criteria identified in this Call for Project Proposals, the availability of funds, and the most effective division of funds between awards.

SECTION TWO: SUBMITTAL – GENERAL INFORMATION

Subcommittee:

PPE

Project Name:

Deer Park Prairie Learning Center - Phases II & III

Project Previously Funded by GBEP? Yes No

Lead Implementer / Categories of Eligible Recipients [see 30 TAC § 14.7(3)]:

The lead implementer must be in one of the following categories of eligible recipients. Please indicate which category applies to your entity. If the proposing party is not already paired with a lead implementer in one of the categories listed below, the proposing party will need to partner with an eligible recipient in one of these categories to be selected for funding. Please reach out to GBEP staff with any questions.

- Federal, State, or Local Government Council of Government Public ISDs or Universities
 Nonprofit Other*

Native Prairies Association of Texas (nonprofit)

Unique Entity ID (UEI) Number:

AND:

DJQ7S9KJETV4

75-2146108

VIN or Tax ID:

Contact Information:

Project Representative Name	Jeff Sargent
Project Representative Phone	972-275-9255
Project Representative Email	jeff_sargent@texasprairie.org

Amount Requested from GBEP (\$150,000 minimum):

\$200,000

Federal State No Preference

Is the project scalable?

Amount Requested per year (if applicable):

FY 2026 (09/01/2025-08/31/2026)	\$200,000
FY 2027 (09/01/2026-05/31/2027)	\$0.00
FY 2028 (09/01/2027-05/31/2028)	\$0.00
Total	\$0.00

Project Dates / Duration (beginning no earlier than September 1, 2025 - ending no later than May 31, 2028) [see 30 TAC § 14.7(5)]:

Sept. 1, 2025 - June 1, 2026

Project Urgency:

With Phase I of the Prairie Learning Center project complete, funding is sought to complete Phases II and III. Delay in completing the project continues to limit the capacity of and accessibility for the vital prairie tours, classroom education, and other experiential opportunities at this rare and unique natural habitat in Greater Houston. Plus, as time goes by construction costs only keep going up.

Total Project Cost (including Leveraging Amounts, if any; provide leveraging information where indicated below):

\$410,021

Is this an estimate?

Leveraging (in-kind and/or cash):

Deer Park Prairie Learning Center	
Revenue Budget	
<i>Secured and Invested</i>	
NPAT funds (cash)	\$ 55,000
B.C. (NPAT member/benefactor, cash & in-kind)	\$ 20,610
W.W. (NPAT member/benefactor, cash)	\$ 12,540
Other community donations (cash)	\$ 12,000
Subtotal	\$ 100,150
<i>Pending (cash)</i>	
GBEP BIL Project Proposal - FFY 2025	\$200,000
The Elkins Foundation	\$50,000
Prairie Education/Learning Center fundraising event (Oct. 3, 2024)	\$40,000
Other community donations	\$20,000
Subtotal	\$ 310,000

TOTAL REVENUE

\$ 410,150

Partners* and Their Roles:

Native Prairies Association of Texas (NPAT) is a statewide conservation 501(c)3 nonprofit dedicated to the conservation, restoration, and appreciation of native prairies, savannas, and other grasslands in Texas. We bring the appreciation aspect to life by educating Texans about native prairies, plant communities, grassland birds, wildlife, and sustainable land-use practices. We support the key role of grassland and wetland habitats in climate stabilization and in water-quality resources and conservation. We promote awareness of the natural and cultural heritage of prairies in Texas.

Lawther-Deer Park Prairie (LDPP), owned by NPAT and maintained in partnership with NPAT's Houston Chapter, is a 51-acre, never-plowed, native prairie remnant that is an exceptional example of one of the most endangered ecosystems in North America. LDPP is home to more than 350 native plant species of grasses and wildflowers. Less than 1% of the original 9 million acres of coastal prairie remains. Very few of these prairies can be found within an urban area. Because of their pure genetics, seeds from Deer Park Prairie are planted at more than 20 pocket prairies in the Houston area.

LDPP and NPAT Houston Chapter partners that will benefit from this project but are not directly involved in its implementation include: **Bayou Land Conservancy, Coastal Prairie Conservancy, Galveston Bay Foundation, Houston Zoo, Native Plant Society of Texas - Houston and Clear Lake Chapters, The Nature Conservancy in Texas, Rice University Environmental Science program, and University of Houston-Clear Lake's Environmental Institute of Houston (EIH).**

Greater Houston independent school districts (ISDs) that have benefited from NPAT's Prairie Education Program and will continue to include: **Clear Creek, Deer Park, Fort Bend, Goose Creek, Houston, Humble, Katy, Klein, La Porte, Pasadena, Spring, and Spring Branch.**

***If partners are subgrantees completing work reimbursable under GBEP funding, a letter of commitment from the partner must be submitted under the application.**

SECTION THREE: GALVESTON BAY PLAN, 2ND EDITION IMPLEMENTATION

Grant recipient activities, allowed or required to be performed, must implement Galveston Bay Plan 2nd Edition Priority Area Actions. All proposals must implement these actions. This selection criterion provides for the selection of multiple recipients as needed.

Galveston Bay Plan, 2nd Edition References

<https://gbep.texas.gov/ensure-safe-human-and-aquatic-life-use/>

<https://gbep.texas.gov/protect-and-sustain-living-resources/>

<https://gbep.texas.gov/engage-communities/>

<https://gbep.texas.gov/inform-science-based-decision-making/>

Galveston Bay Plan Priority Area Actions Addressed:

Plan Priority 1: Ensure Safe Human and Aquatic Life Use

- NPS-1 NPS-2 NPS-3 NPS-4
PS-1 PS-2 PS-3
PHA-1 PHA-2 PHA-3 PHA-4 PHA-5

Plan Priority 2: Protect and Sustain Living Resources

- HC-1 HC-2 HC-3
SC-1 SC-2
FWI-1 FWI-2 FWI-3

Plan Priority 3: Engage Communities

- SPO-1 SPO-2 SPO-3 SPO-4
PEA-1 PEA-2 PEA-3

Plan Priority 4: Inform Science-based Decision Making

- RES-1 RES-2 RES-3 RES-4
RES-5 RES-6 RES-7 RES-8
ACS-1 ACS-2 ACS-3

Priority Area Actions Detail:

ENSURE SAFE HUMAN AND AQUATIC LIFE

NPS-2, Support Nonpoint Source Education and Outreach Campaigns: NPAT can include specific messaging in our prairie education program to encourage action to improve water quality. We already have an Enviroscope model that demonstrates how pollution impacts watersheds and how prairies can mitigate it. This project will expand our capacity to host bigger and more frequent workshops on site.

PROTECT AND SUSTAIN LIVING RESOURCES

HC-3, Habitat Enhancement: This project contributes to expanding awareness of the rare coastal prairie habitat. By increasing the capacity to host on-site experiential education at Lawther - Deer Park Prairie (LDPP), it boosts the support for all coastal prairies. This should contribute to more funding from public and private sources for prairie restoration at LDPP and other coastal prairies throughout the region.

SC-1, Native Species Management, SC-2; Invasive Species Management: This project will again contribute to building awareness for coastal prairies and their restoration, which should lead to more funding for native species preservation and invasive species eradication. NPAT already conducts regular maintenance at LDPP to control invasives and increase native plants resilience.

FWI-2, Freshwater Inflows Research and Management; FWI-3, Water Conservation and Education: This project will expand education program and research capacity at LDPP. NPAT has hosted research projects at the prairie before and has invited Rice University's Environmental Science program to host more.

ENGAGE COMMUNITIES

SPO-1, Stewardship Programs and Volunteer Opportunities: Through GBEP's 2024-2026 PPE grant, and using data collected from Ecorise during a previous PPE grant, NPAT and EIH are creating a plan to provide educational programs and stewardship opportunities for underserved schools.

SPO-2, Workshops and Events: The project will support the expansion of measurable workshops for teachers and administrators, on-site field trips, and Girls on the Prairie summer camps for students.

SPO-3, Support Regional Initiatives: The project will amplify NPAT's 2024-2026 PPE grant, which supports multiple regional environmental education programs and initiatives, including Gen:Thrive, Texas Association of Environmental Educators (TAEE), the Environmental Educators Exchange (EEE), Houston Environmental Resources for Educators, and Texas Children in Nature Network (TCiNN). Prairie education also supports "Back the Bay" because students, teachers and administrators learn why prairies should be protected. This leads to awareness of how prairies improve water quality and Galveston Bay's overall health.

SPO-4, Local Government Outreach: The Learning Center will magnify the 2024-2026 PPE project that develops and promotes resource materials to local government school districts. It should especially strengthen relationships with the City of Deer Park's school district and Park and Recreation Department.

PEA-1, Key Issue Engagement: The project will expand our ability to bring awareness to the Galveston Bay watershed community by focusing on prairie ecosystems and the ecological services they provide.

PEA-2, Adult Education; PEA-3, K-12 Education Efforts: This project will support the 2024-2026 GBEP PPE grant by expanding our capacity at LDPP to host workshops for teachers and administrators from underserved communities. It will also allow us to host more and larger K-12 student field trips, girls summer camps and other prairie education programs for those same communities.

INFORM SCIENCE-BASED DECISION MAKING

RES-1, Biological Stressor Monitoring; RES-2, Geochemical Stressor Monitoring; RES-7, Research on Ecosystem Service and Economic Valuation of Bay Resources: The project will again expand capacity to host research teams and encourage more research projects on the watershed impact of invasive species, and geochemical stressors such as eutrophication and legacy toxins on LDPP plant and animal species. This prairie is within reach of many major refinery facilities, located only 6 miles from the Buffalo Bayou and 7 miles from the Upper San Jacinto Bay. Research can also be conducted to evaluate the value of the ecosystem services LPPP provides.

SECTION FOUR: BIL PRIORITIES / FACTORS TO BE USED TO SELECT AWARDS [see 30 TAC § 14.7(6)]

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. This selection criteria provides for the selection of multiple recipients as needed.

Projects must incorporate the implementation of the [Estuary Resilience Action Plan](#) and the [GBEP Equity Strategy](#) (including having physical presence or connection to the targeted communities).

ESTUARY RESILIENCE ACTION PLAN

The Prairie Learning Center project contributes to the Estuary Resilience Action Plan in the following ways:

- It will amplify the GBEP PPE 2024-2026 grant “Mobilizing the Environmental Education Community through Prairie Education” by significantly increasing the capacity host more on-site field trips and classroom education at NPAT’s rare living laboratory, Lawther – Deer Park Prairie (LDPP).
- It supports several of the Galveston Bay Plan goals related to Engaging Communities and Informing Science-Based Decision Making, as identified in Section Three of this application.

GBEP EQUITY STRATEGY

The project supports the Galveston Bay Estuary Program (GBEP) Equity Strategy by:

- Having a physical presence in a community with underserved populations.
- Serving as a primary resource for the NPAT Prairie Education Program, which prioritizes delivering experiential education to youth and adults from underserved communities throughout Greater Houston.
- Strengthening the partnership between NPAT, GBEP, and the variety of other conservation partners and other entities striving to improve the health of and safe, equitable access to the Galveston Bay watershed.

Action Priorities

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. **Proposals must address one or more of the following actions:**

- Habitat protection & enhancement, including adaptive management.
- Projects in support of management measures (e.g., green infrastructure, watershed and human health, water reuse and conservation) and watershed-based plans.
- Projects that support research and monitoring related to the plan priorities of *Ensure Safe Human & Aquatic Life Use* and *Protect and Sustain Living Resources*.

Support Priorities

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. **Proposals must address at least one supporting action developed by the subcommittees, but preference will be given to projects that are able to incorporate multiple supporting actions.**

- Engaging K-12 students and/or adults in hands-on, place-based environmental education.
- Diversifying strategic partners with environmental and non-environmental community organizations working within targeted communities.
- Monitoring and research that produces environmental data applicable to future implementation and management decisions and made available to the public.

Stakeholder Priority Detail:

ACTION PRIORITIES

1. **Habitat protection & enhancement, including adaptive management**

- With the support of several Houston Chapter volunteers, NPAT initiated a new round of intensive invasive plant management on Lawther – Deer Park Prairie (LDPP) in 2023. This work has continued in 2024, and a stewardship fund has been established to help maintain consistent management well into the future. The Prairie Learning Center project will bring more attention and educational opportunities to the prairie, which should only increase volunteer and funding support for prairie conservation at LDPP and coastal prairies throughout the Galveston Bay region.
- 2. **Projects that support research and monitoring related to the plan priorities of *Ensure Safe Human & Aquatic Life Use* and *Protect and Sustain Living Resources*.**
- The project will expand capacity to host research teams and encourage more research projects exploring the impact of invasive species and other human-induced stressors on LDPP plant and animal life. This will help improve the health and resilience of the prairie as a natural resource, to benefit people and the diversity of wildlife that native coastal prairies support. Research can also be conducted to evaluate the value of the ecosystem services LDPP provides.

SUPPORT PRIORITIES

1. **Engaging K-12 students and/or adults in hands-on, place-based environmental education**

As outlined in the GBEP PPE 2024-2026 grant “Mobilizing the Environmental Education Community through Prairie Education” the project will amplify the Prairie Education Program’s efforts to expand:

- **Place based and immersive programing (K-12).**

Data compiled in the summer of 2023 and collected by EcoRise to locate high risk/need areas and includes demographics, test scores, and environmental risk assessments was scaled up to encompass a wider area with more school districts and community partners. It will be used as a community engagement tool.

- **Conservation and environmental workforce training.**

The summer camps and student field trips give students opportunities to interact with members of the environmental community and explore environmental careers. One day of the summer camp will be devoted to environmental career studies with at least four ladies in STEM careers describing their career path, additionally UHCL will present a STEM program from their career counseling office. Students will also learn from community leaders through field trip volunteers.

- **Continuation or expansion of established education, outreach, or engagement programs.**

These include the teacher and administrator workshops, student field trips and the Girls on the Prairie summer camp.

- **Adult engagement in science literacy focused on the Galveston Bay estuary and watershed.**

This will be accomplished with the teacher and administrator workshops. Concepts such as ecosystem services, retention of flood waters, habitat management, wildlife and pollinators, careers in STEM, improvement of water quality through extensive root absorption, point and non-point source water pollution are covered. TEKS aligned student activities are offered so that teachers can bring them to their students in the classroom or school pocket prairie.

2. **Monitoring and research that produces environmental data applicable to future implementation and management decisions and made available to the public.**

- See Action Priority #2 description above.

Does the Project work with new, smaller communities/partnerships?

- Yes
- No

This project does not directly work with new, smaller communities/partnerships. It does support the economy through partnerships with local construction contractors and the permitting process with the City of Deer Park. It will strengthen our relationship with Deer Park's Park and Recreation Department, and our long-standing relationships with local residents surrounding the prairie.

SECTION FIVE: BIL CONSIDERATIONS / FACTORS TO BE USED TO SELECT AWARDS [see 30 TAC § 14.7(6)]

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. This selection criteria provides for the selection of multiple recipients as needed.

Does the Project align with any EPA Areas of Special Interest?

- Reduction in nutrient pollution
- Water reuse and conservation
- Marine litter reduction
- Green infrastructure and resiliency

Healthy native prairies reduce nutrient pollution as they filter and clean water through their deep root systems. Remnant prairies like LDPP are remarkable conservation resources, holding up to 250,000 gallons of water per acre and absorbing nine inches of rainfall per hour before runoff occurs.

Native prairies are also extremely resilient and drought tolerant, requiring no human irrigation. Plus, their water absorption and holding capability provides outstanding flood mitigation. During hurricane events in the Galveston Bay region in the past decade NPAT has owned the property, the neighborhood surround LDPP did not flood, while neighborhoods elsewhere in Deer Park and the region did.

The Prairie Learning Center project, Phase III, includes the green infrastructure installation of a bioswale on the north side of the structure. This will divert rainfall away from the house foundation and street and out onto the prairie, further improving the resiliency of the neighborhood and the Learning Center.

Build America, Buy America Act (BABA)

Build America, Buy America provisions only apply to awards over \$250,000, and where more than 5% of the award is spent on iron, steel, manufactured products, and construction materials permanently incorporated into construction, maintenance, or repair projects. Under the law, construction materials exclude cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives.

Will the Build America, Buy America Law apply to this application? Yes No
If yes, will you comply with the law or submit a waiver? Yes No

Comments (if any):

Does the Project incorporate Federal Flood Risk Management Standards?

[FFRMS - EPA Green Infrastructure Managing Flood Risks](#)

Yes No

The Prairie Learning Center project, Phase III, includes the green infrastructure installation of a bioswale on the north side of the structure. This will divert rainfall away from the house foundation and street and out onto the prairie, further improving the resiliency of the neighborhood and the Learning Center.

Remnant prairies like LDPP are remarkable flood mitigation resources, holding up to 250,000 gallons of water per acre and absorbing nine inches of rainfall per hour before runoff occurs. During hurricane events in the Galveston Bay region in the past decade NPAT has owned the property, the neighborhood surround LDPP did not flood, while neighborhoods elsewhere in Deer Park and the region did.

Infrastructure Investment and Jobs Act (IIJA) Signage

The recipient will ensure that a sign is placed at construction sites supported under this award displaying EPA logo and the official Building a Better America emblem and must identify the project as a “project funded by President Biden’s Bipartisan Infrastructure Law.” Construction is defined at 40 CFR 33.103 as “erection, alteration, or repair (including dredging, excavating, and painting) of buildings, structures, or other improvements to real property, and activities in response to a release or a threat of a release of a hazardous substance into the environment, or activities to prevent the introduction of a hazardous substance into a water supply.” The sign must be placed at construction sites in an easily visible location that can be directly linked to the work taking place and must be maintained in good condition throughout the construction period.

Does the proposal implement construction subject to signage requirements?

[Building A Better America Brand Guide - Using the EPA Seal and Logo](#)

Yes No

Does the Project Address the [Justice 40 Initiative](#)?

NEP’s have a target of ensuring that at least 40% of the benefits of investments from the five years of BIL funding flow to disadvantaged communities.

[Climate and Economic Justice Screening Tool \(CEJST\)](#)

Yes No

The Prairie Learning Center is located on the property primarily occupied by our 51-acre rare remnant prairie located in Deer Park, Texas. As of July 2023, the population of Deer Park was 33,176 (U.S. Census), with 52% White alone (not Hispanic or Latino), and 42% Hispanic or Latino. The project will use local or Houston-area contractors and strive to use US made construction materials.

The Prairie Learning Center, like the Prairie Education Program, will serve the entire Greater Houston metro area. In a typical year 40%+ of the youth audience served by the Prairie Education Program, which benefits directly from the Prairie Learning Center project, comes from metro area disadvantaged communities.

Houston is the most diverse large city in the U.S., with the latest demographics according to the U.S. Census recording: 45% Hispanic or Latino; 24% White alone, not Hispanic or Latino; 22% Black or African American; 7% Asian alone; and 15% Two or More Races. Other data indicates over 145 languages are spoken by Houston citizens.

Does the Project Address geographies above the 80th percentile as identified in [EJScreen](#) in the following demographics?

Yes No

- % Low income
- % Linguistically isolated
- % Less than high school education
- % Unemployed
- % Low life expectancy

[If yes, please identify geographies and summarize how the proposal addresses the selected demographics.]

Geographies in the 90%+ percentiles exist in the community where the project is located and in the Prairie Education Program service area for the above selected low-income indicators. The project addresses the demographics by expanding the capacity to educate people in these communities about the ecosystem services delivered by native prairies and the benefits of protecting them: to improve clean water, provide flood mitigation, maintain a diversity of wildlife, etc. The program also promotes career opportunities in conservation to high school students, encouraging the next generation that will protect and restore our crucial natural resources.

SECTION SIX: PROPOSAL DETAILS

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority.

Project Summary:

The Deer Park Prairie Learning Center project will transform the house at Deer Park Prairie into a vibrant educational facility that is accessible to all. Phase I has already invested \$100,000 to make the once-derelict house functional, while Phases II and III will expand classroom and research capacity, add ADA restrooms, and improve access to the prairie to create a community asset that offers more youth and adults in Greater Houston the opportunity to study and discover the benefits of Texas coastal prairies.

Full Project Description (1,000 words or less):

Native prairies are among our most endangered ecosystems in Texas—they're home to steeply declining birds and pollinators and provide numerous benefits such as flood control, carbon capture, healthy soils, superior livestock forage, mitigation of "heat islands," and outdoor recreation. Native Prairies Association of Texas (NPAT) works to protect and restore native prairies throughout the state, and plant "seeds of hope" by engaging youth, educators, and community groups in learning and action. We believe experiential education is an important guide toward the care and stewardship of our natural heritage.

Lawther - Deer Park Prairie (LDPP), located in Harris County, is our flagship "ambassador prairie"—a living laboratory for prairie stewardship and hands-on learning about nature's benefits, grassland ecology, watersheds, wildlife, and Texas' agricultural and cultural history. In addition to this rare, 51-acre high-quality coastal prairie remnant, the property has an existing house that allows for on-site classroom education, prairie workshops, public events, and research projects, as well as storage for prairie maintenance equipment.

The greatest impediment to expanding the Prairie Education Program's on-site experiential field trips and classroom education at LDPP has been the house that came with the property. It was in poor condition when the prairie was acquired 2014 and continued to deteriorate over the following years.

We are fundraising to transform the existing house into a vibrant Prairie Learning Center that is accessible to all. NPAT has already raised and invested \$100,000 in Phase I to make the once-derelict house functional: completing plumbing repairs; new siding, insulation, windows, doors, and HVAC system; and upstairs carpet and furnishings for research teams. Phase II will expand the classroom by 30%, make office improvements, and add three new restrooms, including ADA accessible ones. Phase III will add a

transportation drop-off, sidewalk to an existing 600-ft. prairie boardwalk, and other site improvements. With these changes, students, disabled individuals, and the public will have access to LDPP, one of the few remnant prairies left in Greater Houston.

Serving the Houston area and beyond, our education program offers interactive classroom and on-site learning about coastal prairies, LDPP's ecology, flood mitigation, water quality, and history. Since 2018, our TEKS-correlated lessons have taught animal adaptations, insect life cycles, the flow of energy, the prairie food web, and applications to STEM to 11,400 people, with a potential reach of 68,500.

Support from the Galveston Bay Estuary Program's BIL funding will turn Deer Park Prairie into a renowned Prairie Learning Center that will expand awareness of remaining tallgrass and coastal prairie ecology, provide opportunities for youth and the public to enjoy the benefits of nature, and create enlightening experiences that inspire people to appreciate and care more for the precious local natural landscapes that are unique to Texas.

The project goal is to complete the renovation of the Prairie Education Center in time for the 2026-2027 school year. We already have architectural drawings and a site plan as well as contractors, electricians, plumbers, and landscapers in place who are ready to continue once funding is received. The entire project has been designed and managed by Beth Clark, co-founder and long-time principal of Clark Condon landscape architects. Clark is a dedicated NPAT-Houston chapter member and volunteer. With her as the project manager, this ensures it will be completed to the highest standards. Clark has also secured concessions on some costs due to her strong relationships with local contractors. Several Houston Chapter members have donated their time, skills, and resources to this project as well.

With GBEP BIL funding, Phase II and III can be completed by May 2026. The improvements will provide the ability to increase direct student reach with K-12 schools in the Houston area by 50%+, host 30%+ larger training classes on-site, engage with 50%+ more adults through community group site visits, and expand research partnerships with higher education institutions such as Rice University and the University of Houston Clear Lake's Environmental Institute of Houston. With these project improvements, we anticipate a direct reach in 2028 of 5,600 students, 345 teachers, and 1,200 adults. The indirect reach of students through the teacher workshops would be over 40,600.

NPAT is uniquely equipped for this work as one of the few land trusts in Texas devoting a pillar of our mission to education. Our Prairie Education Program is based in Houston, led by an experienced and well-known local environmental educator, Della Barbato. She has deep relationships throughout Greater Houston and in the statewide conservation education community. Our rare remnant prairie in Deer Park is a unique natural learning environment within a 30-minute bus ride of many underserved communities in the region, and thus more accessible to students who lack access to green space and potentially suffer disproportionate impacts of environmental injustice. The Prairie Learning Center will increase opportunities for youth and community members to enjoy the mental and physical benefits of time spent in nature—and through educational and impactful experiences—inspire leaders who will create more resilient communities for people, prairies, and wildlife alike.

The Prairie Learning Center will also beautify the structure in the neighborhood, strengthen our partnerships with the City of Deer Park and the school districts throughout Greater Houston that we serve, and be a source of pride for the organization and the region.

And finally, the Galveston Bay Estuary Program has already demonstrated your confidence in the Prairie Education program for several years, for which we are immensely grateful. Support of the Prairie Learning Center project would only amplify the investment you have already made, strengthening prairie education throughout Greater Houston for decades to come.

"People protect what they love, they love what they understand, and they understand what they are taught."
~ Jacques-Yves Cousteau

Latitude/Longitude (Optional):

29°40'18.4"N 95°06'37.6"W

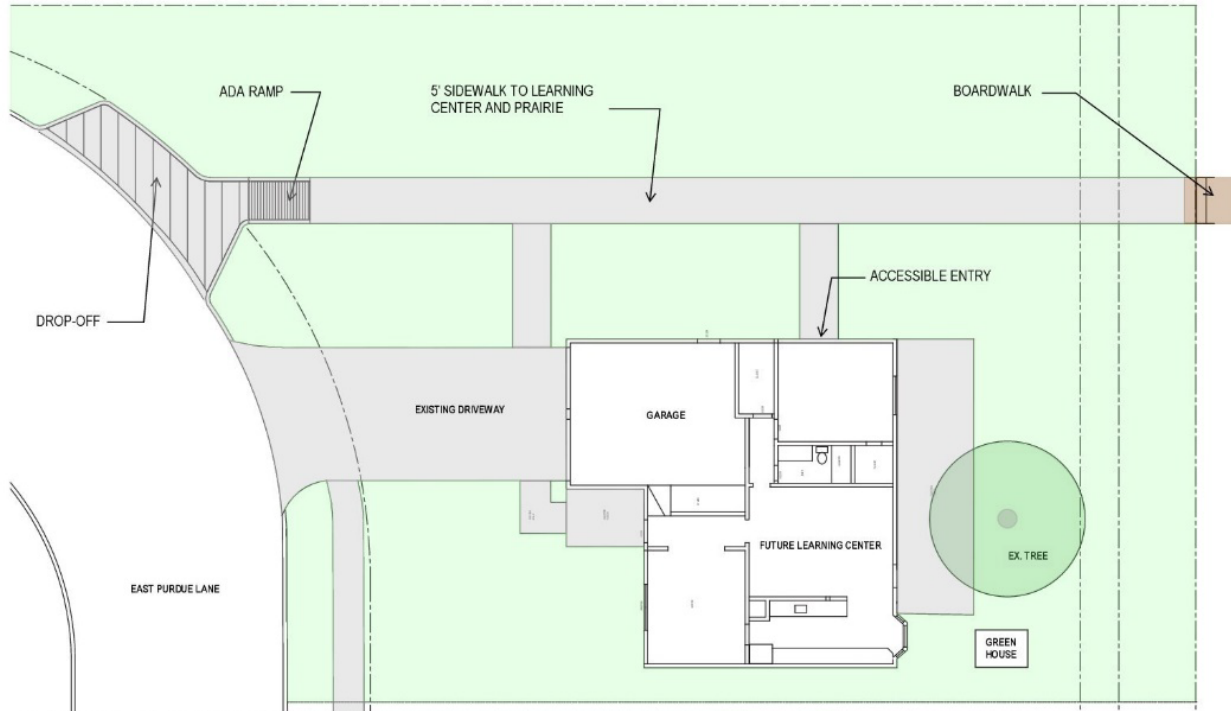
Location:

The Deer Park Prairie Learning Center is located on the property primarily occupied by our 51-acre rare remnant prairie Located in Deer Park, Texas. As of July 2023, the population of Deer Park was 33,176 (U.S. Census), with 52% White alone (not Hispanic or Latino), and 42% Hispanic or Latino. Access to natural green space in Deer Park is extremely limited. However, like the Prairie Education Program, the Prairie Learning Center will serve the entire Greater Houston metro area.

