

**Galveston Bay Estuary Program**

17041 El Camino Real, Suite 210

Houston, TX 77058-2646

Telephone: (281) 218-6461

---

October 8, 2020

Dear Galveston Bay Council Members:

The next quarterly meeting of the Galveston Bay Council is scheduled for:

**Wednesday, October 21, 2020**

**9:30 a.m. – 12:30 p.m.**

**Virtual Meeting**

**WebEx**

Information for the **October 21, 2020** meeting is attached as noted below.

1. Galveston Bay Council Agenda for October 21, 2020
2. Draft July 15, 2020 Galveston Bay Council Meeting Minutes
3. Proposed FY 2022 Work Plan Budget
4. Proposed FY 2022 Project Proposal Summaries
5. Draft Diversity, Equity, and Inclusion Standing Rule

Sincerely,



Lisa M. Marshall  
Program Manager  
Galveston Bay Estuary Program (GBEP)



## **GALVESTON BAY COUNCIL (GBC) QUARTERLY MEETING**

**Location:** Virtual - WebEx

**AGENDA:** *Wednesday, October 21, 2020*

**9:30 a.m.:** **Call to Order:** Introduction of Members and Delegates

**Action Item:** Approval of July 15, 2020 Meeting Minutes

**Report of the Chair** (Glenn Clingenpeel)

**Announcement:** Newly appointed GBC Members:

1. Shane Simpson, SJRA
2. Maria Valdez, Greater Houston Partnership
3. Elizabeth Fazio Hale, GCA

**Action Item:** Approval of New Industry Representative

**Action Item:** Approval of Diversity, Equity, and Inclusion Standing Rule

**Report of the Program** (Lisa M. Marshall)

**Action Item:** Annual Conflict of Interest Form

**10:00 a.m.:** **Presentations & Discussion:** Fiscal Year 2022 Galveston Bay Estuary Program (GBEP) Work Plan. A series of short presentations by GBEP staff covering the projects and programmatic costs being proposed.

**Action Item:** Approval of each item in the proposed work plan

**10:40 a.m.:** **Presentation:** *State of the Bay, 4<sup>th</sup> Edition, New Website* – Lisa Gonzalez, Ph.D and Erin Kinney, Ph.D, Houston Advanced Research Center

**11:10 a.m.:** **Presentation:** *Scalable Roadway-Level Flood Warning Systems* – Jacob Torres, Ph.D, Torres and Associates, LLC

**11:40 p.m.:** **Council Member Roundtable:** News, Announcements and Discussion

**12:15 p.m.:** **Public comments**

**12:30 p.m.: Adjourn**

**Upcoming Galveston Bay Council Meeting Dates:** January 20, 2021; April 21, 2021; July 21, 2021, October 20, 2021. Meetings are held on the third Wednesday of the quarter from 9:30 a.m.-12:30 p.m. If there are known conflicts, Council members are welcome to propose alternate dates to the Council.

## **GALVESTON BAY ESTUARY PROGRAM (GBEP)**

### **DRAFT - Galveston Bay Council (GBC) Meeting Minutes – July 15, 2020**

#### **Attendees:**

**Galveston Bay Council Chair:** Glenn Clingenpeel (Trinity River Authority)

**Galveston Bay Council Vice-Chair:** Albert Gonzales (Low Income Communities)

**Estuary Program Staff Lead:** Lisa Marshall (Galveston Bay Estuary Program)

*Due to issues with COVID-19, the January 21, 2020 quarterly GBC meeting was held through the WebEx conferencing service.*

**Members Present:** Scott Alford, Caryn Brooks, Glenn Clingenpeel, Winfred Colbert, Bryan Eastham, Albert Gonzales, Lori Hamilton, Cruz Hinojosa, Jace Houston, John Huffman, Doug Jacobson, Brian Koch, Audrey Kuklenz, Kristen Lambrecht, Mike Lee, Garry McMahan, Helen Paige, Nancy Parra, Ana Partin, Pamela Plotkin, Russ Poppe, Melissa Porter, Lisa Rickards, Hanadi Rifai, Caimee Schoenbaechler, Ronnie Schultz, Rusty Senac, Linda Shead, Bob Stokes, Jeff Taebel, Sue Theiss, Matthew Tilimon, and Lori Traweek