Other Plans Implemented:

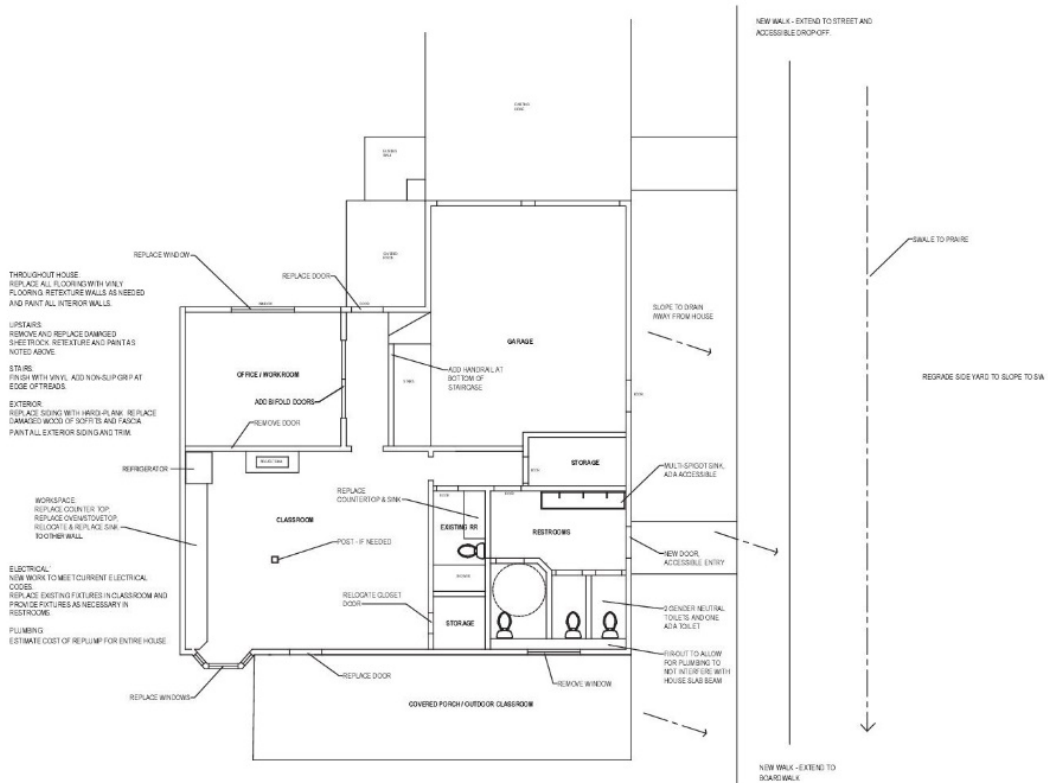
This project, by expanding education about prairie restoration, benefits and habitat management, supports the Texas Coastal Management Plan, Coastal Resiliency Master Plan and Wetland Conservation Plan.

Projects Map - see also "Deer Park Prairie Learning Center Plans" PDF file attached.



**LAWTHER DEER PARK PRAIRIE LEARNING CENTER
PRELIMINARY SITE PLAN**

THIS DRAWING IS CONCEPTUAL IN NATURE AND SUBJECT TO CHANGE. NO WARRANTIES OR REPRESENTATIONS EXPRESSED OR IMPLIED CONCERNING THE ACTUAL DESIGN, LOCATION OR CHARACTER OF THE PLAN ARE INTENDED. THIS PLAN IS NOT FOR PERMIT OR CONSTRUCTION PURPOSES.



**LAWTHER DEER PARK PRAIRIE LEARNING CENTER
PRELIMINARY CONSTRUCTION PLAN**

THIS DRAWING IS CONCEPTUAL IN NATURE AND SUBJECT TO CHANGE. NO WARRANTIES OR REPRESENTATIONS EXPRESSED OR IMPLIED CONCERNING THE ACTUAL DESIGN, LOCATION OR CHARACTER OF THE PLAN ARE INTENDED. THIS PLAN IS NOT FOR PERMIT OR CONSTRUCTION PURPOSES.

Supplemental Photos/Graphics (Optional):

Building a Prairie Future



The Learning Center
@ Deer Park Prairie



Building a Prairie Future!

In an age when our children spend more time glued to screens than exploring the great outdoors, we find ourselves at a critical crossroads. It's no surprise that many kids don't understand or even fear nature, having exchanged hours of outdoor play for digital distractions.

But what if we could change this trajectory and reconnect them with the wonders of the natural world?

If you're one of the fortunate few who grew up cherishing the outdoors, you might reminisce about exploring the woods behind your home, visiting grandma and grandpa's farm, or embarking on memorable family camping trips. Regrettably, too many children today are deprived of such opportunities.

In Texas, where urban development relentlessly consumes rural land at a rate of over 250 acres per day, more than 85% of our state's citizens live in cities. This rampant urban expansion is pushing our fragile ecosystems to the brink of extinction.

Less than 1% of the once-abundant 26 million acres of tallgrass prairie in Texas remains, and time is running out to save what remains of these vital landscapes.

That's where the Native Prairies Association of Texas (NPAT) comes in. NPAT stands as the sole statewide land trust dedicated exclusively to the preservation of prairies. We're on a mission to safeguard and restore these versatile grasslands while educating people about their remarkable beauty and ecological significance.



NPAT's Deer Park Prairie Education Program (DPP) in Houston is at the forefront of our efforts. This program reaches out to both children and adults across the metro area and the entire state. Moreover, it places a strong emphasis on underserved communities with limited access to wilderness.

Our vision for education is clear: we want to give every Texan the opportunity to discover why prairies matter and what they can do to protect them.

This vision is why we're excited to announce the transformation of the old building at Lawther-Deer Park Prairie into a new Prairie Learning Center. When completed, this center will enable NPAT and our conservation partners to increase field trips, teacher workshops and research projects by 50% or more. While essential repairs are nearing completion, we urgently need your support for additional capacity and accessibility improvements.

NPAT's Deer Park Prairie Education Program in Houston reaches out to both children and adults across the metro area and the entire state.

The urgency couldn't be more evident. As urban growth, habitat loss, and extreme weather patterns continue to escalate, environmental education is needed now more than ever. The Prairie Education Program and the Learning Center offer tangible benefits to the entire Houston metro area and beyond, making this a cause that transcends geographical boundaries.

Your contribution to the Education Program or the Learning Center will unlock the magic of prairies for thousands of young minds, particularly those who have limited access to nature's wonders. Your support has the power to inspire the next generation of Texas conservationists, ensuring that our prairies thrive for generations to come.



Remember, where there is action, there is hope. Texas prairies can only be saved through the dedication of individuals like you who genuinely care. Your gift, regardless of its size, will make an invaluable impact on our mission.

Together, we can build a prairie future for Houston's youth, fostering a profound appreciation for nature that will shape our planet's stewards of tomorrow. Join us in this transformative journey and be a part of the solution.

To contribute or learn more, please visit texasprairie.org or contact Jeff Sargent at jeff_sargent@texasprairie.org.

Thank you for your unwavering support and dedication to preserving our natural heritage!



SECTION SEVEN: BUDGET DETAILS

Grant Payments [see 30 TAC § 14.7(12)]: All grant payments will be made on the basis of reimbursement for allowable costs (as defined in 2 CFR Part 200, Subpart E). All payments for awarded proposals will be reimbursements of allowable costs incurred after both parties have entered (signed) a grant agreement for the project.

Budget. Authorized budgeted expenditures for work performed are as follows:

Budget Category	Cost for Work to be Performed
Salary / Wages	\$0.00
Fringe Benefits (###%) ¹	\$0.00
Travel	\$0.00
Supplies	\$0.00
Equipment	\$0.00
Contractual	\$29,630.00
Construction	\$148,148.00
Other	\$22,222.00
Total Direct Cost	\$200,000.00
Indirect Costs	\$0.00
Total	\$200,000.00

Indirect Cost Agreement

Please note: If using a rate different from your entity Indirect Cost Agreement; a letter of exemption from the appropriate authority must be provided with the application, or a statement must be included certifying that the recipient has elected to be reimbursed for an amount less than its total indirect costs, that unreimbursed indirect costs are part of the recipient’s contribution to the success of the project, and that the recipient will pay for all unreimbursed indirect costs using funds available to it for that purpose.

[\[Insert Indirect Cost Agreement or Attach as an Appendix if Applicable\]](#)

Indirect Cost Reimbursable Rate. The reimbursable rate for this Contract is 0.0% of (check one):

- Salary and fringe benefits
- Modified total direct costs
- Other direct costs base

If other direct cost base, identify:

This rate is less than or equal to (check one):

- Predetermined Rate**— an indirect rate that is negotiated between the Performing Party and its federal cognizant agency and supported by a current Negotiated Indirect Cost Rate Agreement (NICRA) letter. A Predetermined Rate is not subject to adjustment except as provided by 2 Code of Federal Regulations (CFR) § 200.411.
- De Minimis Rate**— if Performing Party does not have a current negotiated indirect rate, Performing Party may use a standard rate of ten percent of Modified Total Direct Costs (MTDC) in lieu of determining the actual indirect costs of the service. Costs must be consistently charged as either indirect or direct costs.
- Provisional Rate**— an experienced-based rate agreed to by Performing Party and TCEQ in the absence of a NICRA rate negotiated with the applicable federal cognizant agency.

¹ If fringe is not a single rate, please attach calculation or explanation as an appendix.

Partial Reimbursement Rate— a reimbursement rate agreed to between TCEQ and Performing Party that is less than the rate authorized under TxGMS or, where applicable, 2 CFR Part 200. Performing Party contributes all of its unreimbursed indirect costs to the successful performance of the project or projects funded under this Contract, in accordance with Article 9 of this section.

Other:

Other. If Budget Category “Other” is greater than \$25,000 or more than 10% of total Contract budget, identify the main constituents:

Based on a 15% contingency rate (\$34,447) of the construction costs on Phases II and III of the project (\$229,645), times the 65% that \$200,000 amounts to of the total cost of Phases II and III, which includes construction, contingency, and the general contracting fee (\$310,021).

SECTION EIGHT: CONTRACT REQUIREMENT [see 30 TAC § 14.7(15)]:

- By submitting this Project Proposal, you acknowledge that, if you become a successful grant recipient selected for a grant award, you must enter into a signed grant agreement or contract with TCEQ following the announcement of that award.

SECTION NINE: ACKNOWLEDGMENTS

Please read and understand the following:

- By submitting this Project Proposal, you acknowledge that information on how grant payments will be made is contained in the Budget Details section describing direct and possibly indirect costs. You further acknowledge that grant payments will be reimbursements on the basis of allowable costs incurred and that selected recipients will receive contract documents addressing allowable costs, unallowable costs, and reimbursement.
- By submitting this Project Proposal, you acknowledge your understanding that Project Proposals do not require matching funds and that a TCEQ director does not need to adjust or waive any matching funds requirement.
- By submitting this Project Proposal, you acknowledge that, if GBEP elects to hold a pre-submittal meeting relating to this Project Proposal, GBEP will notify you of the meeting’s time and location indicating whether attendance is mandatory.

SECTION TEN: QUESTIONS AND PRE-SUBMITTAL MEETINGS [see 30 TAC § 14.7(13) and 30 TAC § 14.7(14)]:

- There are no pre-submittal meetings scheduled.
- For requests for additional, pre-submittal information [see 30 TAC § 14.7(13)], please contact gbep@tceq.texas.gov.

SECTION ELEVEN: ADDITIONAL INSTRUCTIONS

In submitting your Project Proposal, please refer and adhere to the following instructions and guidelines concerning materials and information required to be submitted by potential grant recipients:

- GBEP intends to accept only complete Projected Proposals in a layout and format constituting a filled version of this proposal document with all applicable sections therein addressed; however, GBEP may, in its sole discretion, consider and accept nonconforming Project Proposals in the best interest of the state.
- Unless otherwise specified by GBEP, formal signatures are not required on Project Proposals.
- Unless otherwise communicated or implied, GBEP requires 1 (one) completed copy of your Project Proposal.
- Project Proposals must be received electronically, through the email address listed on this page, by the deadline listed on both this page and the first page of this Project Proposal document.

Please Submit Project Proposals (Microsoft Word Only – No PDFs) by August 26, 2024 to gbep@tceq.texas.gov.

Galveston Bay Estuary Program Federal Bipartisan Infrastructure Law (BIL) Project Proposal – Federal Fiscal 2025



A PROGRAM OF TCEQ

Please complete the proposal form and submit to gbep@tceq.texas.gov by **August 26, 2024**. No late submittals will be considered for funding.

This Call for Project Proposals complies with 30 Texas Administrative Code (TAC) § 14.7, which lays out requirements for a competitive solicitation by TCEQ for grant awards. For convenience, specific citations to 30 TAC § 14.7 are identified in the text.

SECTION ONE: INTRODUCTION

Purpose [required by 30 TAC § 14.7(1)]: The purpose of the proposed grant from the Galveston Bay Estuary Program (GBEP), a program of the Texas Commission on Environmental Quality (TCEQ), is to implement *The Galveston Bay Plan, 2nd Edition* (the Plan), a comprehensive conservation and management plan falling under Section 320, of the Federal Water Pollution Control Act (33 U.S.C. Section 1330), for a designated national estuary in the State of Texas.

Objective and Allowable Activities [see 30 TAC § 14.7(4)]: The objective of this grant is to implement the GBEP stakeholder developed priorities for federal fiscal 2025 (FFY2025 Priority Area Actions) that were developed by the GBEP Budget and Priorities subcommittee for federal fiscal 2025 at the July 2024 meeting. Any proposal implementing the Plan may be submitted, but proposals implementing the FFY2025 Priority Area Actions will be considered above others.

Authority [see 30 TAC § 14.7(2)]: Grants issued by GBEP under this solicitation are authorized by: the Federal Water Pollution Control Act (Clean Water Act) § 320 (33 UNITED STATES CODE § 1330), commonly referred to as the National Estuary Program; TEX. WATER CODE § 5.124; and 30 TAC ch. 14.

Match Requirement [see 30 TAC § 14.7(10) and 30 TAC § 14.7(11)]: No matching funds are required. Therefore, there is no need to adjust or waive any matching funds requirement.

Multiple Awards [see 30 TAC § 14.7(7)]: GBEP anticipates awarding funds for multiple proposals. GBEP intends to award grants to that combination of proposals which best implements the Plan, factoring in all criteria identified in this Call for Project Proposals, the availability of funds, and the most effective division of funds between awards.

SECTION TWO: SUBMITTAL – GENERAL INFORMATION

Subcommittee:

M&R

Project Name:

High-tech monitoring and assessing Galveston Bay ecosystems in support of resilience implementation and management decisions

Project Previously Funded by GBEP? Yes No

Lead Implementer / Categories of Eligible Recipients [see 30 TAC § 14.7(3)]:

The lead implementer must be in one of the following categories of eligible recipients. Please indicate which category applies to your entity. If the proposing party is not already paired with a lead implementer in one of the categories listed below, the proposing party will need to partner with an eligible recipient in one of these categories to be selected for funding. Please reach out to GBEP staff with any questions.

- Federal, State, or Local Government Council of Government Public ISDs or Universities
 Nonprofit Other*

Texas A&M University at Galveston

Unique Entity ID (UEI) Number:

AND:

G8Y3L8JV2588

EIN 742125225

VIN or Tax ID:

Contact Information:

Project Representative Name	Hui Liu
Project Representative Phone	(409)740-4716
Project Representative Email	liuh@tamug.edu

Amount Requested from GBEP (\$150,000 minimum):

[\$]572,020

Federal State No Preference

Is the project scalable?

Amount Requested per year (if applicable):

FY 2026 (09/01/2025-08/31/2026)	\$277,452
FY 2027 (09/01/2026-08/31/2027)	\$246,862
FY 2028 (09/01/2027-05/31/2028)	\$47,706
Total	\$572,020

Project Dates / Duration (beginning no earlier than September 1, 2025 - ending no later than May 31, 2028) [see 30 TAC § 14.7(5)]:

September 1, 2025, to May 31, 2028. 33 months

Project Urgency:

The importance of this project is to provide accessible research data to aid the implementation of Galveston Bay Plan and GBEP stakeholder developed priorities. Funding to support such research has not been secured. Applying for the BIL funding through GBEP provides an excellent opportunity to fill this much needed research gap.

Total Project Cost (including Leveraging Amounts, if any; provide leveraging information where indicated below):

[\$]572,020

Is this an estimate?

Leveraging (in-kind and/or cash):

N/A

Partners* and Their Roles:

The University of Texas, Marine Science Institute, collecting data on carbonate chemistry characterization in the bay (subgrantee; letter of commitment included as appendix).
The University of Maryland, technical support on providing and deploying imaging systems sampling target organisms.

***If partners are subgrantees completing work reimbursable under GBEP funding, a letter of commitment from the partner must be submitted under the application.**

SECTION THREE: GALVESTON BAY PLAN, 2ND EDITION IMPLEMENTATION

Grant recipient activities, allowed or required to be performed, must implement Galveston Bay Plan 2nd Edition Priority Area Actions. All proposals must implement these actions. This selection criterion provides for the selection of multiple recipients as needed.

Galveston Bay Plan, 2nd Edition References

<https://gbep.texas.gov/ensure-safe-human-and-aquatic-life-use/>

<https://gbep.texas.gov/protect-and-sustain-living-resources/>

<https://gbep.texas.gov/engage-communities/>

<https://gbep.texas.gov/inform-science-based-decision-making/>

Galveston Bay Plan Priority Area Actions Addressed:

Plan Priority 1: Ensure Safe Human and Aquatic Life Use

- NPS-1 NPS-2 NPS-3 NPS-4
- PS-1 PS-2 PS-3
- PHA-1 PHA-2 PHA-3 PHA-4 PHA-5

Plan Priority 2: Protect and Sustain Living Resources

- HC-1 HC-2 HC-3
- SC-1 SC-2
- FWI-1 FWI-2 FWI-3

Plan Priority 3: Engage Communities

- SPO-1 SPO-2 SPO-3 SPO-4
- PEA-1 PEA-2 PEA-3

Plan Priority 4: Inform Science-based Decision Making

- RES-1 RES-2 RES-3 RES-4
- RES-5 RES-6 RES-7 RES-8
- ACS-1 ACS-2 ACS-3

Priority Area Actions Detail:

Science-based management and decision of National Estuary Programs require high quality data of key ecosystem components. Consistent and careful data collection through well designed monitoring programs that are currently incomplete and insufficient in Galveston Bay, but highly needed for natural resource managers, stakeholders, and other decision makers. This project is designed to contribute to implementation of Galveston Bay Plan 2nd Edition Priority Area Actions through quality-assured monitoring activities. These activities will generate accessible research data on key ecosystem indicators in Galveston Bay, which will be used to inform science-based decision-making action plans of TCEQ/GBEP. Ecosystem assessment has been commonly accepted as a framework for management and restoration of estuarine ecosystems subjected to climate change (**Plan Priority 4**). Therefore, developing sensitive indicators as proxies for tracking physical, chemical, and biological processes is highly valuable to protect and sustain living resources and monitor the estuary health status. The research action in this project is to apply a high-tech sampling framework on a seasonal basis using a PlanktonScope system combined with net tows, and an underway CO₂ partial pressure (*p*CO₂) system coupled with discrete water sampling for carbonate chemistry characterization. This sample scheme will be coupled with key indicator monitoring (i.e., oyster larvae, crab larvae, and fragile zooplankton) to generate key indicators in Galveston Bay, as proxies of climate resilience of estuarine ecosystems. The suite of ecosystem indicators simultaneously collected with broad coverage in time and space in the bay will provide a timely complete picture of Galveston Bay ecosystems along with the status of native, commercially important species (i.e., oysters and blue crabs) to resource managers and stakeholders (**Plan Priority 2**) for future implementation and management decision on Galveston Bay ecosystems. This project will engage with K-12 students, undergraduate/graduate students, adult volunteers from the local community (**Plan Priority 3**) on field sampling and laboratory activities, promoting awareness and importance to protect the health of Galveston Bay considering environmental variability and climate change.

SECTION FOUR: BIL PRIORITIES / FACTORS TO BE USED TO SELECT AWARDS [see 30 TAC § 14.7(6)]

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. This selection criteria provides for the selection of multiple recipients as needed.

Projects must incorporate the implementation of the [Estuary Resilience Action Plan](#) and the [GBEP Equity Strategy](#) (including having physical presence or connection to the targeted communities).

In total 11 stressors were identified in the **Estuary Resilience Action Plan**. This project addresses five stressors, including warmer summer, warmer winter, warmer water, increasing drought, and ocean acidification. Insufficient data of biological/chemical indicators related to these stressors directly affect successful implementation of **Galveston Bay Plan (GBP)** on *Protect and Sustain Living Resources* and *Inform Science-based Decision Making*. In addition, the current method for risk evaluation using consequence/probability matrix is qualitatively based, which can be further improved as a quantitative tool with new research data to be generated in this project. Using quantitative evaluations reduces uncertainties associated with qualitative methods, and this improvement will aid resource managers to make better management decision for coastal resilience that align with the GBP goals.

GBEP Equity Strategies allows the under-resourced communities (URCs) an opportunity to participate in the collaborative projects to improve Galveston Bay as well as benefit from a healthier estuary. It is a tradition of our research laboratories to engage with high school students, undergraduate/graduate students (URCs) and volunteers from diverse communities in research activities. In the past few years, we have visited the local communities (Bob Kosar of The City of El Lago, The Flying Dutchman in Kemah, and Prestige Oyster in San Leon) with a majority of workforce from URCs on the issues of hurricanes, floods, and oyster harvest as well as the subsequent impacts. In addition to existing communications and partnerships with the diverse local community this project plans to expand project engagement with K-12 students and adult volunteers from the local community on field sampling and laboratory activities promoting public awareness and collaborative partnerships to protect the health of Galveston Bay under climate change. Eventually this BIL project will directly and indirectly benefit URCs.

Action Priorities

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. **Proposals must address one or more of the following actions:**

- Habitat protection & enhancement, including adaptive management
- Projects in support of management measures (e.g., green infrastructure, watershed and human health, water reuse and conservation) and watershed-based plans.
- Projects that support research and monitoring related to the plan priorities of *Ensure Safe Human & Aquatic Life Use* and *Protect and Sustain Living Resources*.

Support Priorities

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. **Proposals must address at least one supporting action developed by the subcommittees, but preference will be given to projects that are able to incorporate multiple supporting actions.**

- Engaging K-12 students and/or adults in hands-on, place-based environmental education.
- Diversifying strategic partners with environmental and non-environmental community organizations working within targeted communities.
- Monitoring and research that produces environmental data applicable to future implementation and management decisions and made available to the public.

Stakeholder Priority Detail:

Numerous marine species reside either life-long in estuaries or temporally rely on estuaries as spawning and nursery grounds. Climate-driven stressors (e.g. hurricanes, floods, and droughts) with subsequent changes in the water conditions (e.g. acidified seawater (OA), varying salinity, and extreme temperature) impose unprecedented threats to both the native living resources and the Galveston Bay ecosystems. Unfortunately, climate/human-related disturbances (e.g. hurricanes, droughts, and oil spills etc.) tend to occur frequently and affect Galveston Bay. Timely monitoring and assessing the impacts of these disturbances is urgently needed to provide GBEP/TCEQ and stakeholders with environmental data applicable to implementation and management decisions. It needs monitoring programs of sensitive indicators for tracking the ecosystem status to inform making actionable management decisions and taking prudent actions of resilience adaptation. Compared to other indicators, a big knowledge gap on key pelagic indicators exists in the **State of the Bay**, and **Estuary Resilience Action Plan** in general, on fragile and calcifying organisms in particular. In addition, efforts and commitments in research projects need to perform **Equity Strategies**, promoting environmental awareness in public through stakeholder engagement.

Calcifying species such as oyster larvae (a key species of living resources in the bay), along with fragile species such as ctenophores and larvaceans that compete with larval fish and crab larvae for food resources in the estuary, are sensitive indicators for sustainable living resources and ecosystem status. They are subjected to climate-induced disturbance as well as the direct threat of acidified seawater. Traditional sampling is expensive, and especially destructive for fragile organisms (e.g. various larvae etc.), which often underestimates the quantity, role, and importance of these species in Galveston Bay. The goal of this project is to apply a novel approach of high-tech sampling framework for monitoring pelagic habitats and generating key indicator data including fragile and calcifying organisms in response to climate-related threats in Galveston Bay, which is in good alignment with **BIL Action Priorities**: (a) *Habitat protection & enhancement, including adaptive management*, and (b) *Projects support research and monitoring related to the plan priorities of Ensure Safe Human & Aquatic Life Use and Protect and Sustain Living Resources*. Engaging with K12 students, undergraduate/graduate students, adult volunteers from diverse communities this project also comply with **BIL Support Priorities**: (a) *Engaging K-12 students and/or adults in hands-on, place-based environmental education*, and (b) *Monitoring and research that produces environmental data applicable to future implementation and management decisions and made available to the public*.

Does the Project work with new, smaller communities/partnerships?

Yes

No

Bob Kosar, City of El Lago,

SECTION FIVE: BIL CONSIDERATIONS / FACTORS TO BE USED TO SELECT AWARDS [see 30 TAC § 14.7(6)]

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. This selection criteria provides for the selection of multiple recipients as needed.

Does the Project align with any EPA Areas of Special Interest?

- Reduction in nutrient pollution
- Water reuse and conservation
- Marine litter reduction
- Green infrastructure and resiliency

Zooplankton including merozooplankton (e.g. various larvae of oysters and crabs etc.) are often considered as bio-indicators of water conditions through monitoring variations in their species composition, diversity, and abundance. Data on water conditions (e.g., salinity, temperature, Chl-a, pH, and carbonate saturation state) to be collected in this project are physical indicators of Galveston Bay. These bio-physical data are useful for assessing water reuse and conservation, green infrastructure, and resiliency.

Build America, Buy America Act (BABA)

Build America, Buy America provisions only apply to awards over \$250,000, and where more than 5% of the award is spent on iron, steel, manufactured products, and construction materials permanently incorporated into construction, maintenance, or repair projects. Under the law, construction materials exclude cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives.

Will the Build America, Buy America Law apply to this application? Yes No
If yes, will you comply with the law or submit a waiver? Yes No
Comments (if any):

Project supplies and equipment to be purchased or manufactured products could support BABA.

Does the Project incorporate Federal Flood Risk Management Standards?

FFRMS - EPA Green Infrastructure Managing Flood Risks

Yes No

N/A

Infrastructure Investment and Jobs Act (IIJA) Signage

The recipient will ensure that a sign is placed at construction sites supported under this award displaying EPA logo and the official Building a Better America emblem and must identify the project as a “project funded by President Biden’s Bipartisan Infrastructure Law.” Construction is defined at 40 CFR 33.103 as “erection, alteration, or repair (including dredging, excavating, and painting) of buildings, structures, or other improvements to real property, and activities in response to a release or a threat of a release of a hazardous substance into the environment, or activities to prevent the introduction of a hazardous substance into a water supply.” The sign must be placed at construction sites in an easily visible location that can be directly linked to the work taking place and must be maintained in good condition throughout the construction period.

Does the proposal implement construction subject to signage requirements?

[Building A Better America Brand Guide – Using the EPA Seal and Logo](#)

Yes No

Does the Project Address the [Justice 40 Initiative](#)?

NEP’s have a target of ensuring that at least 40% of the benefits of investments from the five years of BIL funding flow to disadvantaged communities.

[Climate and Economic Justice Screening Tool \(CEJST\)](#)

Yes No

In the recent two years (2023 and 2024), the climate-related weather has shown significant impacts on the Galveston Bay ecosystems. Hotter and drier summer in 2023, and wetter and relatively cooler summer in 2024 (by the end of July) have drawn much public attention to the loss and well-being of oyster industries around Galveston Bay. Oyster fishermen and restaurants largely rely on the oyster harvest that is subjected to water conditions of the estuary for farming, processing, and selling oyster products. Results from this project to protect and sustain the key living resources in the bay, especially on oyster larvae, habitat conditions and estuarine ecosystems in a changing climate will benefit the communities relying on oyster harvest and blue crab fisheries as well.

Does the Project Address geographies above the 80th percentile as identified in [EJScreen](#) in the following demographics?

Yes No

- % Low income
- % Linguistically isolated
- % Less than high school education
- % Unemployed
- % Low life expectancy

N/A

SECTION SIX: PROPOSAL DETAILS

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority.

Project Summary:

This project is designed to perform quality-assured monitoring activities to generate accessible research data through applying a suite of high-tech approaches on sampling key species of living resources and ecosystem indicators that are applicable and transferable to multiple programs of GBEP/TCEQ on Galveston Bay ecosystems. Focusing on key species and indicators including fragile and calcifying organisms currently overlooked, but highly needed for decision making by resources managers and stakeholders, this project will provide high quality data to assess the impacts of ocean acidification and other biophysical processes on Galveston Bay ecosystems to inform science-based decision making.

Full Project Description (1,000 words or less):

Numerous species reside either life-long in estuaries or temporally rely on estuaries as spawning and nursery grounds. Climate-driven stressors with subsequent changes in the water conditions (e.g. acidified seawater (OA), varying salinity and extreme temperature) impose unprecedented threats to native living resources and Galveston Bay ecosystems (Hu & Cai 2013; Liu et al. 2021). Unfortunately, the disturbances (e.g. hurricanes, droughts, and oil spills etc.) tend to occur frequently in Galveston Bay (Liu et al. 2017&2021; Dias et al. submitted). Timely monitoring and assessing these disturbances are urgently needed to provide GBEP/TCEQ and stakeholders research accessible data for resilience implementation and management decisions. Monitoring indicators of sensitive to the status of native living resources and ecosystem status is promising to inform managers on science-based actionable decision making and taking prudent resilience adaptation. Species in estuaries are sensitive to disturbances induced by hurricanes (Liu et al. 2017&2021). Meanwhile, these organisms are subjected to the threat of OA in general (Hammill et al. 2017), but a lot of unknowns exist in understanding the Galveston Bay acidification (Dias et al. submitted). Thus, developing key indicators in an acidifying environment is highly needed for science-based decision making on ecosystem management regarding climate/human related disturbances, which generates accessible research data for implementation of Galveston Bay Plan (GBP).

Traditional sampling of pelagic organisms is expensive and labor-intensive. This approach is destructive to fragile organisms, such as ctenophores and larvaceans that prey on or compete for foods with oyster larvae, crab larvae and larval fish in estuaries. The time-consuming sample processing often delay data availability after sample collection making it difficult to provide real-time data of key indicators to managers for decision making. In addition, OA often causes adverse consequences on calcifying organisms (Doney et al. 2009), especially at larval stages of oysters, crabs, and bony fish, because their hard parts contain more soluble aragonite. However, relevant information on fragile and calcifying organisms subjected to increasing climate related threats in Galveston Bay ecosystems remains scarce.

Imaging technologies have enabled in situ high-frequency observations of ecosystem indicators using PlanktonScope in coastal waters (Bi et al. 2022). High frequency data of indicators have been shown valuable to provide information on the relevant physical and biological processes. In this project, a multidisciplinary approach will be used to generate biological and chemical data applicable and transferable to multiple GBEP programs that ensure aquatic life use, and protect and sustain living resources for better implementation of Galveston Bay Plan. The proposed work is built upon the proven research that has been conducted by the team (Liu et al. 2021; Hu et al. 2020), and the established collaboration between the PIs during an NSF project after Hurricane Harvey (Dias et al. submitted). In this project we will apply a high-tech integrated approach to simultaneously collect key ecosystem indicators in Galveston Bay (Fig.1) from September 2025 to August 2027 (8 seasonal cruises over two years) onboard *R/V Trident* of Texas A&M University using PlanktonScope (Fig.2) combined with net tows, and an underway CO₂ partial pressure (*p*CO₂) system (Fig.3) coupled with discrete water sampling for carbonate chemistry characterization.

At sea we will deploy PlanktonScope (Fig.2) to continuously collect images of pelagic indicators along with classical net tows (100µm mesh size, Fig.5) for validation of imaginary data plus ambient hydrographic factors (Fig.7&8, **Liu**), and simultaneously deploy the *p*CO₂ system (Fig.3, **Hu**) plus water sampling for lab-based characterization of carbonate chemistry (Fig.6). PlanktonScope will be rented from the University of Maryland (project partner). Later imaging files will be processed using high-speed computers with sophisticated algorithms of machine learning to automatically identify and count items (Fig.4). We will analyze data collected from PlanktonScope to examine the impacts of *p*CO₂, carbonate chemistry, and physical-biological factors on the native living resources and ecosystem status at high spatial scales. Logistic regression models will be developed to examine the impacts of carbonate chemistry, temperature, and salinity on the occurrence of pelagic indicators. We will synthesize the impacts of bio-physical processes across spatial and temporal scales on ecosystem indicators in the bay. The suite of indicators generated during the project will provide a full view of estuarine ecosystem status.

Our objectives are: (1) filling the knowledge gap on monitoring estuarine ecosystems by focusing on sensitive indicators including fragile and calcifying species currently overlooked, but highly needed by other stakeholders, (2) applying a suite of high-tech techniques to improve the coverage of data collection in time and space to provide early warning of swarms of ctenophores that prey on and compete with oyster larvae, crab larvae, and larval fish for food resources, (3) quantifying the impacts of acidification and bio-physical processes on seasonal and spatial patterns of indicators, particularly oyster larvae, larval bony fish as well as blue carb larvae as key species of living resources in the bay.

Bi H, Song J, Zhao J, **Liu H** et al. (2022) Temporal characteristics of plankton indicators in coastal waters: A continuum framework for high frequency data from plankton imaging systems. *Journal of Sea Research* 189: 102283

Doney SC et al. (2009) Ocean Acidification: a critical emerging problem for the ocean sciences. *Oceanography* 22:16–25

Hu X, Cai WJ (2013) Estuarine acidification and minimum buffer zone—A conceptual study. *Geophysical Research Letter* 40:5176-5181

Hu X et al. (2020) Disparate responses of carbonate system in two adjacent subtropical estuaries to the influence of Hurricane Harvey - A case study. *Frontier in Marine Science* 7:26. doi: 10.3389/fmars.2020.00026

Dias L, **Hu X**, **Liu H** (submitted) Spatial and seasonal variability of CO₂ flux and carbonate chemistry in a subtropical estuary

Liu H et al. (2017) Mesozooplankton dynamics in relation to environmental factors and juvenile fish in a subtropical estuary of the Gulf of Mexico. *Journal of Coastal Research* 33:5, 1038–1050.

Liu H et al. (2021) Detection of time-varying pulsed event effects on estuarine pelagic communities with ecological indicators after catastrophic hurricanes. *Ecological Indicators* 123, 107327.

Hammill E et al. (2017) Ocean acidification alters zooplankton communities and increases top-down pressure of a cubozoan predator. *Global Change Biology* <https://doi.org/10.1111/gcb.13849>.

Latitude/Longitude (Optional):

Location:

Other Plans Implemented:

Projects Map

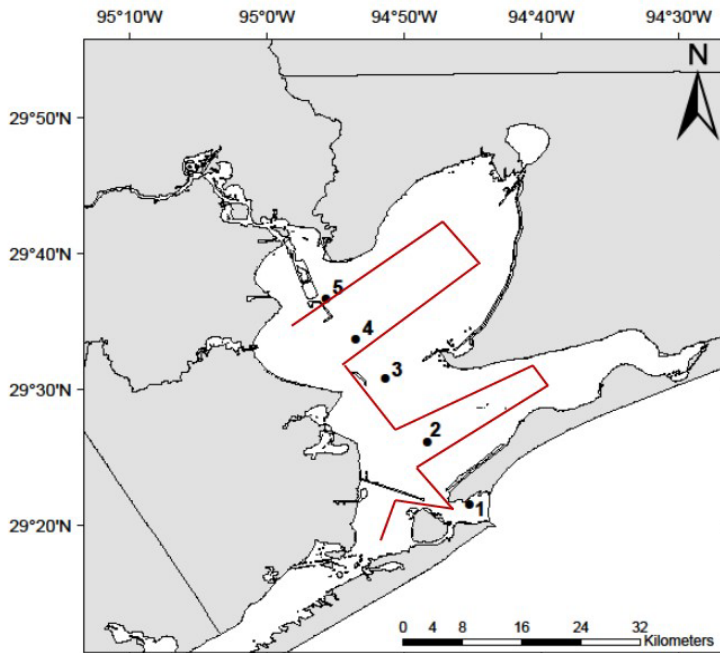


Figure 1 Proposed high-frequency continuous sampling transects in Galveston Bay (numbered dots are regular monitoring stations)

Supplemental Photos/Graphics (Optional):



Figure 2 PlanktonScope to be leased from the University of Maryland and deployed in Galveston Bay during the project



Figure 3 an underway CO₂ partial pressure ($p\text{CO}_2$) system deployed on a sampling cruise in Galveston Bay during the NSF RAPID project

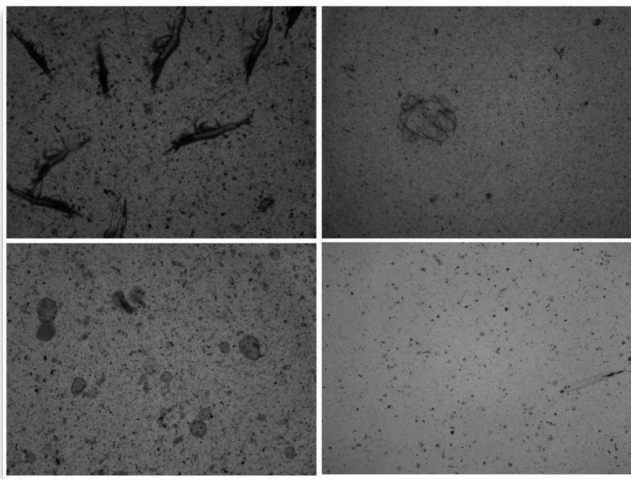


Figure 4 Illustration of images of pelagic indicators collected using PlanktonScope.
 (Photo-left: “Bi H., Song J., Zhao J., **Liu H** et al., Temporal characteristics of plankton indicators in coastal waters: A continuum framework for high frequency data from plankton imaging systems, published by *Journal of Sea Research*, Photo-right: computer-based automatic processing of imaginary files)

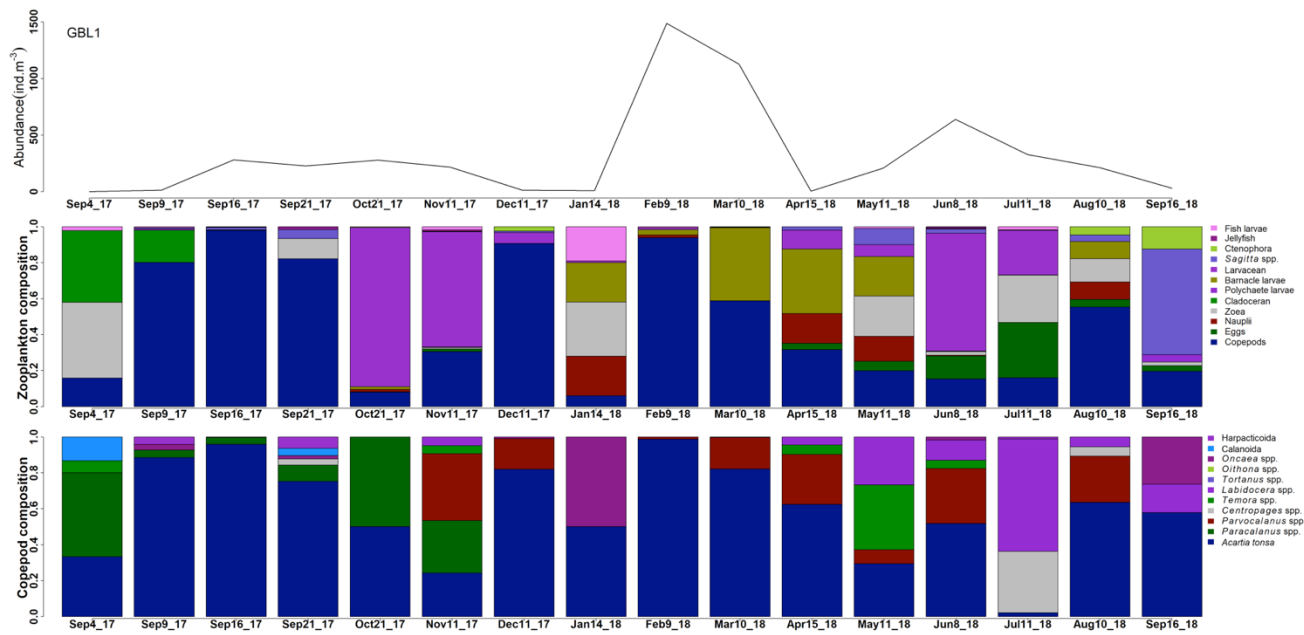


Figure 5 Exhibit of monitoring zooplankton after Hurricane (data published in Liu et al. 2021)

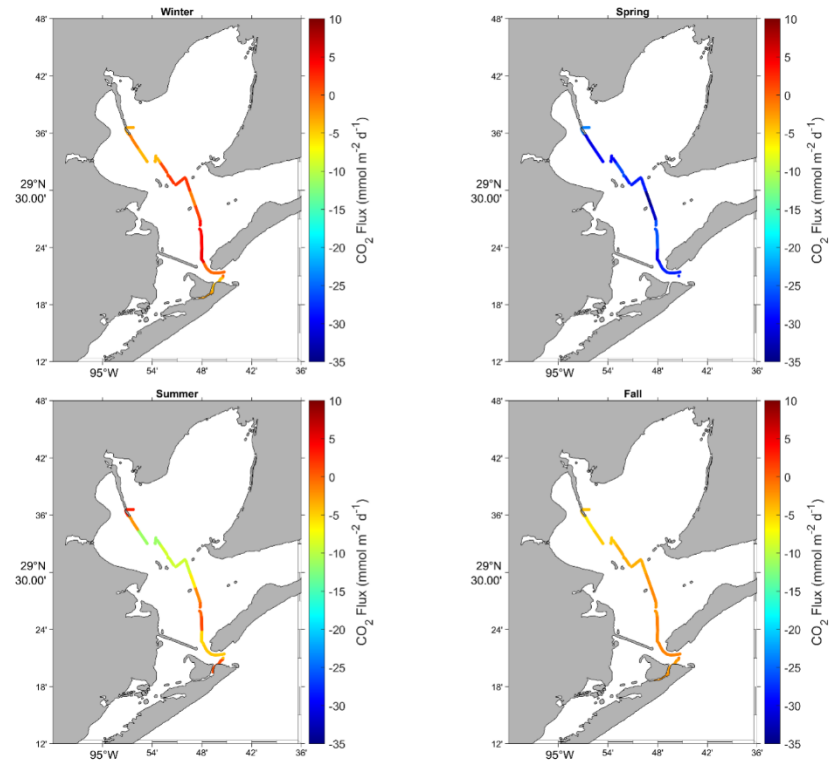


Figure 6 Exhibit of monitoring CO₂ flux in Galveston Bay after Hurricane (Dias et al. submitted)

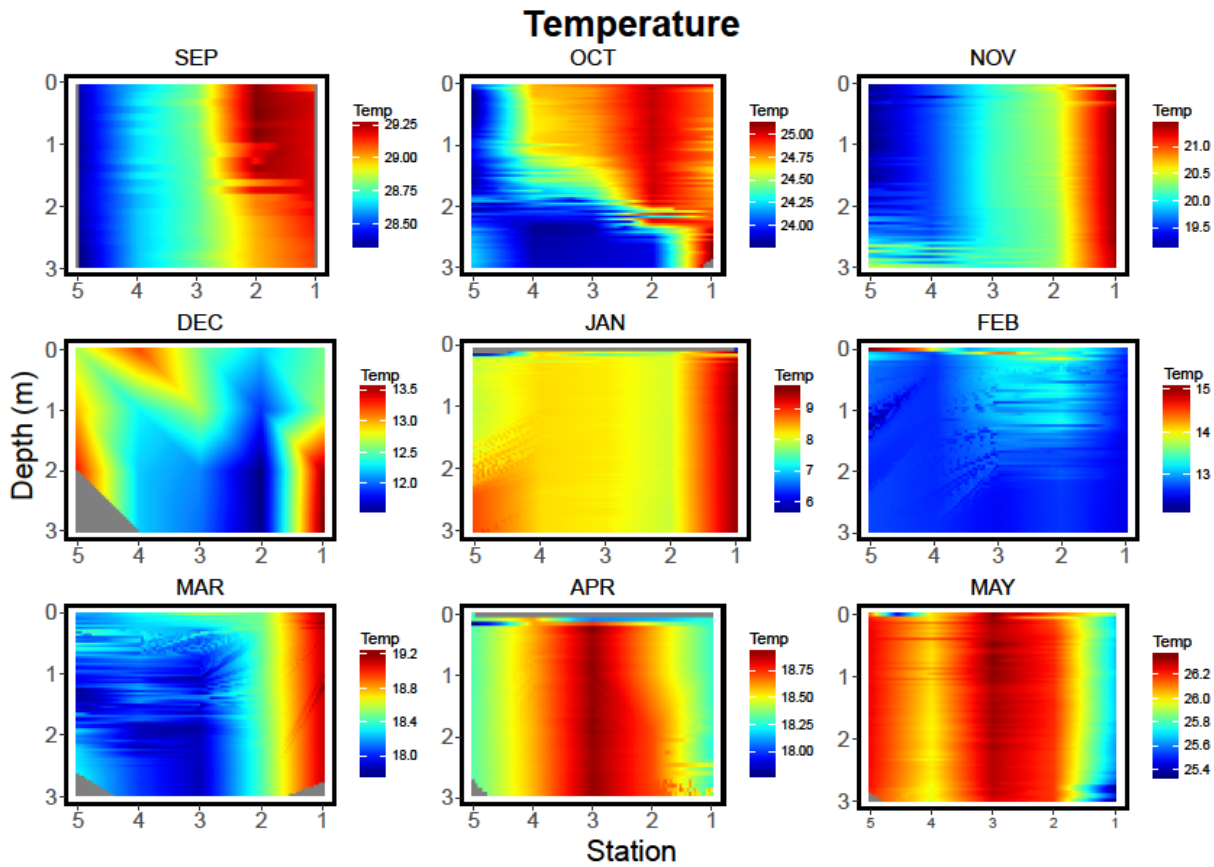


Figure 7 Exhibit of monitoring water temperature in Galveston Bay after Hurricane Harvey.

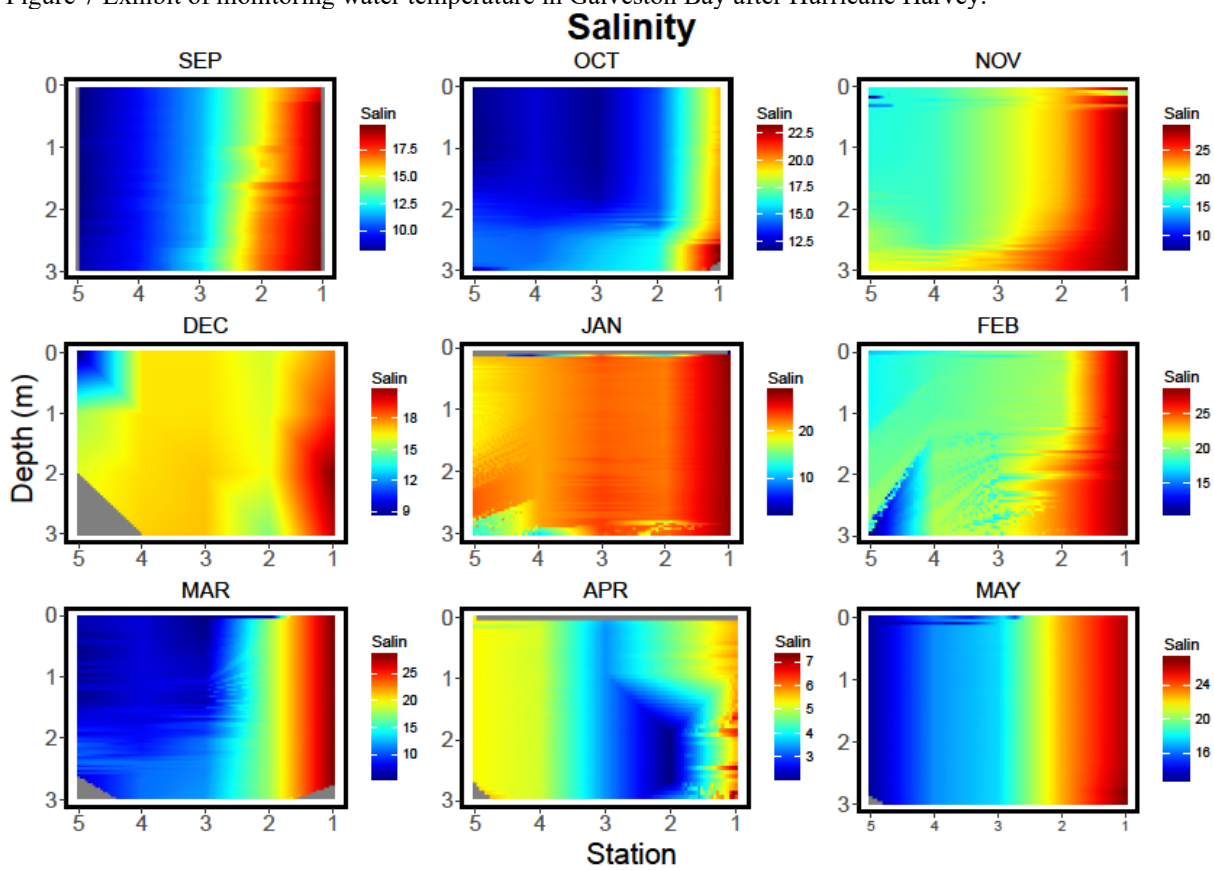


Figure 8 Exhibit of monitoring salinity in Galveston Bay after Hurricane Harvey

SECTION SEVEN: BUDGET DETAILS

Grant Payments [see 30 TAC § 14.7(12)]: All grant payments will be made on the basis of reimbursement for allowable costs (as defined in 2 CFR Part 200, Subpart E). All payments for awarded proposals will be reimbursements of allowable costs incurred after both parties have entered (signed) a grant agreement for the project.

Budget. Authorized budgeted expenditures for work performed are as follows:

Budget Category	Cost for Work to be Performed
Salary / Wages	\$139,903
Fringe Benefits (Please see appendix Faculty: 18.9% + \$1,104/mo Grad: 3% + \$283/mo)¹	\$20,199
Travel	\$4,944
Supplies	\$10,000
Equipment	\$0
Contractual	\$0
Construction	\$0
Other	\$258,818
Total Direct Cost	\$433,864
Indirect Costs	\$138,156
Total	\$572,020

Indirect Cost Agreement

Please note: If using a rate different from your entity Indirect Cost Agreement; a letter of exemption from the appropriate authority must be provided with the application, or a statement must be included certifying that the recipient has elected to be reimbursed for an amount less than its total indirect costs, that unreimbursed indirect costs are part of the recipient’s contribution to the success of the project, and that the recipient will pay for all unreimbursed indirect costs using funds available to it for that purpose.

Please see appendix for a copy of Texas A&M University at Galveston’s IDC rate agreement.
54% IDC rate x \$255,846 MTDC = \$138,156 Indirect Costs

Indirect Cost Reimbursable Rate. The reimbursable rate for this Contract is 54% of (check one):

- Salary and fringe benefits
- Modified total direct costs
- Other direct costs base

If other direct cost base, identify:

This rate is less than or equal to (check one):

- Predetermined Rate**— an indirect rate that is negotiated between the Performing Party and its federal cognizant agency and supported by a current Negotiated Indirect Cost Rate Agreement (NICRA) letter. A

¹ If fringe is not a single rate, please attach calculation or explanation as an appendix.

Predetermined Rate is not subject to adjustment except as provided by 2 Code of Federal Regulations (CFR) § 200.411.

De Minimis Rate— if Performing Party does not have a current negotiated indirect rate, Performing Party may use a standard rate of ten percent of Modified Total Direct Costs (MTDC) in lieu of determining the actual indirect costs of the service. Costs must be consistently charged as either indirect or direct costs.

Provisional Rate— an experienced-based rate agreed to by Performing Party and TCEQ in the absence of a NICRA rate negotiated with the applicable federal cognizant agency.

Partial Reimbursement Rate— a reimbursement rate agreed to between TCEQ and Performing Party that is less than the rate authorized under TxGMS or, where applicable, 2 CFR Part 200. Performing Party contributes all of its unreimbursed indirect costs to the successful performance of the project or projects funded under this Contract, in accordance with Article 9 of this section.

Other:

Other. If Budget Category “Other” is greater than \$25,000 or more than 10% of total Contract budget, identify the main constituents:

Conference Registration Fee (\$1,000 total): \$500 per year in Years 1&2 is requested for conferences (TBD) registration fees for Dr. Liu to disseminate research results.

Graduate Student Tuition (\$27,294 total): Tuition for one graduate student is budgeted at \$489 per credit for 24 credits per year in Years 1&2, and 12 credit hours in Year 3 with a 5% escalation annually starting in year 2.

PlanktonScope Rental Fees (\$16,800 total): We will rent the imaging system *PlanktonScope* from the University of Maryland. The rental cost is budgeted \$500/cruise for 4 cruises per year (\$2,000/per year) plus 4 times two-way shipping between Houston, TX and Baltimore, MD budgeted as \$1,600/per time (\$6,400/per year). The rental and shipping cost is \$8,400 per year in Years 1&2. The total cost is \$16,800 over 2 years.

Professional Services (\$10,000 total): \$5,000 per year is budgeted for professional service on sampling gear and technical consultant and software for processing of imaging files. The total is \$10,000 for 2 years.

Maintenance Fee (\$4,000 total): \$2,000 /per year for 2 years is required for annual maintenance of the high-tech sampling equipment.

Ship time (\$24,000 total): Ship time is budgeted for sampling Galveston Bay. We request support for 4 daily cruises (up to 12 hours per trip) per year in Years 1&2. The current rate for the TAMUG R/V Trident is \$250/hour. \$3,000 (for 12 hours) /per trip, \$12,000 for 4 cruises per year in Years 1&2. The total cost for ship time is \$24,000 during the project.

Subaward to University of Texas – Marine Science Institute: \$175,724 is budgeted for a subaward to Dr. Xiping Hu at UT-MSI. Dr. Hu’s group will conduct monthly cruises on board R/V Trident with Dr. Hui Liu’s group in Galveston Bay. Hu’s work includes water measurements (salinity, temperature, pH, carbon dioxide partial pressure, carbonate saturation states dissolved oxygen) using both discrete water collection and continuous underway data collection.

Hu will collaborate with Liu on furnishing the Quality Assurance Project Plan (QAPP). After each field trip, discrete water samples will be analyzed at Hu’s TAMU-CC lab for total titration alkalinity, total dissolved inorganic carbon, and pH. A graduate student (6 months per year) and a mid-level technician will conduct these analyses and data reporting. Hu will join Liu on data interpretation, modeling, and writing manuscript for publication.

SECTION EIGHT: CONTRACT REQUIREMENT [see 30 TAC § 14.7(15)]:

- By submitting this Project Proposal, you acknowledge that, if you become a successful grant recipient selected for a grant award, you must enter into a signed grant agreement or contract with TCEQ following the announcement of that award.

SECTION NINE: ACKNOWLEDGMENTS

Please read and understand the following:

- By submitting this Project Proposal, you acknowledge that information on how grant payments will be made is contained in the Budget Details section describing direct and possibly indirect costs. You further acknowledge that grant payments will be reimbursements on the basis of allowable costs incurred and that selected recipients will receive contract documents addressing allowable costs, unallowable costs, and reimbursement.
- By submitting this Project Proposal, you acknowledge your understanding that Project Proposals do not require matching funds and that a TCEQ director does not need to adjust or waive any matching funds requirement.
- By submitting this Project Proposal, you acknowledge that, if GBEP elects to hold a pre-submittal meeting relating to this Project Proposal, GBEP will notify you of the meeting's time and location indicating whether attendance is mandatory.

SECTION TEN: QUESTIONS AND PRE-SUBMITTAL MEETINGS [see 30 TAC § 14.7(13) and 30 TAC § 14.7(14)]:

- There are no pre-submittal meetings scheduled.
- For requests for additional, pre-submittal information [see 30 TAC § 14.7(13)], please contact gbep@tceq.texas.gov.

SECTION ELEVEN: ADDITIONAL INSTRUCTIONS

In submitting your Project Proposal, please refer and adhere to the following instructions and guidelines concerning materials and information required to be submitted by potential grant recipients:

- GBEP intends to accept only complete Projected Proposals in a layout and format constituting a filled version of this proposal document with all applicable sections therein addressed; however, GBEP may, in its sole discretion, consider and accept nonconforming Project Proposals in the best interest of the state.
- Unless otherwise specified by GBEP, formal signatures are not required on Project Proposals.
- Unless otherwise communicated or implied, GBEP requires 1 (one) completed copy of your Project Proposal.
- Project Proposals must be received electronically, through the email address listed on this page, by the deadline listed on both this page and the first page of this Project Proposal document.

Please Submit Project Proposals (Microsoft Word Only – No PDFs) by August 26, 2024 to gbep@tceq.texas.gov.



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Vice President for Research, Scholarship and Creative Endeavors

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Letter of Intent

Date: 8/8/2024

UT Austin PI: Xinping Hu, PhD
Prime Agency Name: Texas A&M University at Galveston
Application Title: High-tech monitoring Galveston Bay ecosystems in support of resilience implementation and management decision
OSP #: FP00008188

Project Information

Organization Name: The University of Texas at Austin
DUNS #: 170230239
UEI #: V6AFQPN18437
Congressional District: TX-037
Project Dates: 09/01/2025 to 08/31/2028

<u>First Year</u>		<u>All Years</u>	
Direct Costs	\$ 61,136	Direct Costs	\$ 114,600
F&A Costs	\$ 32,825	F&A Costs	\$ 61,123
Total Costs	\$ 93,961	Total Costs	\$ 175,723

Are Animals Applicable to this Proposed Project? Yes No

Are Humans Applicable to this Proposed Project? Yes No

Attached to this Notice of Intent:

Statement of Work	<input checked="" type="checkbox"/>	Budget Justification	<input checked="" type="checkbox"/>
Biosketch(es) / Key Personnel	<input type="checkbox"/>		<input type="checkbox"/>
Budget	<input checked="" type="checkbox"/>		<input type="checkbox"/>

The University of Texas at Austin is participating in the FDP Expanded Clearinghouse Pilot. Relevant subaward information is located on The University's entity profile located at <https://fdpclearinghouse.org/organizations/66>.

The appropriate programmatic and administrative personnel of The University of Texas at Austin involved in this grant application are aware of the pertinent Federal regulations and policies and are prepared to establish written inter-organizational agreements that will ensure compliance with all such policies.

Please note that The University of Texas at Austin reserves the right to negotiate the terms and conditions of any awarded grant or contract. As an institution of higher education, The University of Texas at Austin intends to perform the work under any awarded grant or contract as fundamental research and reserves the right to: 1) require that the provider notify the University if it is to provide any export controlled information; 2) to deny receipt of any export controlled materials; and 3) to reject any restrictions on the University's right to publish or otherwise disseminate information relating to this research.

The University of Texas at Austin has implemented, and elects to follow, an institutional financial conflicts of interest policy that complies with 42 CFR Part 50 (<https://secure2.compliancebridge.com/utexas/public/getdoc.php?file=7-1210>) AND is registered in the FDP FCOI Clearinghouse.

AUTHORIZED OFFICIAL



Elena V. Mota, BA
Associate Director of Pre-Award, Office of Sponsored Projects
The University of Texas at Austin

ADDITIONAL CONTACTS

Administrative and budgetary matters regarding the proposal:

Dale Cherry, Senior Proposal Analyst
The University of Texas at Austin
Office of Sponsored Projects
Phone: (512) 471-5138
Email: cherry@austin.utexas.edu

Negotiation and execution of agreement:

The University of Texas at Austin
Office of Sponsored Projects
Peter T. Flawn Academic Center (FAC)
Suite 426 (Mail Code A9000)
2304 Whitis Avenue
Austin, Texas 78712-1111
Phone: (512) 471-6424; FAX: (512) 232-6649
Email: osp@austin.utexas.edu

Galveston Bay Estuary Program Federal Bipartisan Infrastructure Law (BIL) Project Proposal – Federal Fiscal 2025



A PROGRAM OF TCEQ

Please complete the proposal form and submit to gbep@tceq.texas.gov by **August 26, 2024**. No late submittals will be considered for funding.

This Call for Project Proposals complies with 30 Texas Administrative Code (TAC) § 14.7, which lays out requirements for a competitive solicitation by TCEQ for grant awards. For convenience, specific citations to 30 TAC § 14.7 are identified in the text.

SECTION ONE: INTRODUCTION

Purpose [required by 30 TAC § 14.7(1)]: The purpose of the proposed grant from the Galveston Bay Estuary Program (GBEP), a program of the Texas Commission on Environmental Quality (TCEQ), is to implement *The Galveston Bay Plan, 2nd Edition* (the Plan), a comprehensive conservation and management plan falling under Section 320, of the Federal Water Pollution Control Act (33 U.S.C. Section 1330), for a designated national estuary in the State of Texas.

Objective and Allowable Activities [see 30 TAC § 14.7(4)]: The objective of this grant is to implement the GBEP stakeholder developed priorities for federal fiscal 2025 (FFY2025 Priority Area Actions) that were developed by the GBEP Budget and Priorities subcommittee for federal fiscal 2025 at the July 2024 meeting. Any proposal implementing the Plan may be submitted, but proposals implementing the FFY2025 Priority Area Actions will be considered above others.

Authority [see 30 TAC § 14.7(2)]: Grants issued by GBEP under this solicitation are authorized by: the Federal Water Pollution Control Act (Clean Water Act) § 320 (33 UNITED STATES CODE § 1330), commonly referred to as the National Estuary Program; TEX. WATER CODE § 5.124; and 30 TAC ch. 14.

Match Requirement [see 30 TAC § 14.7(10) and 30 TAC § 14.7(11)]: No matching funds are required. Therefore, there is no need to adjust or waive any matching funds requirement.

Multiple Awards [see 30 TAC § 14.7(7)]: GBEP anticipates awarding funds for multiple proposals. GBEP intends to award grants to that combination of proposals which best implements the Plan, factoring in all criteria identified in this Call for Project Proposals, the availability of funds, and the most effective division of funds between awards.

SECTION TWO: SUBMITTAL – GENERAL INFORMATION

Subcommittee:

Water and Sediment Quality/Monitoring and Research

Project Name:

Critical Source Areas Identification for Nonpoint Pollutant in Village Creek-Lake Arlington Watershed

Project Previously Funded by GBEP? Yes No

Lead Implementer / Categories of Eligible Recipients [see 30 TAC § 14.7(3)]:

The lead implementer must be in one of the following categories of eligible recipients. Please indicate which category applies to your entity. If the proposing party is not already paired with a lead implementer in one of the categories listed below, the proposing party will need to partner with an eligible recipient in one of these categories to be selected for funding. Please reach out to GBEP staff with any questions.

- Federal, State, or Local Government Council of Government Public ISDs or Universities
 Nonprofit Other*

University of Texas at Arlington (Public University)

Unique Entity ID (UEI) Number:

AND:

LMLUKUPJJ9N3

VIN or Tax ID:

75-600012

Contact Information:

Project Representative Name	Habib Ahmari, Assistant Professor
Project Representative Phone	817-272-6588
Project Representative Email	habib.ahmari@uta.edu

Amount Requested from GBEP (\$150,000 minimum):

\$488,711

Federal State No Preference

Is the project scalable?

Amount Requested per year (if applicable):

FY 2026 (09/01/2025-08/31/2026)	\$161,738
FY 2027 (09/01/2026-08/31/2027)	\$162,885
FY 2028 (09/01/2027-08/31/2028)	\$164,088
Total	\$488,711

Project Dates / Duration (beginning no earlier than September 1, 2025 - ending no later than May 31, 2028) [see 30 TAC § 14.7(5)]:

September 1, 2025 - May 31, 2028

Project Urgency:

It is imperative that the project begins in Fall 2025 to generate essential supplemental data for identifying Critical Source Areas (CSAs) within the Village Creek-Lake Arlington Watershed. This timing aligns with the scheduled installation of best management practices (BMPs) such as raingardens and bioretention systems, which are integral components of the Watershed Protection Plan (WPP) implementation. The project's findings will not only enhance CSA identification but also provide valuable data that can be seamlessly integrated into ongoing monitoring programs conducted by TCEQ, TRA, and local municipalities. These programs are critical for assessing water quality in the Trinity River and its tributaries, including Village Creek, ensuring that the locations of BMPs are selected appropriately, the effectiveness of these practices is accurately measured, and any emerging water quality issues are promptly addressed.

Total Project Cost (including Leveraging Amounts, if any; provide leveraging information where indicated below):

\$488,711

Is this an estimate?

Leveraging (in-kind and/or cash):

N/A

Partners* and Their Roles:

The project team has received support from several of the following local entities on similar projects in the study area. These entities will also participate in this project by providing access to all historical data and studies, offering technical expertise and feedback in developing monitoring plans and QAPP, facilitating access to monitoring locations, assisting in training and fieldwork, and organizing outreach activities. The supporting entities include the North Central Texas Council of Governments (NCTCOG), the Trinity River Authority (TRA), and the cities of Arlington, Fort Worth, Burleson, and Crowley.

***If partners are subgrantees completing work reimbursable under GBEP funding, a letter of commitment from the partner must be submitted under the application.**

SECTION THREE: GALVESTON BAY PLAN, 2ND EDITION IMPLEMENTATION

Grant recipient activities, allowed or required to be performed, must implement Galveston Bay Plan 2nd Edition Priority Area Actions. All proposals must implement these actions. This selection criterion provides for the selection of multiple recipients as needed.

Galveston Bay Plan, 2nd Edition References

<https://gbep.texas.gov/ensure-safe-human-and-aquatic-life-use/>

<https://gbep.texas.gov/protect-and-sustain-living-resources/>

<https://gbep.texas.gov/engage-communities/>

<https://gbep.texas.gov/inform-science-based-decision-making/>

Galveston Bay Plan Priority Area Actions Addressed:

Plan Priority 1: Ensure Safe Human and Aquatic Life Use

- NPS-1 NPS-2 NPS-3 NPS-4
PS-1 PS-2 PS-3
PHA-1 PHA-2 PHA-3 PHA-4 PHA-5

Plan Priority 2: Protect and Sustain Living Resources

- HC-1 HC-2 HC-3
SC-1 SC-2
FWI-1 FWI-2 FWI-3

Plan Priority 3: Engage Communities

- SPO-1 SPO-2 SPO-3 SPO-4
PEA-1 PEA-2 PEA-3

Plan Priority 4: Inform Science-based Decision Making

- RES-1 RES-2 RES-3 RES-4
RES-5 RES-6 RES-7 RES-8
ACS-1 ACS-2 ACS-3

Priority Area Actions Detail:

Plan Priority 1: Ensure Safe Human and Aquatic Life Use

NPS-1: Support Watershed-Based Plan Development and Implementation

NPS-2: Support Nonpoint Source Education and Outreach Campaigns

The project implements multiple Nonpoint Source Pollution (NPS) actions, specifically NSP-1 and NSP-2, to address water quality challenges impacting the safe use of Galveston Bay for human and aquatic life. The project team will develop a procedure for determining Critical Source Areas (CSAs) for sediment, nutrients (phosphorus and nitrogen), and E. coli in urban areas. Village Creek, currently listed by TCEQ as impaired due to high bacteria levels, will be a focal point, as existing models in the Watershed Protection Plan (WPP) are insufficient to account for the rapid urbanization within the watershed. This project aims to apply the CSA identification method developed herein as a case study in Village Creek and expand its application to other urban areas in the Galveston Bay watershed, improving water quality in rapidly urbanizing regions. Collecting field data will be crucial for model development and validation, supporting the WPP's implementation, including the selection of sites for Best Management Practices (BMPs) and monitoring their effectiveness (NPS-1). Additionally, the project will feature outreach and education programs to promote the CSA identification procedure to municipalities and water quality management agencies (NSP-2). Expected outcomes include enhanced water quality monitoring, improved watershed management practices, and a significant reduction in pollutant loads from urban areas discharging into Galveston Bay.

Plan Priority 2: Protect and Sustain Living Resources

HC-3: Habitat Enhancement

The Village Creek Watershed is currently facing significant environmental challenges, particularly the issue of excessive E. coli contamination. E. coli in waterbodies poses serious health risks to humans, including severe gastrointestinal illnesses, and can also disrupt aquatic ecosystems. Village Creek, along with several

other water bodies in North Central Texas, has been designated as a Priority Water in the latest EPA-approved Texas Nonpoint Source (NPS) Management Program.

To address this issue, the project will employ the Critical Source Area (CSA) identification method to accurately pinpoint the sources of E. coli and other harmful pollutants. This targeted approach aims to protect and sustain living resources (HC-3) by mitigating pollutant loads and improving water quality. Furthermore, the application of the CSA identification method in other urban communities within the Galveston Bay watershed is expected to contribute to habitat enhancement in the bay area. By addressing pollutant sources more effectively, this method supports broader efforts to protect and restore the health of the Galveston Bay ecosystem.

Plan Priority 3: Engage Communities

SPO-2 Workshops and Events

SPO-3 Support Regional Initiatives

SPO-4 Local Government Outreach

This project will engage in outreach and education efforts to disseminate the CSA identification procedure to local stakeholders, ensuring broad accessibility and understanding. These efforts include organizing workshops, developing training materials, and providing technical support to stakeholders in implementing the CSA identification procedure, aligning with SPO-2 to SPO-4 as detailed below:

Organizing Workshops: The project team will collaborate with local government agencies such as NCTCOG to organize and conduct workshops designed to educate stakeholders about the CSA identification procedure. These workshops will cover the methodology, its application, and the benefits of identifying CSAs in urban watersheds. The content will be tailored to various audiences, including local government officials, environmental organizations, cities, and community groups.

Developing Training Materials: The project team will create comprehensive training materials to facilitate the dissemination of the CSA identification procedure.

Providing Technical Support: The project team will offer technical support to stakeholders in implementing the CSA identification procedure. This will include one-on-one consultations to address specific questions and challenges encountered by stakeholders, and ongoing support to answer queries related to the procedure.

These efforts also advance NSP-2 by guiding municipalities and water quality management agencies in applying the CSA identification procedure to achieve positive reductions in bacterial loads in Galveston Bay.

Plan Priority 4: Inform Science-based Decision Making

RES-4: Conduct Monitoring and Research to Address Limits to Contact Recreation

RES-6 Evaluate Best Management Practice (BMP) Projects

The proposed project will implement Plan Priorities 4, specifically RES-4 and RES-6. Discharge and water quality data, including both baseflow and stormflow, will be collected from Village Creek and its tributaries to address gaps in data necessary for watershed modeling, identify CSAs for nonpoint source pollutants, and monitor the effectiveness of implementation activities within the watershed. Water samples will be analyzed for various water quality parameters, including total suspended solids (TSS), turbidity (Tu), E. coli, nitrogen, phosphorus, dissolved organic carbon, BOD, COD, pH, and metals such as zinc, chromium, and copper (RES-4). Additionally, field data collection will involve sampling from upstream and downstream of BMPs installed in the watershed as part of the Village Creek-Lake Arlington WPP to assess their performance (RES-6).

The project team will work closely with the WSQ and M&R subcommittees to coordinate these actions for successful implementation.

SECTION FOUR: BIL PRIORITIES / FACTORS TO BE USED TO SELECT AWARDS [see 30 TAC § 14.7(6)]

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. This selection criteria provides for the selection of multiple recipients as needed.

Projects must incorporate the implementation of the [Estuary Resilience Action Plan](#) and the [GBEP Equity Strategy](#) (including having physical presence or connection to the targeted communities).

The project aligns closely with the Estuary Resilience Action Plan and the Galveston Bay Estuary Program (GBEP) Equity Strategy by addressing key stressors impacting the Galveston Bay. Specifically, it targets two key issues: 1) *Changes to Land Use and the Built Environment*, and 2) *Population Growth in the Galveston Bay watershed*.

Addressing Estuary Stressors: The rapid population growth in the Galveston Bay watershed has led to significant land-use changes, transforming natural landscapes into urban areas over the past several decades. This urbanization has disrupted the natural drainage patterns, leading to altered hydrology within the watershed. The increase in impervious surfaces due to urban development has resulted in higher volumes and peak discharges of stormwater runoff, which are considerably larger compared to those from areas with natural ground cover. This stormwater runoff is a significant contributor to water quality impairment, introducing pollutants that degrade the health of aquatic ecosystems and pose risks to human health.

Project Goals and Implementation: The project's primary objective is to identify Critical Source Areas (CSAs) of nonpoint source pollutants within the Village Creek-Lake Arlington Watershed. By focusing on these CSAs, the project aims to mitigate the adverse effects of urban water quality degradation. The performance of the CSA identification model will be validated under both base-flow and extreme weather conditions to ensure its effectiveness across various scenarios.

Equity and Outreach: In alignment with the GBEP Equity Strategy, the project includes a comprehensive outreach and education component. This initiative will promote the CSA identification procedure to other municipalities and water quality management agencies within the Galveston Bay watershed, especially in the lower portion of the watershed. By sharing this knowledge, the project seeks to empower local communities and authorities to better manage water quality issues, particularly in underserved areas that may be disproportionately affected by environmental stressors.

Long-term Impact and Utilization: The model developed through this project will serve as a valuable tool for local water management authorities and municipalities. It will enable them to identify critical nonpoint pollutant sources, enhance water quality monitoring during extreme events, conduct risk assessments, and issue timely alerts to protect both human and aquatic life. By ensuring that decisions are informed by science, the project supports the overarching goals of the Estuary Resilience Action Plan, contributing to the long-term health and resilience of the Galveston Bay Estuary.

Action Priorities

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. **Proposals must address one or more of the following actions:**

- Habitat protection & enhancement, including adaptive management
- Projects in support of management measures (e.g., green infrastructure, watershed and human health, water reuse and conservation) and watershed-based plans.
- Projects that support research and monitoring related to the plan priorities of *Ensure Safe Human & Aquatic Life Use* and *Protect and Sustain Living Resources*.

Support Priorities

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. **Proposals must address at least one supporting action developed by the subcommittees, but preference will be given to projects that are able to incorporate multiple supporting actions.**

- Engaging K-12 students and/or adults in hands-on, place-based environmental education.
- Diversifying strategic partners with environmental and non-environmental community organizations working within targeted communities.
- Monitoring and research that produces environmental data applicable to future implementation and management decisions and made available to the public.

Stakeholder Priority Detail:

The proposed project will address the following action and support priorities:

Action Priorities:

The project directly addresses key action priorities outlined in the Plan by focusing on the identification and management of Critical Source Areas (CSAs) within the Village Creek-Lake Arlington Watershed. This effort aligns with several of the action priorities, including:

- **Habitat Protection & Enhancement:** The project's primary goal of identifying CSAs of nonpoint source pollutants will contribute significantly to habitat protection and enhancement in urban areas of the Galveston Bay watershed. By pinpointing sources of pollutants such as nutrients and E. coli, the project will provide critical insights that can be used to protect aquatic habitats. This information will support adaptive management practices that are essential for responding to the dynamic environmental challenges facing the watershed.
- **Support for Management Measures:** The project will enhance watershed management practices by optimizing water quality monitoring efforts and evaluating the effectiveness of green infrastructure and best management practices (BMPs). The CSAs identification model will be instrumental in prioritizing areas for intervention, thereby improving the allocation of resources and enhancing the overall effectiveness of management measures within the watershed.
- **Research and Monitoring:** The integration of water quality monitoring with research efforts to develop and validate the CSAs identification model is a cornerstone of this project. By focusing on urban sub-watersheds, the project will generate valuable data that supports the plan priorities of ensuring safe human and aquatic life use, as well as protecting and sustaining living resources. This data will be crucial for future decision-making processes related to water quality management in the Galveston Bay watershed.

Support Priorities:

The project also aligns with several of the supporting priorities developed by the subcommittees, particularly in the areas of environmental education and data dissemination:

- **Engaging K-12 Students:** The project team will develop educational materials specifically designed for K-12 students participating in the UTA environmental engineering summer camp. These materials will focus on the importance of best management practices to reduce bacteria and nutrient loads in the Galveston Bay watershed, thereby fostering a deeper understanding of environmental stewardship among the next generation.
- **Collaboration and Dissemination:** The project team will collaborate with local cities and agencies to disseminate the results of the study. This collaboration will be key to implementing the CSA identification methodology in other urban settings within the Galveston Bay watershed. The outcomes of the research will be made publicly available, supporting the future development, and updating of Total Maximum Daily Loads (TMDLs) and Watershed Protection Plans (WPPs). This will ensure that the findings are not only utilized in immediate management decisions but also contribute to long-term planning and implementation strategies across the region.

Does the Project work with new, smaller communities/partnerships?

- Yes
 No

Given the project's specific objectives, there will be a focused effort on fostering greater collaboration with key local stakeholders, including the North Central Texas Council of Governments (NCTCOG), the Trinity River Authority (TRA), and various cities. These collaborations will be central to the project's education and outreach efforts. The project team will work closely with these entities to assist in the development of outreach and education programs that highlight the impacts of nutrient loading and E. coli contamination in local streams, lakes, and other waterways.

These educational programs will be designed to facilitate the sharing of best practices and lessons learned across different communities, ensuring that the knowledge gained through the project is effectively communicated and applied. Many of the cities and organizations involved already have established

partnerships with non-profits, schools, and youth organizations, which will be leveraged to maximize the reach and impact of the outreach efforts. For instance, TRA serves as the watershed coordinator for the Village Creek WPP, which was approved by the EPA in 2019. During the development of the WPP, TRA coordinated with a diverse range of stakeholders, including landowners, non-profits, businesses, and government officials. TRA's ongoing partnerships with various entities, particularly non-profits, will be instrumental in both the development and implementation of projects that support the goals of the Village Creek-Lake Arlington WPP.

This initiative seeks to establish long-term collaboration among various organizations in the region, fostering a unified approach to nonpoint source water quality management and environmental stewardship. By building these strong partnerships, the project aims to create a sustainable framework for addressing water quality issues, ensuring that the benefits of the project extend well beyond its initial implementation phase.

SECTION FIVE: BIL CONSIDERATIONS / FACTORS TO BE USED TO SELECT AWARDS [see 30 TAC § 14.7(6)]

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. This selection criteria provides for the selection of multiple recipients as needed.

Does the Project align with any EPA Areas of Special Interest?

- Reduction in nutrient pollution
- Water reuse and conservation
- Marine litter reduction
- Green infrastructure and resiliency

The Project aligns with the following EPA Areas of Special Interest:

Reduction in Nutrient Pollution: The project directly targets the reduction of nutrient pollution by identifying Critical Source Areas (CSAs) of nonpoint source pollutants, specifically focusing on nutrient loading within the Village Creek-Lake Arlington Watershed. By pinpointing these sources, the project aims to mitigate the introduction of excess nutrients into local waterbodies, which is a significant contributor to water quality degradation. The data and insights gained from this project will inform targeted management practices and outreach efforts, helping to reduce nutrient pollution and protect the health of aquatic ecosystems in the Galveston Bay watershed.

Green Infrastructure and Resiliency: The project also supports the implementation and evaluation of green infrastructure as a key component of watershed management. By integrating green infrastructure practices into the CSA identification model, the project will assess the effectiveness of these practices in reducing pollutant loads and enhancing watershed resiliency. This approach not only contributes to immediate water quality improvements but also builds long-term resilience against the impacts of urbanization and climate change. The project's focus on adaptive management and collaboration with local stakeholders further strengthens its alignment with EPA's interest in promoting green infrastructure and resilience.

Build America, Buy America Act (BABA)

Build America, Buy America provisions only apply to awards over \$250,000, and where more than 5% of the award is spent on iron, steel, manufactured products, and construction materials permanently incorporated into construction, maintenance, or repair projects. Under the law, construction materials exclude cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives.

Will the Build America, Buy America Law apply to this application? Yes No
If yes, will you comply with the law or submit a waiver? Yes No
Comments (if any):

N/A

Does the Project incorporate Federal Flood Risk Management Standards?

[FFRMS - EPA Green Infrastructure Managing Flood Risks](#)

Yes No

N/A

Infrastructure Investment and Jobs Act (IIJA) Signage

The recipient will ensure that a sign is placed at construction sites supported under this award displaying EPA logo and the official Building a Better America emblem and must identify the project as a “project funded by President Biden’s Bipartisan Infrastructure Law.” Construction is defined at 40 CFR 33.103 as “erection, alteration, or repair (including dredging, excavating, and painting) of buildings, structures, or other improvements to real property, and activities in response to a release or a threat of a release of a hazardous substance into the environment, or activities to prevent the introduction of a hazardous substance into a water supply.” The sign must be placed at construction sites in an easily visible location that can be directly linked to the work taking place and must be maintained in good condition throughout the construction period.

Does the proposal implement construction subject to signage requirements?

[Building A Better America Brand Guide - Using the EPA Seal and Logo](#)

Yes No

Does the Project Address the [Justice A Initiative](#)?

NEP’s have a target of ensuring that at least 40% of the benefits of investments from the five years of BIL funding flow to disadvantaged communities.

[Climate and Economic Justice Screening Tool \(CEJST\)](#)

Yes No

A significant portion of the Galveston Bay watershed is classified as *disadvantaged*, with rapidly expanding urban areas placing additional burdens on many communities. Among these, the communities in the southern and western portions of the Village Creek-Lake Arlington Watershed face substantial environmental challenges, particularly due to excessive E. coli contamination.

This project aims to address critical water quality issues within the Village Creek-Lake Arlington Watershed and the surrounding region, delivering significant benefits to disadvantaged and underserved communities. Monitoring sites will be strategically selected in subwatersheds located within communities identified as disadvantaged by the Climate and Economic Justice Screening Tool (CEJST). The Critical Source Area (CSA) method developed in this project will be employed to pinpoint hotspots of nonpoint source pollution. The findings will enable local municipalities to more effectively address water quality concerns in these areas.

By improving water quality and reducing levels of nutrient and E. coli contamination, the project will protect public health, particularly for communities that rely on these water sources for drinking and recreational activities. These communities are often the most vulnerable to waterborne illnesses and environmental degradation due to limited resources and infrastructure. Furthermore, enhancing water quality will improve the overall ecological health of the Village Creek Watershed and downstream waterbodies, including Galveston Bay, thereby supporting local biodiversity. By prioritizing the needs and well-being of disadvantaged and underserved communities, this project will contribute to creating a healthier, more resilient, and equitable environment for all residents of the Galveston Bay watershed.

Does the Project Address geographies above the 80th percentile as identified in [EJScreen](#) in the following demographics?

Yes No

- % Low income
- % Linguistically isolated
- % Less than high school education
- % Unemployed

☒ % Low life expectancy (45-51)

Village Creek, along with several other waterbodies in the Galveston Bay watershed, is listed as a Priority Water in the most recent EPA-approved Texas Nonpoint Source (NPS) Management Program. According to the EPA's EJScreen mapper, the demographics of the area reveal significant socioeconomic challenges: 33% of the population is classified as low income, 5% are linguistically isolated, 15% have less than a high school education, 6% are unemployed, and 19% have a low life expectancy. These indicators fall between the 53rd and 75th percentiles compared to state and national averages.

However, when focusing on specific communities within the western and southern portions of the Village Creek-Lake Arlington Watershed, the data shows even greater disparities. These areas rank in the 80th percentile or higher for 3 of the 13 Environmental Burden Indicators and 6 of the 11 Socioeconomic Indicators. This suggests that these communities are facing significant environmental and social stressors, making them particularly vulnerable to the impacts of water quality issues.

To address these concerns, watershed modeling to identify Critical Source Areas (CSAs) and field data collection will be conducted in four subwatersheds located within these high-risk areas. By targeting these specific subwatersheds, the project aims to identify and mitigate the sources of pollution most affecting the communities with the highest socioeconomic and environmental burdens, as identified by EJScreen. This targeted approach will ensure that the project not only improves water quality but also addresses the environmental justice concerns of the most impacted populations.

SECTION SIX: PROPOSAL DETAILS

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority.

Project Summary:

Urbanization often leads to water quality degradation in many waterbodies. Identifying Critical Source Areas (CSAs) –regions with disproportionately high pollution loads– is essential for effective water quality management. This project aims to develop a novel method to better identify CSAs within the Village Creek watershed, which eventually flows into Galveston Bay. By improving water quality in rapidly urbanizing areas, the project addresses the challenge of urban water quality degradation through targeted CSA modeling. The project objectives align with the Bipartisan Infrastructure Law (BIL) priorities by focusing on habitat protection, green infrastructure, and watershed-based plans. Additionally, it includes outreach and education programs to promote CSA identification techniques to municipalities and water quality agencies and engages K-12 students in environmental education to foster community involvement and awareness.

Full Project Description (1,000 words or less):

Nonpoint source (NPS) pollution is a widespread environmental issue, originating from diverse human activities across landscapes. In the United States, NPS pollution remains one of the leading causes of water quality degradation in rivers, lakes, and coastal areas. Unlike point source pollution, which can be traced to specific industrial or sewage treatment plants, NPS pollution presents a substantial challenge both from a regulatory and an assessment standpoint due to its diffuse nature.

Urbanization is a significant driver of water quality deterioration. As cities expand, urban watersheds become conduits for pollutants such as oil, pet waste, pesticides, herbicides, nutrients, road salts, bacteria, and sediment. These contaminants accumulate on impervious surfaces like sidewalks, parking lots, and streets, as well as on more pervious areas like yards and fields. Rain or snowmelt washes these pollutants into stormwater systems, which then carry them into streams, rivers, and lakes as NPS pollution.

Effectively addressing NPS pollution requires targeted strategies, such as identifying Critical Source Areas (CSAs)-specific locations within a watershed that disproportionately contribute to pollution. Identifying CSAs is essential for designing effective monitoring programs and implementing watershed management strategies. Research has shown that a small portion of a watershed can contribute to the majority of its pollution. For instance, a study in Minnesota's Twin Cities found that 80% of pollutants were generated by just 20% of the watershed area. However, while significant research has been done on CSAs in agricultural and natural watersheds, there is still much to learn about how CSAs function in urban environments.

The Village Creek-Lake Arlington Watershed, part of the Galveston Bay watershed, faces environmental challenges due to rapid urbanization and socio-economic disparities. This watershed has been classified as an impaired waterbody by the Texas Commission on Environmental Quality (TCEQ) due to high bacteria levels, preventing it from meeting standards for contact recreation. Although models have been used in the Watershed Protection Plan (WPP) to identify potential pollutant sources, the area's rapid urbanization has outpaced these models, making it difficult to accurately identify and address critical NPS pollution sources.

Project Overview

This project, led by the University of Texas at Arlington (UTA) and funded by the Galveston Bay Estuary Program (GBEP), aims to pinpoint CSAs of NPS pollutants within the Village Creek-Lake Arlington Watershed to mitigate urban water quality issues. The project will be conducted in collaboration with key stakeholders, including the North Central Texas Council of Governments (NCTCOG), the Trinity River Authority (TRA), and the cities of Arlington, Fort Worth, Burleson, and Cowley.

Key Activities

1. Watershed Modeling and CSA Identification:

- The project will conduct watershed modeling to identify CSAs within the Village Creek-Lake Arlington Watershed, focusing on subwatersheds in disadvantaged areas identified by the Climate and Economic Justice Screening Tool (CEJST). The project team will develop a procedure for determining CSAs for sediment, nutrients (phosphorus and nitrogen), and E. coli in urban areas, using the Village Creek watershed as a demonstration site.
- The watershed model will incorporate hydrological response units and be developed under various scenarios with different input data resolutions (e.g., land cover and digital elevation models (DEM)) and watershed delineations to establish the necessary input data resolution for accurate CSA determination. The flow and water quality data collected will be used for model calibration and validation.

2. Water Quality Monitoring:

- Field data collection and analysis will be used to validate the CSA identification method, ensuring it accurately identifies pollution hotspots. The project team will collect baseflow and biased flow water quality samples, which will be analyzed at the UTA Environmental Lab for various parameters, including total suspended solids (TSS), turbidity, E. coli, nutrients, dissolved organic carbon, biochemical oxygen demand (BOD), chemical oxygen demand (COD), pH, and metals.

3. Outreach and Education:

- The project will include workshops, training materials, and technical support for stakeholders to implement the CSA identification procedure.

- Collaboration with local municipalities and regional organizations will promote the adoption of the CSA method across the region, while targeted outreach and education programs will address the impacts of nutrient loading and E. coli contamination.
- The project will also engage K-12 students and community members in hands-on environmental education activities, fostering a sense of stewardship and empowering them to contribute to water quality improvement efforts.

Expected Outcomes

The project is expected to achieve the following outcomes:

- *Improved Water Quality:* Significant reductions in nutrient and E. coli levels in the Village Creek-Lake Arlington Watershed, leading to safer water for drinking and recreation.
- *Enhanced Community Resilience:* Strengthened capacity in disadvantaged areas to address environmental challenges through education, outreach, and improved water management practices.
- *Biodiversity Conservation:* Restoration of critical habitats within the watershed, supporting local biodiversity and contributing to the overall ecological health of Galveston Bay.
- *Replicable Model for Water Quality Management:* A validated CSA identification model that can be replicated in other urban watersheds across the Galveston Bay watershed, ensuring broader regional impact.

This project represents a comprehensive approach to addressing both environmental degradation and social inequality within the Village Creek-Lake Arlington Watershed. By focusing on ecological restoration and community empowerment, it not only aims to create a healthier, more resilient, and equitable environment for all residents of the Galveston Bay watershed but also directly contributes to the long-term health of Galveston Bay itself. The reduction of nutrient and E. coli levels upstream will lead to cleaner water entering the bay, supporting the restoration of critical habitats, and enhancing biodiversity in this vital estuarine ecosystem. As nutrient loads decrease and water quality improves, the project will help mitigate the adverse effects of urban runoff on Galveston Bay, ultimately contributing to its resilience against environmental stressors. The success of this project will serve as a model for similar initiatives, demonstrating the effectiveness of targeted, community-driven environmental action in protecting and preserving one of Texas's most important natural resources- Galveston Bay.

Latitude/Longitude (Optional):

97.41° W, 32.75° N to 97.2° W, 32.43° N

Location:

The study area encompasses the Village Creek-Lake Arlington Watershed, which is within the Lower West Fork Trinity subbasin, a part of the Upper Trinity River basin and the Trinity River subregion. The Trinity River ultimately flows into Galveston Bay (see Figures 1 and 2 below).

Other Plans Implemented:

Village Creek-Lake Arlington WPP

Projects Map

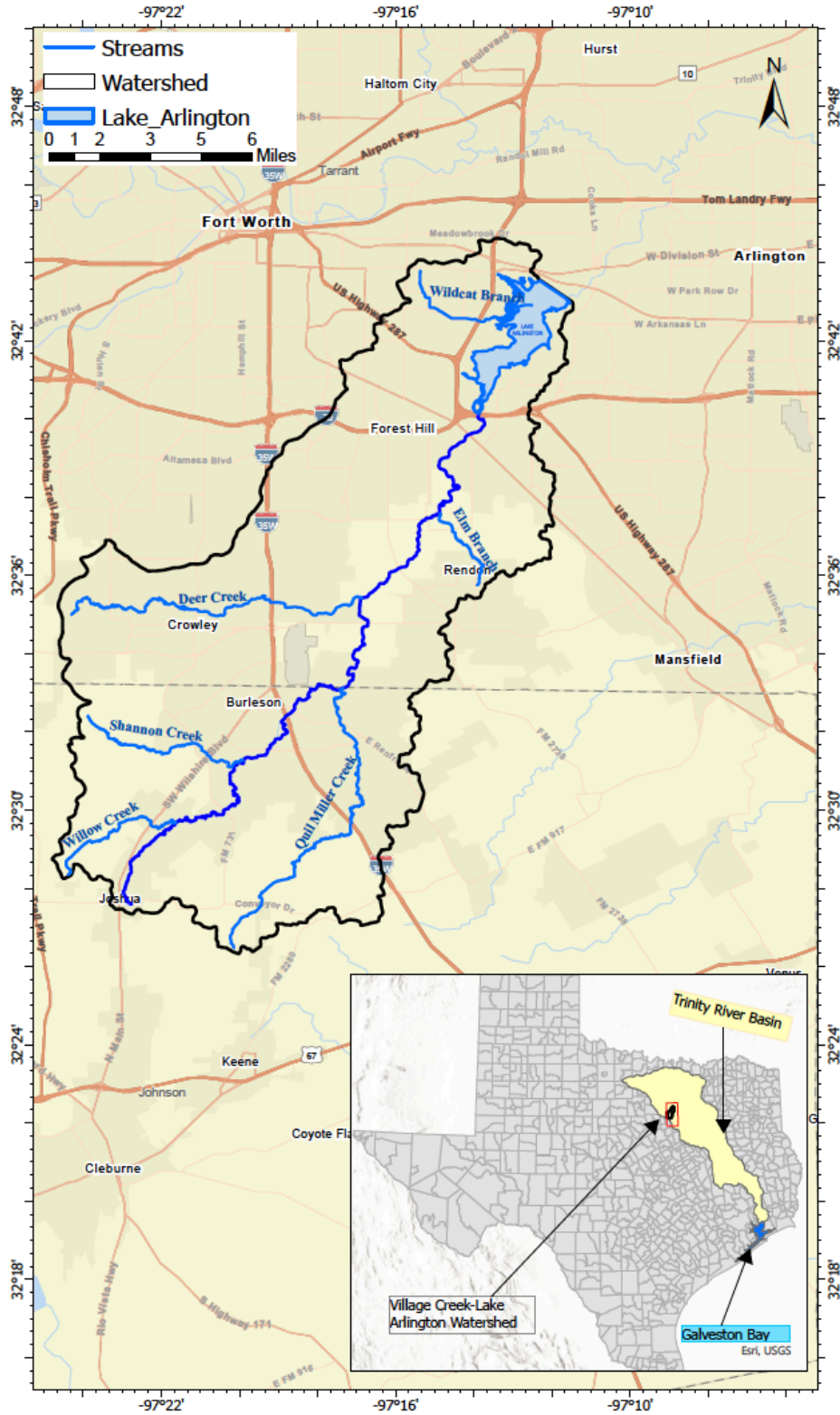


Figure 1: Location of the Village Creek-Lake Arlington Watershed within the Trinity River Basin, situated in the upper Galveston Bay watershed.

Supplemental Photos/Graphics (Optional):

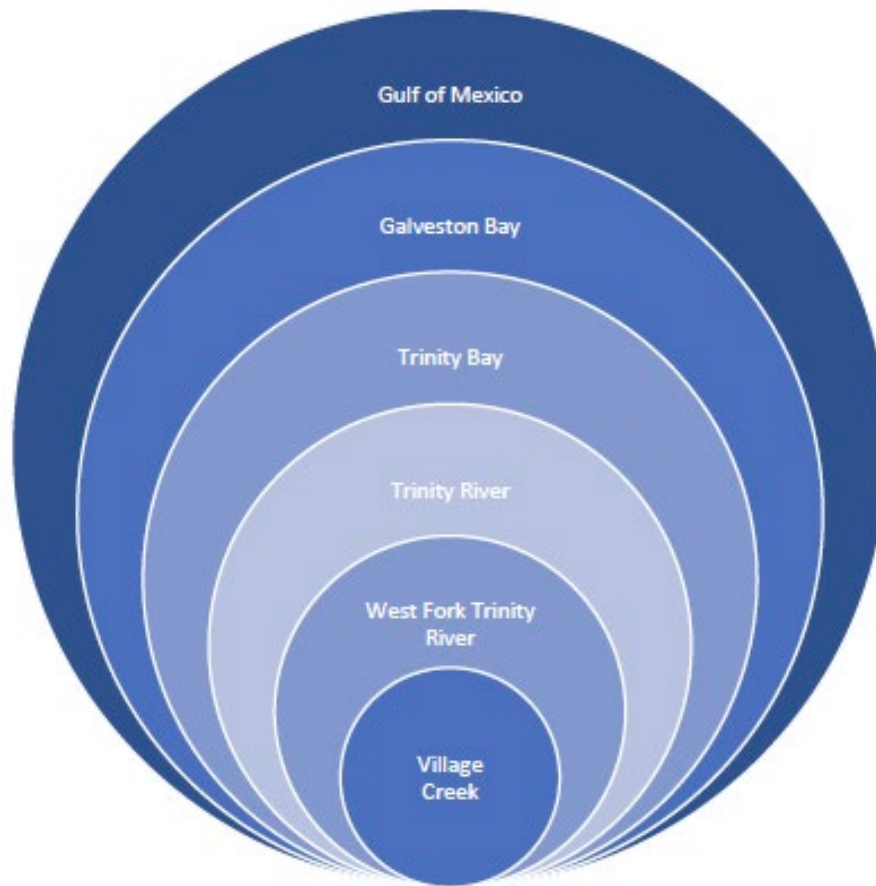


Figure 2: The pathway from Village Creek-Lake Arlington watershed system to Galveston Bay (Village Creek-Lake Arlington WPP, 2019)

SECTION SEVEN: BUDGET DETAILS

Grant Payments [see 30 TAC § 14.7(12)]: All grant payments will be made on the basis of reimbursement for allowable costs (as defined in 2 CFR Part 200, Subpart E). All payments for awarded proposals will be reimbursements of allowable costs incurred after both parties have entered (signed) a grant agreement for the project.

Budget. Authorized budgeted expenditures for work performed are as follows:

Budget Category	Cost for Work to be Performed
Salary / Wages	\$177,174
Fringe Benefits (30% faculty and staff 20%, graduate students) ¹	\$38,752
Travel	\$12,000.00
Supplies	\$33,000.00
Equipment	\$0.00
Contractual	\$0.00
Construction	\$0.00
Other	\$78,306.00
Total Direct Cost	\$339,232
Indirect Costs	\$149,479
Total	\$488,711

Indirect Cost Agreement

Please note: If using a rate different from your entity Indirect Cost Agreement; a letter of exemption from the appropriate authority must be provided with the application, or a statement must be included certifying that the recipient has elected to be reimbursed for an amount less than its total indirect costs, that unreimbursed indirect costs are part of the recipient’s contribution to the success of the project, and that the recipient will pay for all unreimbursed indirect costs using funds available to it for that purpose.



fa-rate-agreement-2022.pdf

Indirect Cost Reimbursable Rate. The reimbursable rate for this Contract is 56% of (check one):

- Salary and fringe benefits
- Modified total direct costs
- Other direct costs base

If other direct cost base, identify:

This rate is less than or equal to (check one):

- Predetermined Rate**— an indirect rate that is negotiated between the Performing Party and its federal cognizant agency and supported by a current Negotiated Indirect Cost Rate Agreement (NICRA) letter. A

¹ If fringe is not a single rate, please attach calculation or explanation as an appendix.

Predetermined Rate is not subject to adjustment except as provided by 2 Code of Federal Regulations (CFR) § 200.411.

De Minimis Rate— if Performing Party does not have a current negotiated indirect rate, Performing Party may use a standard rate of ten percent of Modified Total Direct Costs (MTDC) in lieu of determining the actual indirect costs of the service. Costs must be consistently charged as either indirect or direct costs.

Provisional Rate— an experienced-based rate agreed to by Performing Party and TCEQ in the absence of a NICRA rate negotiated with the applicable federal cognizant agency.

Partial Reimbursement Rate— a reimbursement rate agreed to between TCEQ and Performing Party that is less than the rate authorized under TxGMS or, where applicable, 2 CFR Part 200. Performing Party contributes all of its unreimbursed indirect costs to the successful performance of the project or projects funded under this Contract, in accordance with Article 9 of this section.

Other:

Other. If Budget Category “Other” is greater than \$25,000 or more than 10% of total Contract budget, identify the main constituents:

The "Other" costs include tuition for two graduate students over three years, totaling \$72,306. Additionally, there are expenses for attending conferences, including registration, airfare, accommodation, and related costs, estimated at \$2,000 per person (for the project manager and two graduate students), totaling \$6,000.

SECTION EIGHT: CONTRACT REQUIREMENT [see 30 TAC § 14.7(15)]:

- By submitting this Project Proposal, you acknowledge that, if you become a successful grant recipient selected for a grant award, you must enter into a signed grant agreement or contract with TCEQ following the announcement of that award.

SECTION NINE: ACKNOWLEDGMENTS

Please read and understand the following:

- By submitting this Project Proposal, you acknowledge that information on how grant payments will be made is contained in the Budget Details section describing direct and possibly indirect costs. You further acknowledge that grant payments will be reimbursements on the basis of allowable costs incurred and that selected recipients will receive contract documents addressing allowable costs, unallowable costs, and reimbursement.
- By submitting this Project Proposal, you acknowledge your understanding that Project Proposals do not require matching funds and that a TCEQ director does not need to adjust or waive any matching funds requirement.
- By submitting this Project Proposal, you acknowledge that, if GBEP elects to hold a pre-submittal meeting relating to this Project Proposal, GBEP will notify you of the meeting’s time and location indicating whether attendance is mandatory.

SECTION TEN: QUESTIONS AND PRE-SUBMITTAL MEETINGS [see 30 TAC § 14.7(13) and 30 TAC § 14.7(14)]:

- There are no pre-submittal meetings scheduled.
- For requests for additional, pre-submittal information [see 30 TAC § 14.7(13)], please contact gbep@tceq.texas.gov.

SECTION ELEVEN: ADDITIONAL INSTRUCTIONS

In submitting your Project Proposal, please refer and adhere to the following instructions and guidelines concerning materials and information required to be submitted by potential grant recipients:

- GBEP intends to accept only complete Projected Proposals in a layout and format constituting a filled version of this proposal document with all applicable sections therein addressed; however, GBEP may, in its sole discretion, consider and accept nonconforming Project Proposals in the best interest of the state.
- Unless otherwise specified by GBEP, formal signatures are not required on Project Proposals.
- Unless otherwise communicated or implied, GBEP requires 1 (one) completed copy of your Project Proposal.
- Project Proposals must be received electronically, through the email address listed on this page, by the deadline listed on both this page and the first page of this Project Proposal document.

Please Submit Project Proposals (Microsoft Word Only – No PDFs) by August 26, 2024 to gbep@tceq.texas.gov.

Galveston Bay Estuary Program Federal Bipartisan Infrastructure Law (BIL) Project Proposal – Federal Fiscal 2025



A PROGRAM OF TCEQ

Please complete the proposal form and submit to gbep@tceq.texas.gov by **August 26, 2024**. No late submittals will be considered for funding.

This Call for Project Proposals complies with 30 Texas Administrative Code (TAC) § 14.7, which lays out requirements for a competitive solicitation by TCEQ for grant awards. For convenience, specific citations to 30 TAC § 14.7 are identified in the text.

SECTION ONE: INTRODUCTION

Purpose [required by 30 TAC § 14.7(1)]: The purpose of the proposed grant from the Galveston Bay Estuary Program (GBEP), a program of the Texas Commission on Environmental Quality (TCEQ), is to implement *The Galveston Bay Plan, 2nd Edition* (the Plan), a comprehensive conservation and management plan falling under Section 320, of the Federal Water Pollution Control Act (33 U.S.C. Section 1330), for a designated national estuary in the State of Texas.

Objective and Allowable Activities [see 30 TAC § 14.7(4)]: The objective of this grant is to implement the GBEP stakeholder developed priorities for federal fiscal 2025 (FFY2025 Priority Area Actions) that were developed by the GBEP Budget and Priorities subcommittee for federal fiscal 2025 at the July 2024 meeting. Any proposal implementing the Plan may be submitted, but proposals implementing the FFY2025 Priority Area Actions will be considered above others.

Authority [see 30 TAC § 14.7(2)]: Grants issued by GBEP under this solicitation are authorized by: the Federal Water Pollution Control Act (Clean Water Act) § 320 (33 UNITED STATES CODE § 1330), commonly referred to as the National Estuary Program; TEX. WATER CODE § 5.124; and 30 TAC ch. 14.

Match Requirement [see 30 TAC § 14.7(10) and 30 TAC § 14.7(11)]: No matching funds are required. Therefore, there is no need to adjust or waive any matching funds requirement.

Multiple Awards [see 30 TAC § 14.7(7)]: GBEP anticipates awarding funds for multiple proposals. GBEP intends to award grants to that combination of proposals which best implements the Plan, factoring in all criteria identified in this Call for Project Proposals, the availability of funds, and the most effective division of funds between awards.

SECTION TWO: SUBMITTAL – GENERAL INFORMATION

Subcommittee:

NRU, PPE

Project Name:

Renovating Jones Park: Building Galveston's First Climate-Ready Stormwater Park

Project Previously Funded by GBEP? Yes No

Lead Implementer / Categories of Eligible Recipients [see 30 TAC § 14.7(3)]:

The lead implementer must be in one of the following categories of eligible recipients. Please indicate which category applies to your entity. If the proposing party is not already paired with a lead implementer in one of the categories listed below, the proposing party will need to partner with an eligible recipient in one of these categories to be selected for funding. Please reach out to GBEP staff with any questions.

- Federal, State, or Local Government Council of Government Public ISDs or Universities
 Nonprofit Other*

Vision Galveston, Inc.

Unique Entity ID (UEI) Number:

AND:

HULFGLLIPX97

84-2769581

VIN or Tax ID:

Contact Information:

Project Representative Name	Anna Weiss
Project Representative Phone	832-205-8827
Project Representative Email	anna@visiongalveston.com or info@visiongalveston.com

Amount Requested from GBEP (\$150,000 minimum):

[\$] 899,535.50

Federal State No Preference

Is the project scalable?

Amount Requested per year (if applicable):

FY 2026 (09/01/2025-08/31/2026)	\$	879,339.00
FY 2027 (09/01/2026-05/31/2027)	\$	20,196.50
FY 2028 (09/01/2027-05/31/2028)	\$	0.00
Total	\$	899,535.50

Project Dates / Duration (beginning no earlier than September 1, 2025 - ending no later than May 31, 2028) [see 30 TAC § 14.7(5)]:

September 1, 2025 - November 31, 2027

Project Urgency:

Despite being the only public park in a 10-minute radius for almost 2,000 children living within a ½ mile of the site, Jones Park, as it stands, is unusable and poses an urgent environmental hazard. Flooding is a significant concern for the park and its neighbors. After every storm, the park fills with flood water, leading to non-point source pollution, mosquito breeding, and inability to use the park. The community voted for the city not to demolish and sell the park in 2017. They have waited almost ten years for refurbishment; instead, after continued disinvestment, the park deteriorates more every year. Photos of flooding and park conditions in Appendix A.

Total Project Cost (including Leveraging Amounts, if any; provide leveraging information where indicated below):

[\$] 2,125,957.00

Is this an estimate?

Leveraging (in-kind and/or cash):

- Secured cash:**
- \$175,000 from IDC Parks Package
 - \$25,000 donation from Better Parks for Galveston
- Secure in-kind:**
- \$21,250 for Vision Galveston employee salaries
 - \$5,000 for Bioswale in Bag Materials
- Potential cash:**
- \$375,000 for Phase I drainage, irrigation, planting and park furnishings. TPWD Local Parks Grant, award announcements late 2024-early 2025
 - \$100,000 for basketball court and some park furnishings. Bobcat Local Parks Renovation Competition, award announcements late 2024
 - \$8,798,156 for Phase I and II drainage, irrigation, planting and park infrastructure/furnishings. EPA Community Change Grants Competition, award announcements late 2024-early 2025
 - \$1,000,000 Capital Campaign by Vision Galveston and partners

Partners* and Their Roles:

The main partners in this project are Vision Galveston (applicant) and the City of Galveston. The park is owned by the City of Galveston, which has collaborated closely with Vision Galveston on public engagement and design for the new park. Jones Park was initially identified as the most important park needing rehabilitation in the most recent City of Galveston Parks and Open Space Master Plan (Supplemental Document: POSMP). Vision Galveston has leveraged its resources and connections as a collective impact non-profit organization to enable the community and the City to redesign the park. Vision Galveston will continue to assist the City as needed, host public engagement during park construction, and provide programming and space activation once the park is open to the public.

Another lead partner in the design process was Asakura Robinson, a landscape architecture firm specializing in community-engaged sustainable design. With the help of experts like Moody Gardens (native plants), Galveston Island Tree Conservancy (trees), GreenRise Technologies (green infrastructure), BraunIntertec and Watearth (environmental engineering and hydrology), the Family, Children and Youth Board and Better Parks for Galveston (park amenities), and input from the children of Galveston ISD's Parker Elementary (located less than 0.25 miles from Jones Park), Asakura Robinson designed a park featuring local flora and fauna, low-impact flood control infrastructure, accessible amenities, and a playground featuring local beach and sea creatures such as sea turtles, dolphins and pelicans (Supplemental Documents: Design Features). Subject matter experts from the Texas Parks and Wildlife Department will be utilized to review educational signage for accuracy.

Collaborators at Houston Advanced Research Center (HARC) will help assess the effectiveness of the green infrastructure and monetary value provided by the nature-based solutions following the completion of their construction. A letter of commitment from Dr. Ryan Bare, Senior Scientist, is attached as Appendix B. Community scientist volunteers organized by Vision Galveston will study biodiversity to assess the ecological benefits of native plant restoration.

After the park is completed, Vision Galveston will take the lead in engaging the community. We aim to host at least one public event at the park each month for the first year after the park opens. Vision Galveston will collaborate with other local organizations, such as Galveston Island Tree Conservancy, Galveston Island Nature Tourism Council, Sea Grant, and others, to provide a variety of events to engage different age groups and demographics. We will also work with collaborators at Texas A&M University to use cell-phone data to assess park attendance and will organize volunteers to survey park attendees to confirm attendance estimates, demographic information, and feedback.

***If partners are subgrantees completing work reimbursable under GBEP funding, a letter of commitment from the partner must be submitted under the application.**

SECTION THREE: GALVESTON BAY PLAN, 2ND EDITION IMPLEMENTATION

Grant recipient activities, allowed or required to be performed, must implement Galveston Bay Plan 2nd Edition Priority Area Actions. All proposals must implement these actions. This selection criterion provides for the selection of multiple recipients as needed.

Galveston Bay Plan, 2nd Edition References

<https://gbep.texas.gov/ensure-safe-human-and-aquatic-life-use/>

<https://gbep.texas.gov/protect-and-sustain-living-resources/>

<https://gbep.texas.gov/engage-communities/>

<https://gbep.texas.gov/inform-science-based-decision-making/>

Galveston Bay Plan Priority Area Actions Addressed:

Plan Priority 1: Ensure Safe Human and Aquatic Life Use

- NPS-1 NPS-2 NPS-3 NPS-4
PS-1 PS-2 PS-3
PHA-1 PHA-2 PHA-3 PHA-4 PHA-5

Plan Priority 2: Protect and Sustain Living Resources

- HC-1 HC-2 HC-3
SC-1 SC-2
FWI-1 FWI-2 FWI-3

Plan Priority 3: Engage Communities

- SPO-1 SPO-2 SPO-3 SPO-4
PEA-1 PEA-2 PEA-3

Plan Priority 4: Inform Science-based Decision Making

- RES-1 RES-2 RES-3 RES-4
RES-5 RES-6 RES-7 RES-8
ACS-1 ACS-2 ACS-3

Priority Area Actions Detail:

Our project will address sixteen of the thirty-eight priority areas:

The installation of green infrastructure and the planting of native plants, grasses, and trees will address project priorities NPS-3 (Implement Nonpoint Source Best Management Practices), HC-2 (Habitat Restoration), HC-3 (Habitat Enhancement), and SC-1 (Native Species Management). Bioswales, rain gardens, and improved drainage will reduce flooding and nonpoint source pollution (NPS-3) and will be measured by the number of BMPs implemented and the amount of stormwater redirected. Native grasslands, marsh plants, and trees will be restored to the area (HC-2, SC-1), and existing trees will be conserved and included in the future park (HC-3). Performance will be measured by the number of acres enhanced and restored, the number of native species added or enhanced, overall biodiversity, and tree canopy planted. These metrics will also allow us to fulfill priority area RES-6 Evaluate Best Management Practice (BMP) Projects, and RES-7 Conduct Research on Ecosystem Service and Economic Valuation of Bay Resources.

Community scientists will play a vital role in collecting some of this data with Vision Galveston and partners, fostering a sense of community stewardship. We will develop new programs and volunteer opportunities for stakeholders (SPO-1). We will increase the number of programs created in underserved communities and evaluate program success based on the number of people reached and the results of pre- and post-surveys (SPO-1). Along with HARC, we will also evaluate whether we are meeting the priorities by measuring the number of BMP project evaluations completed (RES-6), the number of BMP project evaluation white papers, presentations, and workshops completed (RES-6), the number of ecosystem service and economic evaluation research studies conducted (RES-7), and the number of ecosystem service and economic evaluation white papers, presentations, and workshops completed (RES-7). We will provide access to monitoring and research data (ACS-2) by submitting it to the Galveston Bay Regional Monitoring Database for hosting on their data portal. These metrics will be captured by the number of datasets submitted and research synthesis reports completed (ACS-2).

We are committed to providing a wealth of educational opportunities, from interpretive signage to hands-on experiences, to ensure that everyone involved is well-informed and knowledgeable about the project. Jones Park was developed with explicit public input, and we will continue to conduct outreach and engagement activities to keep the community informed as the park is constructed and opened (SPO-2, Workshops and Events). Our ongoing relationship with the City of Galveston is paramount, as we engage them in crucial conversations about green infrastructure and parks equity in Galveston, and actively include City staff in our outreach campaigns (SPO-4, Local Government Outreach). The park must be an activated space. By hosting workshops and events about nature-based solutions and community science with partners (SPO-2), we can engage in dialogue about key issues (PEA-1) with adults (PEA-2) and K-12 teachers and students (PEA-3). The success of our engagement and outreach will be measured by the number of workshops and events completed (SPO-2), the number of attendees (SPO-2), and whether we can engage the City of Galveston and other municipal branches in our outreach and, if so, how many individuals and their titles (SPO-4), and responses to pre- and post- questionnaires (PEA-2).

A unique engagement opportunity to accompany Jones Park is Bioswale in a Bag. Bioswale in a Bag is a small tabletop model demonstrating how green infrastructure can help island communities like Galveston through flood and pollution reduction (Appendix C). This model includes lesson plans for formal and informal educators (Appendix D), and once the park is built, it will include a trip to Jones Park, which the model is based on. Vision Galveston is mass producing this tool, starting with 30, and will hold workshops to teach how to use the model, then give it to educators and community members for free. The goal is to increase understanding of green infrastructure as a BMP and its benefits for the island. The topics covered in this model and associated curriculum support areas NPS-2 (Support Nonpoint Source Education and Outreach Campaigns), NPS-4 (Host Nonpoint Source Workshops), PHA-2 (Improve Regional Contact Recreation Risk Awareness), PEA-1 (Key Issue Engagement), PEA-2 (Adult Education), and PEA-3 (K-12 Education). Indicators of success that will be measured for Bioswale in a Bag are: number of individuals or groups engaged in NPS campaigns (NPS-2), number of NPS workshops with pre- and post-assessments completed (NPS-4), number of groups and individuals reached through outreach and education (PHA-2, PEA-1, PEA-2, PEA-3), number of plan of action education and outreach programs implemented (PEA-1, PEA-2, PEA-3), number of materials and resources created to support outreach and education for adults and K-12 students implemented (PEA-1, PEA-2, PEA-3), number of pre-and post-assessments conducted with each education and outreach program for adults and K-12 students implemented (PEA-1, PEA-2, PEA-3).

SECTION FOUR: BIL PRIORITIES / FACTORS TO BE USED TO SELECT AWARDS [see 30 TAC § 14.7(6)]

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. This selection criteria provides for the selection of multiple recipients as needed.

Projects must incorporate the implementation of the [Estuary Resilience Action Plan](#) and the [GBEP Equity Strategy](#) (including having physical presence or connection to the targeted communities).

The creation of the Jones Stormwater Park will address many of the stressors and strategies outlined in the Estuary Resilience Action Plan. The specific stressors addressed are:

- Tides/nuisance flooding
- Increase in extreme events (coastal flooding/storm surge)
- Sea Level Rise + subsidence
- Warmer Summers
- Increasing Inland Flooding (largely rain-based)
- Population Increase
- Changes in land use and the built environment (infrastructure)

The mitigation strategies proposed are:

- Stakeholder Outreach: Education
- Implementation of WBPs
- Preservation/Conservation/Restoration
- Research
- Promote Water Conservation and Reuse
- Promote Native Habitat

Green infrastructure, specifically bioswales, bioretention and underground stormwater detention, rain gardens, and trees, will address nuisance and inland flooding that conveys bacteria in floodwaters, storms leading to runoff, increased population, and changes in land use leading to increased impervious surfaces. Restoration of native plants and trees will address sea level rise and subsidence, leading to flooding, loss of habitat, and population increase, leading to land loss. Stakeholder engagement will help people understand how to deal with nuisance flooding and bacteria in flood waters while providing education on nature-based solutions for flooding and heat. Research on the efficacy of our nature-based solutions will arm our community with data to advocate for more low-impact flooding solutions.

The Jones Stormwater Park project will support the following Key Activities that were identified as relating to environmental justice, as described in the above section, "Priority Area Actions Detail":

- Plan Priority 1: Ensuring Safe Human and Aquatic Life Use
 - Action Plan 1: Improve water quality through nonpoint source pollution abatement, NPS-1: Support watershed-based plan development and implementation, NPS-2: Support nonpoint source education and outreach campaigns, NPS-3: Implement NPS best management practices, NPS-4: Host nonpoint source workshops
 - Action Plan 3: Promote public health and awareness, PHA-2: Improve regional contact recreation risk awareness
- Plan Priority 2: Protect and Sustain Living Resources
 - Action Plan 1: Support habitat conservation, HC-2: Habitat restoration, HC-3: Habitat enhancement
 - Action Plan 2: Support species conservation, SC-1: Native species management
- Plan Priority 3: Engaging Communities
 - Action Plan 1: Preserve Galveston Bay through stakeholder and partner outreach, SPO-1: Stewardship programs and volunteer opportunities, SPO-2: Workshops and events, SPO-3: Support regional initiatives, SPO-4: Local government outreach
 - Action Plan 2: Support public education and awareness initiatives, PEA-1: Key issue engagement, PEA-2: Adult education, PEA-3: K-12 education efforts

- Plan Priority 4: Informing Science-Based Decision Making
 - Action Plan 1: Collaborate with research institutions to support focus area applied research and monitoring, RES-6: Evaluate Best Management Practices project, RES-7: Conduct research on ecosystem services and economic valuation of bay resources

The Jones Park project will also include strategies and recommendations outlined in the Equity Strategy and Stakeholder Engagement Plan. The Green Galveston Plan (Supplemental Document: Green Galveston Plan), published in 2021 to summarize the Green Galveston Initiative and Objectives, outlines how we build equity into every step of our projects. Our Green Galveston plan was developed after surveying over 2000 children and adults and is built on seven "Guiding Principles" that ensure that we are engaging in equitable practices when selecting projects, establishing ongoing stakeholder engagement, and changing course if our data and evaluations suggest the need to. These Principles are:

1. All Galvestonians have a right to the recreational, restorative, and social opportunities of high-quality parks and natural areas.
2. Galveston's parks and open space should support the physical and mental health of the island's residents
3. Galveston's parks and open space should respond to and support the local ecological and environmental conditions of the island.
4. Galveston's parks and open space should support local economic growth and development across the island.
5. Galveston's parks and open space should be accessible for cyclists, pedestrians, residents utilizing public transportation, and through waterways.
6. Galveston's parks and open space should include programming and placemaking that reflect the cultures and histories of the island.
7. Galveston's parks and open space should provide immersive educational opportunities for residents that also support stewardship

Vision Galveston has a strong presence in the community, hosting and participating in multiple public events each month and communicating frequently on social media. When developing Jones Park, we had many types of engagement (Appendices E-G), meeting with stakeholders from the community at the predevelopment and 30%, 60%, and 100% Design stages (Appendix H) to get feedback and incorporate it into the next design stage. We will continue to meet with and engage our stakeholders throughout the building, engagement, and evaluation process. Our engagement processes are led by professional facilitators; this ensures that partners feel valued and able to provide feedback. Our actions following these sessions, including incorporating suggestions and providing frequent status updates, have built community trust.

Action Priorities

*Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. **Proposals must address one or more of the following actions:***

- Habitat protection & enhancement, including adaptive management
- Projects in support of management measures (e.g., green infrastructure, watershed and human health, water reuse and conservation) and watershed-based plans.
- Projects that support research and monitoring related to the plan priorities of *Ensure Safe Human & Aquatic Life Use* and *Protect and Sustain Living Resources*.

Support Priorities

*Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. **Proposals must address at least one supporting action developed by the subcommittees, but preference will be given to projects that are able to incorporate multiple supporting actions.***

- Engaging K-12 students and/or adults in hands-on, place-based environmental education.
- Diversifying strategic partners with environmental and non-environmental community organizations working within targeted communities.
- Monitoring and research that produces environmental data applicable to future implementation and management decisions and made available to the public.

Stakeholder Priority Detail:

Habitat protection & enhancement, including adaptive management: This will be achieved by restoring native grass habitat, flower beds, and plants in our stormwater marsh. No mow and other low-impact practices will enhance the habitat's features and benefits. The park is designed to be ecologically friendly, including lights that will not harm migrating birds and incorporating recycled and sustainable materials where feasible. (Supplemental Documents: Design Features, 100DD and Material Study)

Projects in support of management measures (e.g., green infrastructure, watershed, and human health, water reuse and conservation) and watershed-based plans: A large piece of this project is based on the need to reduce flooding and use green infrastructure (bioswales, stormwater marsh, rain gardens) to resolve this issue. Other features will make this project water-efficient, including improved storm drainage pipes, rain barrels, and native landscaping. (Supplemental Documents: Design Features, 100DD and Material Study)

Projects that support research and monitoring related to the plan priorities of *Ensure Safe Human & Aquatic Life Use and Protect and Sustain Living Resources*: The Houston Advanced Research Center will play a crucial role in assessing the efficacy and economic valuation of the green infrastructure installed. Additional community scientists will work with Vision Galveston's Dr. Anna Weiss to survey biodiversity in the restored habitat.

Engaging K-12 students and/or adults in hands-on, place-based environmental education: The remodeled Jones Park will serve as a hub for environmental education. Vision Galveston's Green Principles state that green spaces should be authentic and activated. To accomplish this at Jones Park, Vision Galveston will organize programming at the park, starting with community science monitoring of park biodiversity. Parker Elementary School is also less than 0.25 miles away from Jones Park and will frequently use the space.

Vision Galveston has also developed a flood model called Bioswale in a Bag. This small and easily portable model is based loosely on Jones Park and the surrounding Galveston neighborhood and demonstrates the utility of green infrastructure (Appendices B-C). This model improves on other typically used flood models because of its size, cost, and local, place-based view of flooding. A K-12 curriculum is forthcoming and will include a field trip to the completed Jones Park to view the concepts the model is displaying in person. An informal educators' guide will also be created for those not teaching in the classroom. Vision Galveston will use this model in outreach events and hold training sessions to show formal and informal educators and community leaders how to use the model so they can bring it into their classrooms and communities to demonstrate the benefits of green infrastructure island-wide.

Diversifying strategic partners with environmental and non-environmental community organizations working within targeted communities: This project has brought many new partners to the table. A significant partnership lies between Vision Galveston and the City of Galveston. Vision Galveston was created under a collective impact model to take on projects for the public good. Having a non-profit collaborate with the City to remodel a public park is a new type of partnership. We have strategically partnered with environmental organizations and experts to provide feedback on the park's design and programming. Additionally, we have brought many non-environmental organizations to the table to engage the community during the design process, including the Family, Children, and Youth Board and GISD's Parker Elementary. The Vision Galveston Green Galveston Action Team, an advisory group that has provided feedback about Jones Park from the early stages, includes individuals from organizations, including Galveston Historical Foundation, Texas A&M University, AgriLife Extension, GISD, as well as community members with no specific organizational affiliation.

Monitoring and research that produces environmental data applicable to future implementation and management decisions and made available to the public: This will be achieved in collaboration with Houston Advanced Research Center, which will assess the efficacy and monetary value of the green infrastructure installed, as well as in partnership with community scientists who will, with Vision Galveston's Dr. Anna Weiss, survey biodiversity in the restored habitat. One primary goal of this project is to serve as a proving ground for green infrastructure on Galveston Island so that with the community and City government's support, we can improve drainage island-wide with lower-impact and green design.

Does the Project work with new, smaller communities/partnerships?

Yes

No

This is the first public-non-profit partnership to rehabilitate a public park in Galveston. This strong positive collaboration between the City of Galveston and Vision Galveston is new, as Vision Galveston was formed in 2019. The Jones Park project is also one of the first collaborations between Vision Galveston and the City.

SECTION FIVE: BIL CONSIDERATIONS / FACTORS TO BE USED TO SELECT AWARDS [see 30 TAC § 14.7(6)]

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority. This selection criteria provides for the selection of multiple recipients as needed.

Does the Project align with any EPA Areas of Special Interest?

- Reduction in nutrient pollution
- Water reuse and conservation
- Marine litter reduction
- Green infrastructure and resiliency

Creating the climate-ready Jones Stormwater Park will address three of the four EPA Areas of Special Interest. Green infrastructure is a central feature of this park and includes bioswales for flood water reduction and trees to improve air temperature and quality. Nutrient pollution will be reduced by increased biofiltration from the bioswales and less runoff to transport pollutants into the watershed. Rain barrels will be installed in the park, along with educational signage explaining their benefits and how community members might incorporate them at home.

Build America, Buy America Act (BABA)

Build America, Buy America provisions only apply to awards over \$250,000, and where more than 5% of the award is spent on iron, steel, manufactured products, and construction materials permanently incorporated into construction, maintenance, or repair projects. Under the law, construction materials exclude cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives.

Will the Build America, Buy America Law apply to this application? Yes No
If yes, will you comply with the law or submit a waiver? Yes No
Comments (if any):

Park equipment and other park amenities, as well as the irrigation and underground stormwater detention system, will be purchased from manufacturers that produce in the United States.

Does the Project incorporate Federal Flood Risk Management Standards?

FFRMS - EPA Green Infrastructure Managing Flood Risks

Yes No

We are aware of the park's flooding issue, which is a key driver for the redevelopment plan. As a result, we are implementing a range of measures to absorb rainfall and reduce flooding, thereby preventing water from overwhelming pipe networks and pooling in streets or houses. Nature-based solutions and green infrastructure are significant aspects of the park, in line with the FFRMS. These solutions, including bioswales, stormwater detention ponds, and tree canopy, are designed to manage water effectively. Even the basketball court has been planned and budgeted to be constructed with pervious materials, ensuring efficient water transport to an underground storage and drainage system (Underground Detention schematic in Supplemental Document: 100DD). It's important to note that the City of Galveston, as the park owner, participates in the National Flood Insurance Program (Appendix I), providing additional support in case of flood damage to the site given the location in a flood plain (Appendix J)

Infrastructure Investment and Jobs Act (IIJA) Signage

The recipient will ensure that a sign is placed at construction sites supported under this award displaying EPA logo and the official Building a Better America emblem and must identify the project as a "project funded by President Biden's Bipartisan Infrastructure Law." Construction is defined at 40 CFR 33.103 as "erection,

alteration, or repair (including dredging, excavating, and painting) of buildings, structures, or other improvements to real property, and activities in response to a release or a threat of a release of a hazardous substance into the environment, or activities to prevent the introduction of a hazardous substance into a water supply.” The sign must be placed at construction sites in an easily visible location that can be directly linked to the work taking place and must be maintained in good condition throughout the construction period.

Does the proposal implement construction subject to signage requirements?

[Building A Better America Brand Guide – Using the EPA Seal and Logo](#)

Yes No

Does the Project Address the [Justice 40 Initiative](#)?

NEP’s have a target of ensuring that at least 40% of the benefits of investments from the five years of BIL funding flow to disadvantaged communities.

[Climate and Economic Justice Screening Tool \(CEJST\)](#)

Yes No

Per the CEJST tool (Appendix K), Jones Park falls within Census Tract Number 48167725800. The population is 65% non-white, 12% are children under 10, and 10% are over age 65. This tract is identified as disadvantaged because it meets more than one burden threshold and the associated socioeconomic threshold. The screener tool also designates it as a Justice40 Community.

The neighborhood is in the 99th percentile for expected building loss rate and projected flood risk, the 97th percentile for expected population loss rate, and the 71st percentile for proximity to Superfund sites. It is also in the 72nd percentile for low-income households, 80th percentile for diabetes, 56th for heart disease, and a staggering 91st percentile for low life expectancy. This census tract is in the 86th percentile for linguistic isolation, 74th percentile for low median income, 65th for poverty, and 51st for unemployment. 18% of people ages 25 years or older do not have a high school diploma.

This project, with its potential to significantly improve the community, invests in climate change mitigation, green space, and developing critical clean water and wastewater infrastructure for this neighborhood, addressing the Justice40 Initiative.

Does the Project Address geographies above the 80th percentile as identified in [EJScreen](#) in the following demographics?

Yes No

- % Low income
- % Linguistically isolated
- % Less than high school education
- % Unemployed
- % Low life expectancy

In the EJScreen Mapper, the tract that includes Jones Park is designated as a Justice40 Community and an EPA IRA Disadvantaged Community (map in Appendix L). It is in the 92nd percentile for low life expectancy, 64th for low income, 33rd for Unemployment, and 21st for less than high school education. According to the EJScreen, the parcel has no linguistic isolation.

This park, however, is the only park in a 0.5-mile radius for over 2,000 children that live or go to school in the area as of the 2022 Census. The student population of GISD, including nearby Parker Elementary, whose students are heavy park users, is 81% economically disadvantaged (Supplemental Document: TEA). This park will provide access to these children and attract new families to the neighborhood. Between 2010-201, Galveston lost an estimated 775 families with children and over 20,000 residents between 1960 and 2010. The disappearance of young families on the island has been partly driven by the loss of affordable housing and family-friendly neighborhood amenities (Supplemental Document: Families). By rehabilitating Jones Park into an accessible Stormwater Park, we are bringing green infrastructure solutions to climate change, restored land, and the benefits of accessible outdoor recreation to disadvantaged communities, including

the health benefits of fresh air, exercise, and calming green landscapes to reduce the occurrence of ailments such as heart disease and diabetes. Our park activation will include programming and events for children and adults, even those without a high school diploma. Vision Galveston has provided Spanish-language programming in the past and will continue to offer it for this project as well.

SECTION SIX: PROPOSAL DETAILS

Grant recipient activities must implement the Plan. Additional recipient selection criteria includes whether a project addresses a BIL priority.

Project Summary:

This proposal aims to build the first stormwater park in Galveston and educate the community about Green Infrastructure. Seeing the flood mitigation benefits of the new drainage system will lead to community support for increased green infrastructure on Galveston Island and encourage more sustainable development that incorporates low-impact design.

Full Project Description (1,000 words or less):

Galveston Island hosts several essential but endangered ecosystems, including the Texas coastal prairie and estuarine marshes. Although less than 1% of Texas' original coastal prairies remain, pockets of prairie are being protected and restored across the coast and in other parks and reserves around Galveston, including the East-end Lagoon Nature Reserve. Galveston is also home to sensitive ecosystems such as marshlands, especially in the undeveloped west end of the island. Although the Jones Park site is no longer reminiscent of the original habitats of Galveston and resembles instead the grassy suburban lawns surrounding it, the signs of the underlying marshland remain, with the park flooding with the slightest rain. The renovation will help to enhance and restore critical habitat, mitigate flooding in the community, and enhance opportunities for recreation and environmental education.

The first phase of the building will focus on installing nature-based flood mitigation since flooding is the most urgent problem for the park. Once the flooding issue is resolved, the community can use the park again, and newly installed equipment will be subject to less water damage. The bioretention system installation will include planting and irrigation. The total area of the biofiltration system is 54,000 ft², paired with a total volume of 40,527 ft³ of underground retention. An overflow structure will act as a weir to prevent flooding in the Hollywood Heights neighborhood adjacent to Jones Park. The bioretention systems will be planted with trees, wetlands, shrub/groundcover, and native grasses. Part of the underground stormwater retention tank will lie below turf with solid sod and will provide additional storage. The biofiltration system (10ft by 6ft) is comprised of Focal Point high flow media, which has a minimum required 100 inches per hour infiltration rate. The retention pond, planted with local wetland plants, will provide an opportunity for visitors to learn about and appreciate the island's diverse flora. A native coastal prairie mix grass mix from Native American Seed will be planted to grow native wildflowers and grasses, with low-impact maintenance measures such as prohibiting mowing. Trees planted will maximize shade and increase the immediate benefits of access to the greenspace by cooling the park. Interpretive signage will be developed with local experts and placed throughout the park, especially around the restored prairie, stormwater marsh and trees. The universally designed Jones Park, including the coastal prairie and water features, will create new opportunities for people who are disabled to engage with nature in Galveston. ADA-accessible site furnishings, including concrete pathways and benches, will also be built, ensuring that everyone in the community can enjoy the park. We expect this work to take approximately eight to ten months to complete.

Following the construction of the water mitigation features, a year-long evaluation period will commence, including scientific studies and surveys. HARC will produce quantitative estimates to evaluate key environmental outcomes resulting from the trees planted and constructed nature-based solution projects. The benefits evaluation will use the i-Tree suite of tools and a combination of well-documented modeling tools such as the Pollution Load Estimate Tool (PLET), Visualizing Ecosystem Land Management Assessments (VELMA), a customized benefits valuation, or others as identified. Short-term (annual) estimated outcomes will include the monetary value and amount of the stormwater volume and quality benefits, air pollutants removed, carbon sequestration, drought risk reduction, heat risk reduction, tree canopy coverage and total biomass, habitat, and the amount of stormwater captured per year by trees. The long-term outcomes will be evaluated by estimating the total combined benefits over the project's lifespan. This long-term perspective will provide a sense of optimism about the enduring benefits of the project.

Community scientists will work with Dr. Anna Weiss from Vision Galveston to conduct monthly fauna and flora surveys to track biodiversity. HARC will coordinate with relevant project partners to develop and submit a QAPP to GBEP. The QAPP will define, document, and implement data quality objectives and quality assurance/quality control activities that ensure that data of known and acceptable quality are generated.

This park presents a unique opportunity as a field trip companion to the Vision Galveston-developed tabletop flood model, Bioswale in a Bag. This model, which simulates the process of water filtration through a bioswale, is directly relevant to the water mitigation features being installed in Jones Park. Vision Galveston will produce several dozen copies of this model for free for educators and community members and will hold workshops to teach how to use the model. An educational guide distributed with the tool will include a field trip to Jones Park to view the processes seen in the model. Because of Vision Galveston's and our partners' relationships with the community, programming will reach a diverse audience. As the first stormwater park in Galveston, Jones Park will demonstrate how low-impact design can be paired with community-driven planning to create a climate-ready destination park.

Latitude/Longitude (Optional):

29° 16' 17.184" N, 94° 50' 28.032" W

Location:

West Bay and Offatts Bayou, Galveston Island

Other Plans Implemented:

Community engagement pre- and post- construction: The design development of the park was done with extensive community input and incorporation of this feedback. The community was surveyed in developing the Vision Galveston Plan and the Green Galveston Plan (Supplemental Documents: VG Plan and Green Galveston Plan), which provide recommendations and principles to guide the park's development. Stakeholders were also convened to review and discuss the Jones Park plans at the pre-development, 30%, 60%, and 100% design stages and to provide direct feedback on the park design (examples: Appendices E-G). This engagement was done in collaboration between Asakura Robinson, Vision Galveston, Better Parks for Galveston, Galveston ISD, and the City of Galveston. These collaborations fulfill the City Comprehensive Plan (Supplemental Document: Comp. Plan) Recommendation:

- NR-6.2 Improve coordination between various public and private entities for the management of natural areas

and the City of Galveston Parks and Open Space Master Plan (Supplemental Document: POSMP) Recommended Actions:

- 1. Continuously pursue partnerships with other parks and recreation providers
- 6. Ensure that recreational programs meet the interests and needs of persons of all ages and abilities by providing programs independently and in cooperation with partners.

The community's direct feedback has been instrumental in ensuring that the park's design aligns with their needs and preferences. This engagement process, which includes the community at every stage, from planning to implementation, not only represents the community's needs but also fosters a deep sense of ownership and stewardship over the park. This approach will result in a park that truly reflects the community it serves, fulfilling Vision Galveston (Supplemental Document: VG Plan) Recommendation:

- 51. Develop community-based assets that support education and economic opportunity

City Comprehensive Plan Recommendations:

- NR 6.4 Encourage and maintain a sustainable urban ecosystem
- HP-4.7 Support the provision of neighborhood amenities and increase beautification efforts

Galveston Parks and Open Space Masterplan Goals:

- 4. Provide parks and recreation facilities that meet or exceed the established local standards and provide for both the present and future needs of the community

- 6. Ensure that recreational programs meet the interests and needs of persons of all ages and abilities by providing programs independently and in cooperation with partners
- 7. Explore additional opportunities for partnerships and expand outreach programs to increase the sense of ownership of parks by the neighborhoods they serve or the local groups that use them

as well as TPWD Land & Water Resources Conservation and Recreation Plan Goal (attached as TPWD Plan):

- 3. Educate, inform, and engage Texans in support of conservation and recreation

Nature-based Solutions and Habitat Restoration: Jones Park will transform from a barren plot of grass to an exemplar of integrating nature and science into development. Jones Park is well known for its flooding and heat issues, which spill over to the surrounding neighborhoods and impact the ability of the community to use the park. The City's Parks and Open Space Masterplan identified Jones as the most critical park for redevelopment. The community identified the need for green infrastructure, drainage improvements, and shading/cooling in the engagements mentioned above. This will not only address the immediate issues of flooding and heat but also contribute to a more sustainable and resilient city. Jones Park will be the first sponge park in Galveston and will serve as a proving ground for low-impact development on an island that desperately needs it. The park's unique features and sustainable design will surely attract visitors, contributing to the city's economic growth. Using low-impact design (e.g., bioswales, trees) to solve heat and flooding issues will address City Comprehensive Plan Recommendations:

- NR 1.1 Reduce nonpoint source contamination of bay tributaries and near-shore waters
- NR 6.4 Encourage and maintain a sustainable urban ecosystem
- ED-1.7 Promote and maintain Galveston as a leader in sustainable development and economic growth
- ED-2.1 Expand Galveston's attraction as a quality, year-round tourist destination
- ED-3.1 Support existing businesses and industries through infrastructure improvements, uniformly applied code enforcement, and beautification activities
- HP-4.7 Support the provision of neighborhood amenities and increase beautification efforts

City of Galveston Parks and Open Space Master Plan Goals:

- 1. Ensure all existing and future parks and recreational facilities are maintained to an equivalent standard of quality and excellence
- 3. Increase the availability of shade at existing and future parks to increase usability
- 5. Ensure parks are accessible, safe, and connected to their adjacent neighborhoods and other areas of the City
- 8. Ensure the success of the Department through professional development and technical advancement of staff and other Departments, and Board members, and
- Key Recommended Action 3: Undergo an aggressive park enhancement program.

Vision Galveston Plan Recommendations:

- 4. Integrate nature into development
- 18. Reduce flood insurance rates by improving Galveston's community rating system status
- 29. Improve parks and open space
- 30. Ensure there are quality parks in walking distance of every home
- 31. Build an amazing destination park to attract residents and visitors alike
- 51. Develop community-based assets that support education and economic opportunity

and TPWD Land & Water Resources Conservation and Recreation Plan Goal:

- 1: Practice, encourage, and enable science-based conservation and stewardship of natural and cultural resources

The renovation of Jones Park will include the restoration and maintenance of endangered local habitats, including Texas Coastal Prairie and Marshland. Partnerships with environmental organizations allow us to incorporate local knowledge and cutting-edge practices in the park. The design of these habitats and their incorporation into the park was done in collaboration with local experts, including Moody Gardens and Galveston Island Tree Conservancy. Improved ecosystems on the island will increase biodiversity, which supports our community's vitally important ecotourism industry. This will fulfill City Comprehensive Plan Recommendations:

- NR-5.3 Promote Preservation and creation of open space through development and planning tools

- NR-5.5 Work with non-profit conservation partners
- NR-6.2 Improve coordination between various public and private entities for management of natural areas
- NR 6.4 Encourage and maintain a sustainable urban ecosystem

City of Galveston Parks and Open Space Master Plan Goals:

- 2. Continue to increase the quality and diversity of amenities in the existing and future parks to attract and accommodate people of all ages for both active and passive activities
- 12. Protect and sustain natural areas, resource features, and environmentally sensitive land

Vision Galveston Plan Recommendations:

- 4. Integrate nature into development
- 29. Improve parks and open space
- 31. Build an amazing destination park to attract residents and visitors alike
- 51. Develop community-based assets that support education and economic opportunity

and TPWD Land & Water Resources Conservation and Recreation Plan Goals:

- 1: Practice, encourage, and enable science-based conservation and stewardship of natural and cultural resources.
- 2: Increase access to and participation in the outdoors.

Park amenities: This park redesign will beautify the community and increase access to green space. Since many natural areas in Galveston are far from the City's urban core or inaccessible to those with physical disabilities, the universally- and sustainably- designed Jones Park, including the coastal prairie and water features, will create new opportunities for many who were previously excluded from engaging with nature in Galveston. Lack of accessibility has been noted in both the City of Galveston Parks and Open Spaces Master Plan and the Vision Galveston Plan. Increasing accessibility fulfills a basic standard of ensuring new construction is ADA-compatible, and universal design is a well-established standard for meeting the needs of many. Adding shade, bike racks, and sidewalks will increase the park's usability by locals and tourists alike. This will enhance the local economy and create a vibrant and bustling community. These features will fulfill City Comprehensive Plan Recommendations:

- ED-2.1 Expand Galveston's attraction as a quality, year-round tourist destination
- ED-3.1 Support existing businesses and industries through infrastructure improvements, uniformly applied code enforcement, and beautification activities
- HP-4.7 Support the provision of neighborhood amenities and increase beautification efforts
- T-2.4 Management of pedestrian and vehicular traffic in natural areas
- T-2.7 Create a connected hike and bike system
- T-2.8 ADA Improvements
- NR 6.4 Encourage and maintain a sustainable urban ecosystem

City of Galveston Parks and Open Space Master Plan Goals:

- 1. Ensure all existing and future parks and recreational facilities are maintained to an equivalent standard of quality and excellence
- 2. Continue to increase the quality and diversity of amenities in the existing and future parks to attract and accommodate people of all ages for both active and passive activities
- 3. Increase the availability of shade at existing and future parks to increase usability
- 4. Provide parks and recreation facilities that meet or exceed the established local standards and provide for both the present and future needs of the community
- 5. Ensure parks are accessible, safe, and connected to their adjacent neighborhoods and other areas of the City
- 13. Partner in contributing to the city's economic development by attracting tourists and businesses to recreational attractions in and around Galveston

and Key Recommended Actions:

- 3: Undergo an aggressive park enhancement program
- 8: Improve park accessibility

It also fulfills the Vision Galveston Plan Recommendations:

- 4. Integrate nature into development
- 29. Improve parks and open space
- 30. Ensure there are quality parks in walking distance of every home
- 31. Build an amazing destination park to attract residents and visitors alike
- 51. Develop community-based assets that support education and economic opportunity
- 65. Build quality amenities

and TPWD Land & Water Resources Conservation and Recreation Plan Goal:

- 2: Increase access to and participation in the outdoors

Programming and educational signage: As a hub for environmental education, Jones Park will host nature walks, seminars, and workshops. Community science projects will also provide engagement. Because of the relationships we and our partners have with the community, programming will reach a diverse audience. The coastal-themed amenities will encourage environmental awareness and conservation from an early age. Co-designed with local experts, interpretive signs will consistently provide engaging, accurate information about park species and ecosystems. This park presents a unique opportunity as a field trip companion to an educational tabletop model, Bioswale in a Bag. An educational guide distributed with the tool will include a field trip to Jones Park to view the processes seen in the model. This programming will fulfill the City of Galveston Comprehensive Plan Goals:

- NR-3.4 Encourage wetland restoration on Galveston Island
- NR-5.5 Work with non-profit conservation partners
- NR-6.1 Create educational programs to teach the importance of a barrier island's natural environment
- NR 6.4 Encourage and maintain a sustainable urban ecosystem
- NR-7.5 Develop programs to educate citizens on the importance of sustainability for the community
- ED-1.7 Promote and maintain Galveston as a leader in sustainable development and economic growth
- ED-2.1 Expand Galveston's attraction as a quality, year-round tourist destination

City of Galveston Parks and Open Space Master Plan Goals:

- 1. Ensure all existing and future parks and recreational facilities are maintained to an equivalent standard of quality and excellence
- 2. Continue to increase the quality and diversity of amenities in the existing and future parks to attract and accommodate people of all ages for both active and passive activities
- 5. Ensure parks are accessible, safe, and connected to their adjacent neighborhoods and other areas of the city
- 6. Ensure that recreational programs meet the interests and needs of persons of all ages and abilities by providing programs independently and in cooperation with partners
- 7. Explore additional opportunities for partnerships and expand outreach programs to increase the sense of ownership of parks by the neighborhoods they serve or the local groups that use them
- 12. Protect and sustain natural areas, resource features, and environmentally sensitive land
- 13. Partner in contributing to the city's economic development by attracting tourists and businesses to recreational attractions in and around Galveston

and Key Recommended Actions:

- 1: Continuously pursue partnerships with other parks and recreation providers; = partnerships with local organizations to provide programming and co-design signage meet
- 8: Improve park accessibility
- 3: Undergo an aggressive park enhancement program

Vision Galveston Plan Recommendations:

- 14. Develop robust cross-cultural, cross-generational environmental education programs
- 29. Improve parks and open space
- 30. Ensure there are quality parks in walking distance of every home
- 31. Build an amazing destination park to attract residents and visitors alike
- 51. Develop community-based assets that support education and economic opportunity

and TPWD Land & Water Resources Conservation and Recreation Plan Goals:

- 1: Practice, encourage, and enable science-based conservation and stewardship of natural and cultural resources.
- 2: Increase access to and participation in the outdoors.
- 3: Educate, inform, and engage Texans in support of conservation and recreation.

Research, monitoring and evaluation: The design of Jones Park was based on data, and the evaluation of its features will be quantified by Ph.D. scientists at HARC and Vision Galveston, with the help of community scientists. By collecting data to show the success of this project (e.g. amount of stormwater diverted, temperature decreased, improved park usage), we can provide an important case study of a public sponge park and green infrastructure in Galveston and encourage further sustainable development on the island. This will fulfill the City of Galveston Comprehensive Plan Goals:

- NR-3.4 Encourage wetland restoration on Galveston Island
- NR-5.3 Promote Preservation and creation of open space through development and planning tools
- NR-5.5 Work with non-profit conservation partners
- NR-6.2 Improve coordination between various public and private entities for management of natural areas
- NR 6.4 Encourage and maintain a sustainable urban ecosystem
- ED-1.7 Promote and maintain Galveston as a leader in sustainable development and economic growth
- HP-4.7 Support the provision of neighborhood amenities and increase beautification efforts

City of Galveston Parks and Open Space Master Plan Goals:

- 6. Ensure that recreational programs meet the interests and needs of persons of all ages and abilities by providing programs independently and in cooperation with partners
- 7. Explore additional opportunities for partnerships and expand outreach programs to increase the sense of ownership of parks by the neighborhoods they serve or the local groups that use them
- 12. Protect and sustain natural areas, resource features, and environmentally sensitive land

Vision Galveston Plan Recommendations:

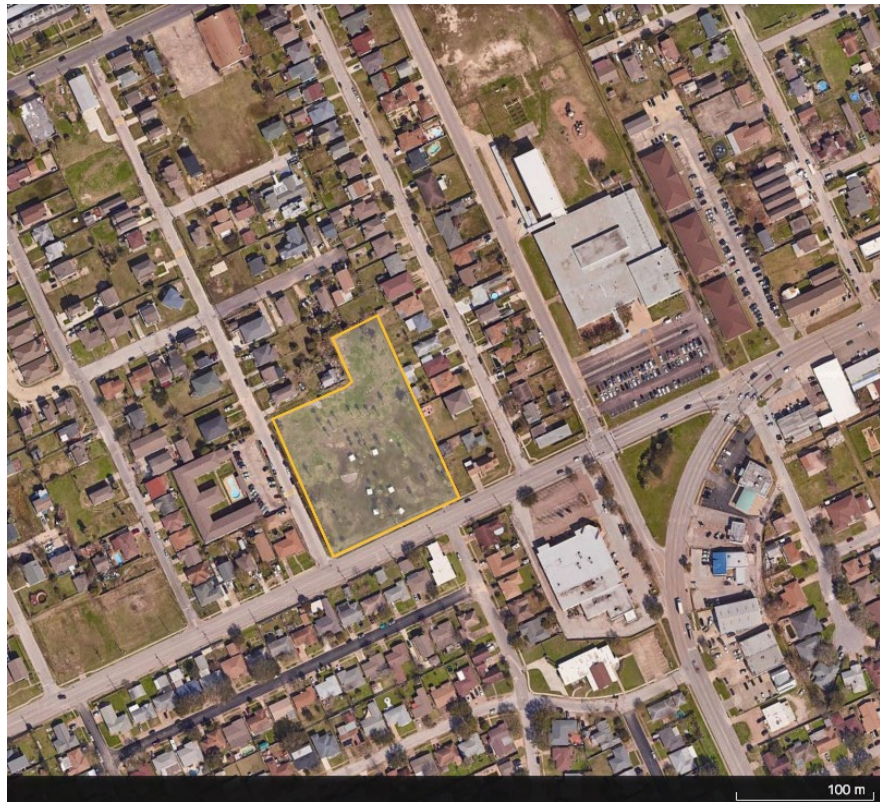
- 14. Develop robust cross-cultural, cross-generational environmental education programs
- 18. Reduce flood insurance rates by improving Galveston's community rating system status

and TPWD Land & Water Resources Conservation and Recreation Plan Goals:

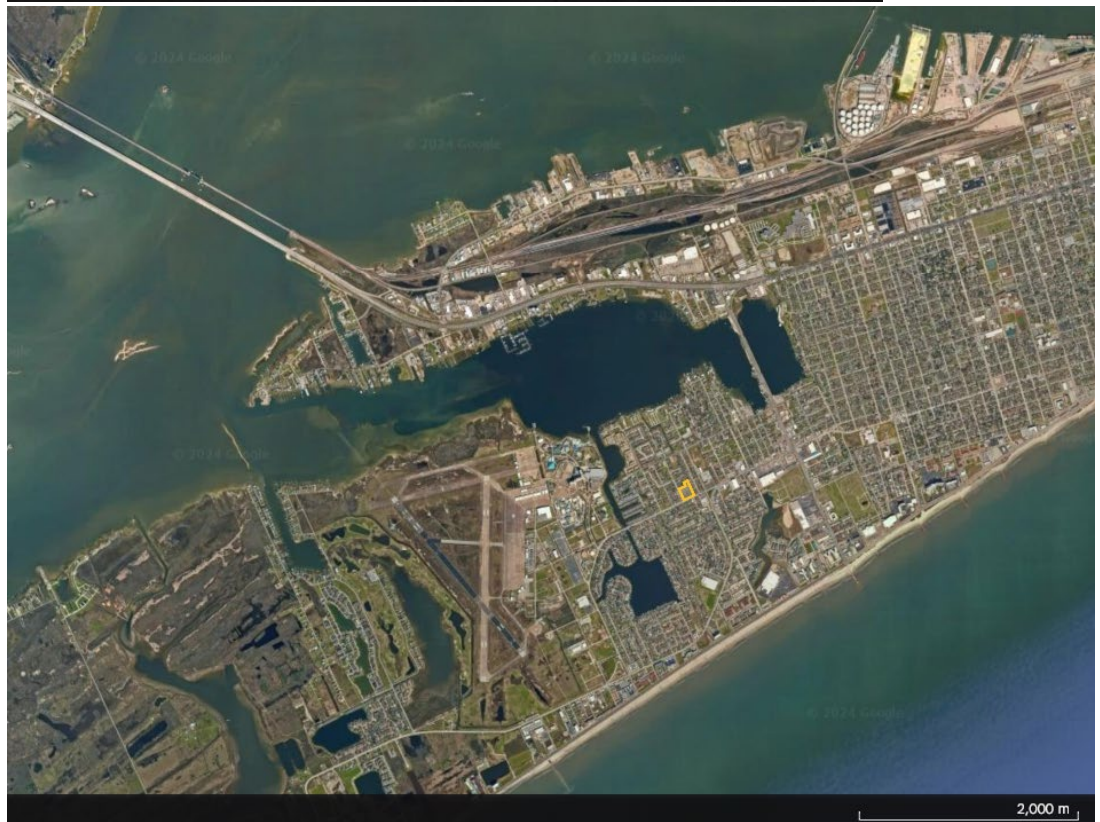
- 1: Practice, encourage, and enable science-based conservation and stewardship of natural and cultural resources
- 2: Increase access to and participation in the outdoors
- 3: Educate, inform, and engage Texans in support of conservation and recreation

Projects Map

Jones Park is outlined in yellow on both maps. Map A is a close-up of the neighborhood, and Map B shows the park's location within the city of Galveston. The maps were captured on Google Earth on August 25, 2024. Map C shows the location of the park within the Galveston Island area on a traditional Google Map.



Map A (right top)



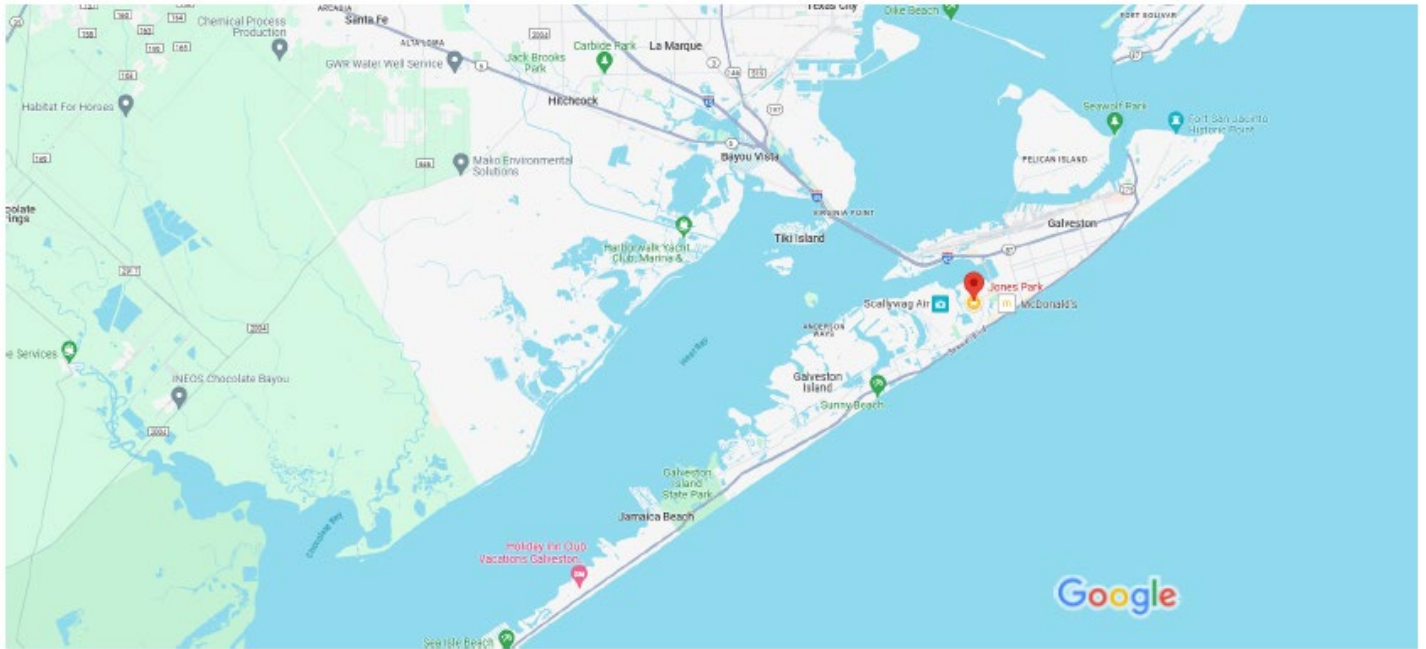
Map B (right bottom)

Map C (below)



Jones Park Location Map

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Map data ©2024 INEGI 2 mi 

Supplemental Photos/Graphics (Optional):

See Appendices for photos of park and other graphics

SECTION SEVEN: BUDGET DETAILS

Grant Payments [see 30 TAC § 14.7(12)]: All grant payments will be made on the basis of reimbursement for allowable costs (as defined in 2 CFR Part 200, Subpart E). All payments for awarded proposals will be reimbursements of allowable costs incurred after both parties have entered (signed) a grant agreement for the project.

Budget. Authorized budgeted expenditures for work performed are as follows:

Budget Category	Cost for Work to be Performed
Salary / Wages	\$ 0.00
Fringe Benefits (##%) ¹	\$ 0.00
Travel	\$ 0.00
Supplies	\$ 1,000.00
Equipment	\$ 0.00
Contractual	\$ 38,393.00
Construction	\$ 835,142.50
Other	\$ 0.00
Total Direct Cost	\$ 874,535.50
Indirect Costs	\$ 25,000.00
Total	\$ 899,535.50

Indirect Cost Agreement

Please note: If using a rate different from your entity Indirect Cost Agreement; a letter of exemption from the appropriate authority must be provided with the application, or a statement must be included certifying that the recipient has elected to be reimbursed for an amount less than its total indirect costs, that unreimbursed indirect costs are part of the recipient’s contribution to the success of the project, and that the recipient will pay for all unreimbursed indirect costs using funds available to it for that purpose.

[\[Insert Indirect Cost Agreement or Attach as an Appendix if Applicable\]](#)

Indirect Cost Reimbursable Rate. The reimbursable rate for this Contract is 10% of (check one):

- Salary and fringe benefits
- Modified total direct costs
- Other direct costs base

If other direct cost base, identify:

This rate is less than or equal to (check one):

- Predetermined Rate**— an indirect rate that is negotiated between the Performing Party and its federal cognizant agency and supported by a current Negotiated Indirect Cost Rate Agreement (NICRA) letter. A Predetermined Rate is not subject to adjustment except as provided by 2 Code of Federal Regulations (CFR) § 200.411.
- De Minimis Rate**— if Performing Party does not have a current negotiated indirect rate, Performing Party may use a standard rate of ten percent of Modified Total Direct Costs (MTDC) in lieu of determining

¹ If fringe is not a single rate, please attach calculation or explanation as an appendix.

the actual indirect costs of the service. Costs must be consistently charged as either indirect or direct costs.

Provisional Rate— an experienced-based rate agreed to by Performing Party and TCEQ in the absence of a NICRA rate negotiated with the applicable federal cognizant agency.

Partial Reimbursement Rate— a reimbursement rate agreed to between TCEQ and Performing Party that is less than the rate authorized under TxGMS or, where applicable, 2 CFR Part 200. Performing Party contributes all of its unreimbursed indirect costs to the successful performance of the project or projects funded under this Contract, in accordance with Article 9 of this section.

Other:

Other. If Budget Category “Other” is greater than \$25,000 or more than 10% of total Contract budget, identify the main constituents:

[Description of costs associated with “Other” budget category.]

SECTION EIGHT: CONTRACT REQUIREMENT [see 30 TAC § 14.7(15)]:

- By submitting this Project Proposal, you acknowledge that, if you become a successful grant recipient selected for a grant award, you must enter into a signed grant agreement or contract with TCEQ following the announcement of that award.

SECTION NINE: ACKNOWLEDGMENTS

Please read and understand the following:

- By submitting this Project Proposal, you acknowledge that information on how grant payments will be made is contained in the Budget Details section describing direct and possibly indirect costs. You further acknowledge that grant payments will be reimbursements on the basis of allowable costs incurred and that selected recipients will receive contract documents addressing allowable costs, unallowable costs, and reimbursement.
- By submitting this Project Proposal, you acknowledge your understanding that Project Proposals do not require matching funds and that a TCEQ director does not need to adjust or waive any matching funds requirement.
- By submitting this Project Proposal, you acknowledge that, if GBEP elects to hold a pre-submittal meeting relating to this Project Proposal, GBEP will notify you of the meeting’s time and location indicating whether attendance is mandatory.

SECTION TEN: QUESTIONS AND PRE-SUBMITTAL MEETINGS [see 30 TAC § 14.7(13) and 30 TAC § 14.7(14)]:

- There are no pre-submittal meetings scheduled.
- For requests for additional, pre-submittal information [see 30 TAC § 14.7(13)], please contact gbep@tceq.texas.gov.

SECTION ELEVEN: ADDITIONAL INSTRUCTIONS

In submitting your Project Proposal, please refer and adhere to the following instructions and guidelines concerning materials and information required to be submitted by potential grant recipients:

- GBEP intends to accept only complete Projected Proposals in a layout and format constituting a filled version of this proposal document with all applicable sections therein addressed; however, GBEP may, in its sole discretion, consider and accept nonconforming Project Proposals in the best interest of the state.
- Unless otherwise specified by GBEP, formal signatures are not required on Project Proposals.
- Unless otherwise communicated or implied, GBEP requires 1 (one) completed copy of your Project Proposal.

- Project Proposals must be received electronically, through the email address listed on this page, by the deadline listed on both this page and the first page of this Project Proposal document.

Please Submit Project Proposals (Microsoft Word Only – No PDFs) by August 26, 2024 to gbep@tceq.texas.gov.

**Galveston Bay Estuary Program Federal Bipartisan Infrastructure Law (BIL) Project
Proposal Federal Fiscal Year 2025**

Vision Galveston Application Appendices:

- Appendix A... Park Conditions and Flooding Photos
- Appendix B ... Letter of Commitment from Dr. Ryan Bare, Houston Advanced Research Center
- Appendix C ... Images of Bioswale in a Bag Prototype
- Appendix D ... Table of Contents for Bioswale in a Bag Draft Curriculum
- Appendix E ... Public Engagement 3/4/21 Summary
- Appendix F GISD Activity Examples
- Appendix G ... Green Galveston Report Graphics: Green Galveston Report Jones Park Engagement
- Appendix H ... 30/60/100% Design Site Plans
- Appendix I ... Proof of Participation in National Flood Insurance Program
- Appendix J ... FEMA Flood Map
- Appendix K ... Screen shot of the CEJST map for Jones Park taken on 8/21/24
- Appendix L ... Screen shot of the EJ Screener map for Jones Park taken on 8/21/24
- Appendix M ... Budget Details and Justification

Attachments list:

<u>Document title</u>	<u>Brief Description</u>
100DD	Jones Park 100% Design Documents
Comp. Plan	City of Galveston Comprehensive Plan
Design Features	Details of 100% Design
Families	Vision Galveston Report on local population loss
Green Galveston Report	Vision Galveston Green Galveston Plan
Material Study	Jones Park Good Better Best Material Study and Cost Estimates
OPCC	Jones Park Opinion of Probable Costs 100% Design
POSMP	City of Galveston Parks and Open Space Master Plan
TEA	TEA GISD Data
TPWD Plan	TPWD Land & Water Resources Conservation and Recreation Plan
VG Plan	Vision Galveston 20-Year Plan

Appendix A – Park Conditions and Flooding Photos

Flooding



Flooding



Flooding



Park Amenities: Benches and Shade Structures



Park Amenities: Benches and Shade Structures



Park Amenities: Benches and Shade Structures



Park Activities: Basketball court



Park access: Sign, On-street parking area



Park environment: Trees, plants and overall landscape



Park environment: Trees, plants and overall landscape



Drone Photographs:



Drone Photographs:



Drone Photographs:



Appendix B – Letter of Commitment from Dr. Ryan Bare



Galveston Bay Estuary Program
17041 El Camino Real, Suite 210
Houston, TX 77058

August 23, 2024

To the Grant Selection Committee,

I am writing to express my strong support for Vision Galveston's proposed project, *Renovating Jones Park: Building Galveston's First Climate-Ready Stormwater Park*, and my commitment to conducting a Nature-Based Solution (NBS) benefits evaluation should it be selected for FY 2025 Bipartisan Infrastructure Law Funding. This project supports the Galveston Bay Plan Priorities 1, 2, 3 and 4, all of the GBEP Stakeholder Action and Support priorities, as well as two of four EPA Areas of Special Interest. The focus on creating equitable green space and climate solutions will support Equity and Justice initiatives.

Galveston experiences frequent nuisance flooding after rainstorms and heat inequity due to differential shade coverage. The community in and around Jones Park is vulnerable to climate impacts. This project's innovative use of green infrastructure to solve these issues is a novel approach for Galveston Island. It will be an important pilot study for locals to experience NBS benefits. The need for more investment in green space on the island (where residents mostly spend time) is readily apparent. Adding an accessible park in this part of Galveston will greatly benefit the community by providing recreation opportunities, flood, heat mitigation, among other ecosystem services.

I will contribute my expertise to ensure the success of this project by evaluating the NBS constructed in Jones Park. Specifically, HARC will produce quantitative estimates to evaluate key environmental outcomes resulting from the trees planted and constructed NBS practices. The benefit evaluation will use the i-Tree suite of tools and a combination of well documented modeling tools such as the Pollution Load Estimate Tool (PLET), Visualizing Ecosystem Land Management Assessments (VELMA), a customized benefits valuation, or others as identified. HARC will also provide technical assistance to develop a Quality Assurance Project Plan to include the modeling activities and other environmental information operations.

I have a strong, positive relationship with Vision Galveston, collaborating on several grant projects and proposals since 2022. I have seen first-hand how community engagement and equitable processes are strongly integrated into their work, including in the redevelopment of Jones Park. They have a strong relationship with the Galveston community that will ensure the success of this project.

I am thrilled to express my support for this project, which will have a significant community impact. This project has the power to transform the community and set a precedent for sustainable, community-engaged design across the island, ensuring a brighter future for Galveston.

Sincerely,

A handwritten signature in cursive script that reads "Ryan Bare".

Dr. Ryan Bare
Senior Research Scientist and Nature-Based Solutions Program Manager
Houston Advanced Research Center
8801 Gosling Road

Appendix C – Images of the Bioswale in a Bag Prototype

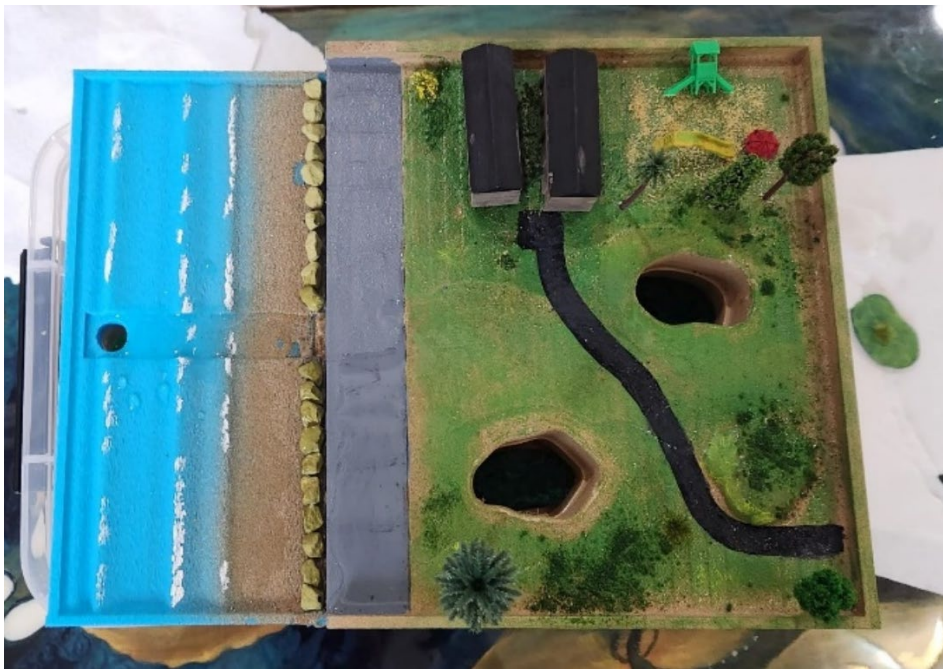


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Appendix E - Public Engagement 3/4/21 Summary

2500 Summer Street, Suite 3228
Houston, TX 77007
Planning | Urban Design | Landscape Architecture
P: (713) 337-5830
W: asakurarobinson.com



SD Public Engagement Summary

Project: Jones Park
Project #: VGA2201

1. Survey (03/04/2021):
 - a. How often do you visit Jones Park?
 - i. 44% of respondents selected never
 - ii. 20% of respondents selected a couple times a year
 - iii. 16% of respondents selected once a week
 - iv. 8% of respondents selected once a month
 - v. 4% of respondents selected every day
 - b. If you visit Jones Park, what do you do there?
 - i. 52% of respondents selected bring kids to the playground
 - ii. 40% of respondents selected I don't visit Jones Park
 - iii. 28% of respondents selected picnic
 - c. If you visit Jones Park, how do you get there?
 - i. 36% of respondents selected drive
 - ii. 32% of respondents selected walk
 - iii. 28% of respondents selected I don't visit Jones Park
 - iv. 4% of respondents selected bike
 - d. If you visit Jones Park infrequently or do not visit the park, what is stopping you?
 - i. 68% of respondents selected flooding in parks
 - ii. 44% of respondents selected nothing of interest to me in the park
 - iii. 16% of respondents selected hot weather
 - iv. 8% of respondents selected I don't have time
 - e. What would you like to do at Jones Park?
 - i. 64% of respondents selected play with my kids at a playground
 - ii. 60% of respondents selected picnic with friends
 - iii. 60% of respondents selected walk my dog
 - iv. 60% of respondents selected play sports
 - v. 60% of respondents selected games
 - vi. 52% of respondents selected learn about nature
 - vii. 40% of respondents selected view wildlife
 - viii. 4% of respondents selected teach family friendly activities
 - ix. 4% of respondents selected craft fair
2. GISD Activity (03/25/2021):
 - a. I enjoy going to Jones Park because...
 - i. It's where you can have fun
 - ii. It's close to my school (5)
 - iii. I like going to parks because I like outdoors

- iv. I enjoy the nice breeze, fun swings, and slides
 - v. It's fun to play at the playground
 - vi. I play with my friends. It is close to my school
 - vii. Because it's fun
 - viii. It will be fun when it is redone
- b. I designed my park for...
- i. Families to have fun
 - ii. A great place to have fun
 - iii. People to have fun and get exercise. I love to make people happy
 - iv. Kids and babies
 - v. Kids to have more fun
 - vi. Kids in Galveston
 - vii. To make it fun for kids
 - viii. A better place for kids to play and enjoy their free time
- c. My favorite thing to do in a park is...
- i. Run, climb, and swing
 - ii. Run, go on the equipment
 - iii. Climb on a spiderweb
 - iv. Play on the playgrounds and I like to swing. I like to slide, play in waterparks, and play basketball
 - v. Play games, eat, invite friends over, play on the park
 - vi. To run around and have fun
 - vii. Swings, slides, water park/splash pad (2)
 - viii. Swing on the swings and climbing the rock wall
- d. I wish Jones Park had...
- Monkey bars (3)
 - Rocking animals
 - Slides (4)
 - A cooling space
 - Flowers
 - Seesaw (3)
 - Swings, all over the park (5)
 - Mom and me swings
 - Merry go round (2)
 - Water paths, water mushrooms, water park (2)
 - Pools
 - Trampoline (2)
 - Fun House/Play house
 - A zipline (2)
 - A jogging area for exercise (2)
 - A picnic area (2)
 - A room with a treadmill and other exercise equipment
 - Pull up bars
 - Go kart
 - Library spot / free little library
 - Sport areas

- Sand pit
 - Rocks to climb on
 - A mini island (Galveston themed play)
 - Basketball court
 - Park map
 - Spinning and climbing play equipment
- e. Drawn elements summary:
- i. Brady W.: Tree, Basketball, Slide, Play Castle, Monkey Bars, Swing, Seating, Restrooms, Shade Structures, Walking Path
 - ii. Chloe B.: Walking Paths, Swing, Animal Rockers, Shade Structure with Picnic Tables, Play Tower with Slide, Merry go round, Seesaw, Tree with Garden
 - iii. Dean W.: Walking Paths, Shade Structures, Swings, Merry go round, Water Paths, Pools, Trampoline, Fun house with different doors doing different fun things
 - iv. Hailey C.: Walking paths, Play castle, Swings, Basketball court, Trees with seating, Gazebo
 - v. Khayron W.: Trees, Swings, Birds, Pull up bars, Basketball court, Monkey bars, Slide, Trash can, Picnic tables
 - vi. Logan H.: Slides, Swings, Zipline, Football field, Walking Paths, Play castle, Trees, Trampoline, Tables and Chairs, Shade Structures, Games
 - vii. N'Myreia V.: Butterflies, Swings, Slides, Flowers
 - viii. Roxi S.: Mini map of the island and park, Sand pit, Slide, Swings, Basketball Court, Picnic Pavilion, Spinning play equipment, Hill slide, Rocks, Seesaw, Monkey bars, Rope climb equipment, Splash pad mushroom
 - ix. Whitley S.: Splashpad, Shade, Trees and garden, Bike track for riding bike, Yoga area, Exercise area for kids, Bathroom, Water fountains, Adult exercise area, Lots of swings, Sandbox, Education area

Appendix F - GISD Activity Examples

Whitley S., 3rd

I enjoy going to Jones Park because...
 It is close to my school. I also like going to parks because I like outdoors.

I designed my Park for...
 I want to have a splash pad, a playground, a picnic area, and an exercise area for kids.

My favorite thing to do in a park is...
 To swing, slide, and play basketball.

I wish Jones Park had...
 More trees and a water feature.

Roxi S., 4th

I enjoy going to Jones Park because...
 It is fun.

I designed my Park for...
 To make it fun for kids.

My favorite thing to do in a park is...
 To play on the playground.

I wish Jones Park had...
 A water feature and a picnic area.

Hailey C., 2nd

I enjoy going to Jones Park because...
 It is close to my school. I also like going to parks because I like outdoors.

I designed my Park for...
 People to have fun and get exercise. I love to make people happy.

My favorite thing to do in a park is...
 Play on playground and I like to swing. I like to slide, play in water park, and play basketball.

I wish Jones Park had...
 A zipline and a jogging area for exercise. A picnic area and a room with a treadmill. The thing we run on.

Logan H., 4th

I enjoy going to Jones Park because...
 It's fun to play at the playground.

I designed my Park for...
 Kids to have more fun.

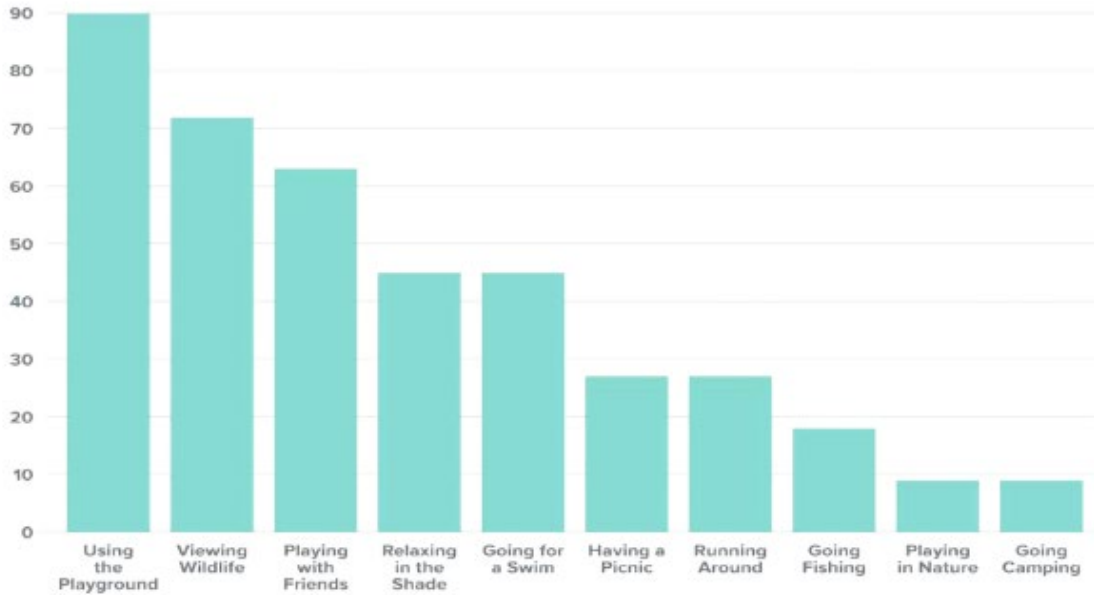
My favorite thing to do in a park is...
 To run around and have fun.

I wish Jones Park had...
 A playground, a picnic area, and a room with a treadmill. The thing we run on.

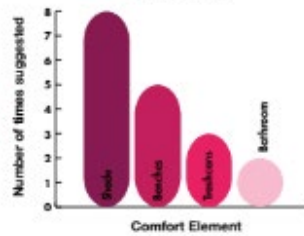
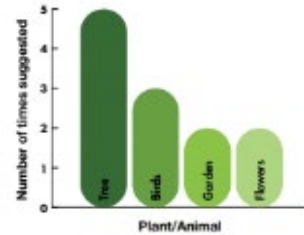
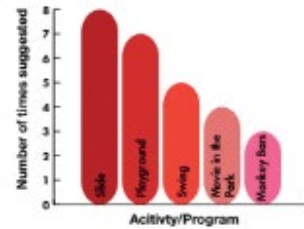
Appendix G – Green Galveston Report Graphics: Green Galveston Report Jones Park Engagement

Q: What do you enjoy about parks?

(Students were asked to pick their top 4)



Jones Park Community Feedback



Appendix H – 30/60/100% Design Site Plans

30% Design Site Plan – 12/2021







- ## SITE PLAN
- 1 BIORETENTION W/ ACCENT WETLAND PLANTING
 - 2 PARKING LOTS W/ POWERBLOCK PERMEABLE PAVEMENT
 - 3 PORTABLE RESTROOM
 - 4 BIKE RACKS
 - 5 PEDESTRIAN PERMEABLE PAVEMENT
 - 6 BASKETBALL COURT W/ SHUFFLEBOARD
 - 7 PICKLEBALL COURTS W/ FENCE & GATES
 - 8 FITNESS AREA W/ PIP SURFACE AND CANOPY
 - 9 NATIVE GRASS SEED MIX
 - 10 BIORETENTION TRANSITION PLANTING
 - 11 BOARDWALK-STYLE CONCRETE WALK
 - 12 PAVILION W/ PICNIC TABLES (6) AND PAINTED SCHOOL GAMES (e.g. 4 SQUARE)
 - 13 SEATWALL
 - 14 PLAYGROUND W/ INCLUSIVE EQUIPMENT AND PIP SURFACE
 - 15 VEGETATED SWALE W/ WETLAND PLANTING
 - 16 ARTIFICIAL TURF MOUND W/ ADA ACCESSIBLE SLIDES AND STEPPERS
 - 17 ON-STREET PARKING
 - 18 PARK MONUMENT SIGN
 - 19 OPEN LAWN (SOD)
 - 20 ACOUSTICAL BARRIER ATTACHED TO FENCE
 - 21 PLAYGROUND FENCE
- NEW SHADE TREES
 - NEW ORNAMENTAL TREES
 - NEW PALM TREES
 - EXISTING TREES POTENTIALLY TO REMAIN
 - EXISTING PALM TREES POTENTIALLY TO REMAIN
 - BIOFILTRATION SYSTEM
 - TRASH RECEPTACLE (2)
 - PEDESTRIAN LIGHT (25)
 - EDUCATIONAL SIGNAGE (3)
 - RELOCATED GRANITE MONUMENT (2)
 - BENCH (10)
 - DRINKING FOUNTAIN (2)
 - PARK OR PLAYGROUND RULES SIGN (2)
 - HANDICAP SPACE (10)



- ## SITE PLAN
- 1 ON-STREET PARKING
 - 2 PARKING LOTS W/ POWERBLOCK PAVER DRAIN SYSTEM
 - 3 VEGETATED SWALE
 - 4 BASKETBALL COURT
 - 5 FENCED PICKLEBALL COURTS W/ SOUND BARRIER
 - 6 RELOCATED GRANITE MONUMENT
 - 7 FITNESS AREA W/ CANOPY
 - 8 NATIVE GRASS SEED MIX
 - 9 BIORETENTION W/ ACCENT WETLAND PLANTING
 - 10 CONCRETE BOARDWALK
 - 11 PAVILION W/ PICNIC TABLES (6) AND PAINTED PLAYGROUND GAMES (e.g. 4 SQUARE)
 - 12 PLAYGROUND W/ INCLUSIVE EQUIPMENT AND PIP SURFACE
 - 13 ARTIFICIAL TURF MOUND W/ ACCESSIBLE SLIDES AND STEPPERS
 - 14 PARK ENTRY SIGN
 - 15 OPEN LAWN (SOD)
 - SPORT COURT LIGHT
 - PEDESTRIAN LIGHT
 - ▲ GROUND LIGHT
- EXISTING PALM TREES TO REMAIN
 - NEW PALM TREES
 - NEW SHADE TREES
 - NEW SMALL / ORNAMENTAL TREES

Appendix I – Proof of Participation in National Flood Insurance Program

		Community Status Book Report Communities Participating in the National Flood Program <small>Select here for not participating</small>				TEXAS					
CID	Community Name	County	Init FHBM Identified	Init FIRM Identified	Curr Eff Map Date	Tribal	Reg-Emer Date	CRS Entry Date	Curr Eff Date	Curr Class	% Disc
480525#	FORT STOCKTON, CITY OF	PECOS COUNTY	05/24/74	11/01/85	(NSFHA)	No	11/01/85				
480596B	FORT WORTH, CITY OF	WISE COUNTY/PARKER COUNTY/DENTON COUNTY/TARRANT COUNTY	09/17/71	06/04/80	03/21/19	No	06/04/80	10/01/12	04/01/23	7	15%
480235	FRANKLIN COUNTY*	FRANKLIN COUNTY				No	07/28/00(E)				
480990#	FRANKLIN, CITY OF	ROBERTSON COUNTY	07/16/76	07/06/82	07/18/11(M)	No	07/06/82				
480252#	FREDERICKSBURG, CITY OF	GILLESPIE COUNTY	04/12/74	05/19/81	10/19/01	No	05/19/81				
485467A	FREEPORT, CITY OF	BRAZORIA COUNTY		11/17/70	12/30/20	No	11/13/70				
480249#	FREER, CITY OF	DUVAL COUNTY		02/04/11	(NSFHA)	No	11/03/11				
480822A	FREESTONE COUNTY*	FREESTONE COUNTY	01/03/78	09/01/07	09/01/07(L)	No	09/01/07				
485468A	FRIENDSWOOD, CITY OF	HARRIS COUNTY/GALVESTON COUNTY	06/05/70	03/03/72	08/15/19	No	03/03/72	10/01/91	10/01/21	6	20%
481172	FRIO COUNTY*	FRIO COUNTY				No	09/30/97(E)				
480523	FRIONA, CITY OF	PARMER COUNTY	04/12/74	06/05/85	06/05/85(M)	No	06/05/85				
480134C	FRISCO, CITY OF	DENTON COUNTY/COLLIN COUNTY	01/24/75	06/18/80	06/07/17	No	06/18/80				
480875	FRITCH, CITY OF	HUTCHINSON COUNTY	07/16/76		07/16/76	No	11/08/06(E)				
480954#	FROST, CITY OF	NAVARRO COUNTY	07/18/75	07/18/75	06/05/12(M)	No	08/08/78				
481041#	FRUITVALE, CITY OF	VAN ZANDT COUNTY	07/16/76	11/01/89	12/17/10(M)	No	11/01/89				
481488C	FULSHEAR, CITY OF	FORT BEND COUNTY	07/09/76	08/19/87	01/29/21	No	07/31/81				
480012#	FULTON, TOWN OF	ARANSAS COUNTY	06/17/70	08/06/71	02/17/16	No	02/27/87				
	USE THE ARANSAS COUNTY (485452) FIRM					No					
481219	GAINES COUNTY *	GAINES COUNTY				No	04/19/89(E)				
480154#	GAINESVILLE, CITY OF	COOKE COUNTY	02/15/74	10/15/81	01/16/08	No	10/15/81				
480293G	GALENA PARK, CITY OF	HARRIS COUNTY	02/21/75	11/02/82	05/02/18	No	11/02/82				
485470A	GALVESTON COUNTY*	GALVESTON COUNTY		04/09/71	08/15/19	No	04/09/71				
	INCLUDES THE TOWN OF CRYSTAL BEACH					No					
485469A	GALVESTON, CITY OF	GALVESTON COUNTY		05/26/70	08/15/19	No	05/07/71	05/01/14	05/01/19	6	20%
	An area in Galveston county called Pirates Cove was annexed to the City of Galveston back in 2006 and is now part of the City of Galveston.					No					
	Description of an area in Galveston County, TEXAS Annexed into the City of Galveston All of the area with in the boundaries of Galveston Municipal Utility District No. One of Galveston County, Texas as the district presently exists.					No					
480381#	GANADO, CITY OF	JACKSON COUNTY	04/12/74	09/28/79	09/17/14	No	09/28/79				
480148#	GARDEN RIDGE, CITY OF	COMAL COUNTY	10/25/74	04/30/86	09/02/09	No	04/30/86				
485471#	GARLAND, CITY OF	COLLIN COUNTY/ROCKWALL COUNTY/DALLAS COUNTY	08/11/70	04/16/71	07/07/14	No	04/16/71	10/01/91	10/01/23	6	20%
481220	GARZA COUNTY *	GARZA COUNTY				No	03/28/01(E)				
480156#	GATESVILLE, CITY OF	CORVELL COUNTY	04/05/74	09/30/81	02/17/10	No	09/30/81				

Appendix J - FEMA Flood Map

National Flood Hazard Layer FIRMMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE)
Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee. See Notes, Zone X
- Area with Flood Risk due to Levee Zone D

OTHER AREAS

- NO SCREEN Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

CROSS SECTIONS WITH 1% ANNUAL CHANCE WATER SURFACE ELEVATION

- 20.2
- 17.6
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline

OTHER FEATURES

- Profile Baseline
- Hydrographic Feature

MAP PANELS

- Digital Data Available
- No Digital Data Available
- Unmapped

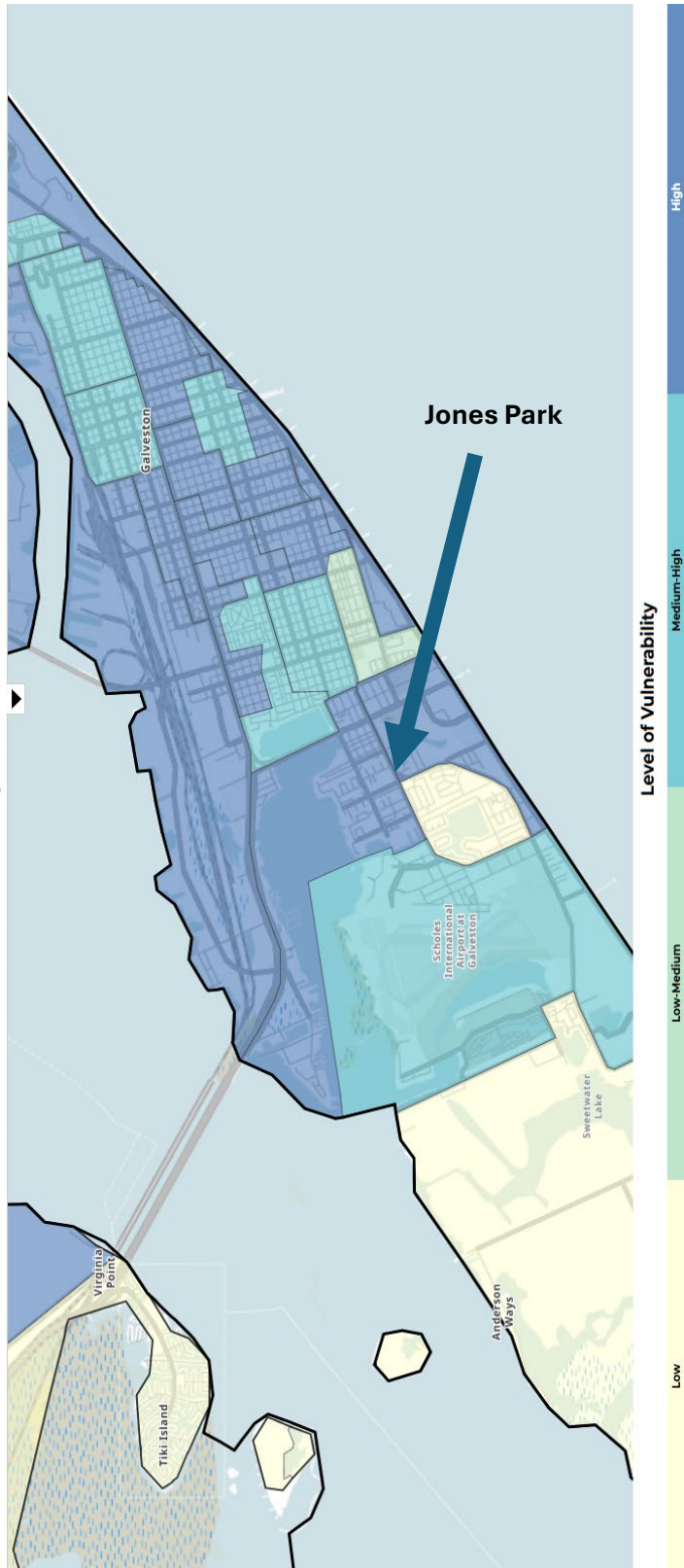
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

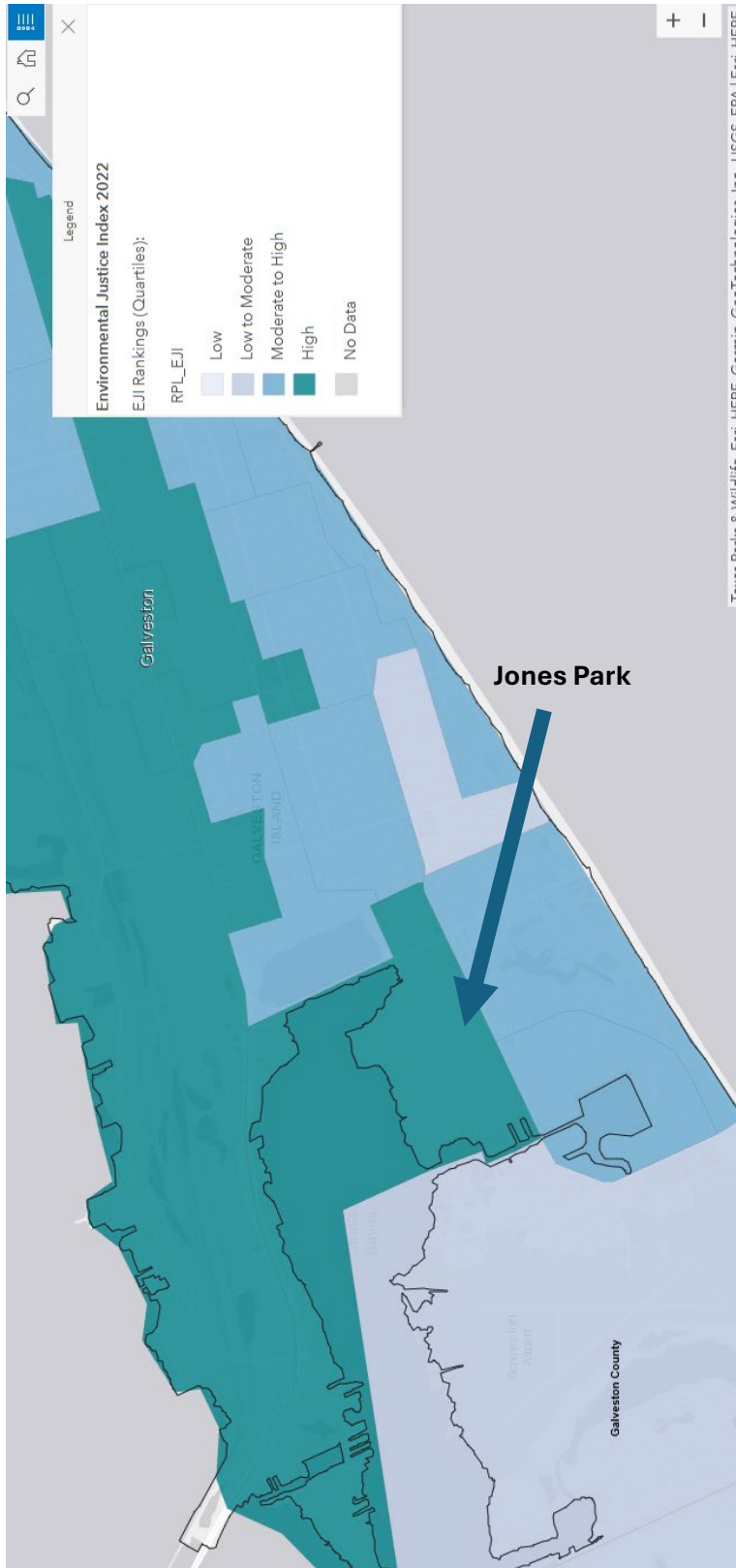
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/25/2024 at 4:20 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmapped areas cannot be used for regulatory purposes.

Appendix K – Screen shot of the CEJST map for Jones Park taken on 8/21/24



Appendix L – Screen shot of the EJ Screener map for Jones Park taken on 8/21/24



Appendix M – Budget Details and Justification

Category	Item	FFY1	FFY2	FFY3		Category Total	Indirect Costs (10%, up to \$25,000)	Remainder of costs to complete renovation of Jones Park (to be raised via grants and capital campaign)
Salary	Vision Galveston Director of Green Galveston Initiatives	\$ 3,750.00	\$ 15,000.00					\$ 7,500.00
Salary	Vision Galveston Engage Galveston Manager	-	\$ 2,500.00			\$ 21,250.00		\$ 2,500.00
Fringe	NA	-	-			\$ -		-
Travel	NA	-	-			\$ -		-
Supplies	Supplies for Bioswale in a Bag	\$ 2,500.00	\$ 2,500.00					
Supplies	Supplies for Community Science	-	\$ 1,000.00	\$ -		\$ 6,000		-
Equipment	NA	-	-			\$ -	\$ 25,000.00	-
Contractual	HARC Contract for NbS research and evaluation	\$ 19,196.50	\$ 19,196.50			\$ 38,393.00		-
Contractual	Construction Contract	\$ 1,858,189.00	-			\$ 2,058,189.00		\$ 5,579,753.00
Contractual	Engineer Contract	\$ 200,000.00	-					\$ 300,000.00
Total		\$ 2,083,635.50	\$ 40,196.50	\$ -		\$ 2,123,832.00	\$ 25,000.00	\$ 5,889,753.00
Construction funds already secured	\$175,000 IDC Parks Package and \$25,000 BPG Donation for park amenities	-\$200,000						
Salary funds: in-kind	\$21,250 for Vision Galveston employee salaries	-\$21,250						
Supplies: In-kind	\$5,000 from Vision Galveston for Bioswale in a Bag activities	-\$5,000						
Capital campaign funds to be raised	\$1,000,000 by Vision Galveston and partners	-\$1,000,000						
total requested from GBEP							\$	899,535.50
<p>Budget Justification: The budget for this project will allow us to complete the most important parts of Phase I construction for Jones Park, namely installing green infrastructure to reduce climate stressors (including bioswales and permeable pavers in the parking lot), refurbishing the walkways and other amenities so the park can be used, and conducting monitoring and evaluation to understand how well the nature-based solutions are working. Supplies for events including printing, tents, survey supplies (flags, transect tape, hand lenses, etc.) will be needed for community science monitoring in year 2. Houston Advanced Research Center will contract with Vision Galveston to create a QAPP in year 1, then conduct monitoring and evaluation in year 2. Construction and engineering costs includes contractual services as well as bioretention, irrigation, concrete pathways, planting, site furnishings, and park signage. In kind: Salary for engagement event planning and administration for Vision Galveston Green Galveston Director (5% and 20% of salary time in years 1 and 2 respectively) and Engagement Manager (5% of salary time in year 2); Bioswale in a Bag models will be printed and paid for by Vision Galveston. Individual costs for these items are detailed in Supplemental Document: OPCC. The budget for construction and engineering was created by Asakura Robinson as part of their 100% DD process, which is included in supplemental application documents. More information on probable cost estimates can be found in Supplemental Documents: OPCC and Design Features.</p>								