**Members Not Present/Delegates:** Andrea Catanzaro\*, Jeff DallaRosa, Will Nipper\*, Taylor Rieck\*, Mary Beth Stengler, Charrish Stevens, Kirk Wiles, Tracy Woody  
(\*=Member designated a proxy)

**Proxies Present (GBC member absent/designated proxy):** Andrea Catanzaro/Harmon Brown, Will Nipper/Maria Valdez

**Current Vacancies:** None

**Other Attendees:** Kerry Niemann, Tyler Payne, Dianna Ramirez, Elizabeth Fazio-Hale, Stephanie DeVilleneuve, Terry Gentry, Carion Taylor, Theresa Morris

**Additional GBEP Staff Present:** Cynthia Clevenger, Lindsey Lippert, Kristen McGovern, Christian Rines, Mary Stiles, Patricia Thompson, Vanessa Zemke

#### **Call to Order: Introduction of Members and Delegates**

Glenn Clingenpeel brought the meeting to order and asked council members to please mute their mics.

#### **Action Item: Approval of January 21, 2020 Meeting Minutes**

Mr. Clingenpeel opened the meeting with approval of the minutes. A motion was requested for approval. Brian Koch moved to approve the minutes, and Linda Shead seconded the motion.

#### **Report of the Chair**

Mr. Clingenpeel hoped council members are doing well and regrets the council could not meet in person. He appreciated members flexibility and adaptability and hopes these virtual meetings will be a temporary. Mr. Clingenpeel thanked GBEP staff for

their continued efforts to communicate throughout the pandemic. Mr. Clingenpeel also expressed that he and Ms. Marshall have consistently conversed during this time as well and wanted to assure continuity of operations.

Mr. Clingenpeel reported that the council has three newly appointed members— Lisa Rickards, Charrish Stevens and Sue Theiss. Each new member will be introduced.

### **Lisa Rickards**

Mr. Jacobson updated the council on his current projects. He has been working on the EPA's Deep Waters Horizon (DWH) response. Mr. Jacobson has been the Texas EPA representative for DWH responses since 2016 and has worked to implement and identify projects on the Texas coast to restore ecosystem services damage that occurred from the spill.

Mr. Jacobson also represents Texas on the Trustee Implementation Group (TIG), that created a plan and implemented 15 projects. EPA will start in 2020 or early 2021 on the restoration plan.

Mr. Jacobson has been with EPA for 25 years, and even though his role has changed at the EPA, and he will no longer serve on the council, he assured members that he will still be involved with GBEP. He will also keep up to date with the council and its continued work. Mr. Jacobson thanked the GBEP staff and council for their achievements over the past 25 years and wished continued success in future endeavors.

Doug Jacobson introduced his replacement, Ms. Rickards with the U.S. Environmental Protection Agency (EPA).

### **Charrish Stevens**

Mr. Clingenpeel read Ms. Stevens's bio and introduced her to the council.

### **Sue Theiss**

Albert Gonzales read Ms. Theiss's bio and introduced her to the council.

Ms. Theiss said that she has a background in environmental and law and is back in Houston district, excited to get involved, and is honored to be nominated to the council.

Mr. Clingenpeel thanked Mr. Jacobson's contribution to the council,

Ms. Marshall thanked Mr. Jacobson for his service and his support to GBEP.

Mr. Gonzales also thanked Mr. Jacobson and said he has had the pleasure of being on the council with Mr. Jacobson since 1999, and Mr. Jacobson was very humble and helpful in responses and knowledgeable about EPA. Mr. Gonzales mentioned Mr. Jacobson is a great asset to EPA.

### **Report of the Program (Lisa Marshall)**

Ms. Marshall reported that every two years, half of the Council members' terms expire in November. After this Council meeting, Ms. Marshall will send an email with a form

to members whose terms are expiring to confirm they will continue to represent their organization on the Council. The aim is to approve those members at the TCEQ Commissioners Agenda in February or March, 2021.

In June, the subcommittees selected their priorities for the fiscal year 22 project development process. Currently the request for proposals has gone out to the subcommittees and they are due back to GBEP on June 24, 2020. The proposals will be presented, and projects selected during the September 2020 subcommittee meetings. The subcommittee coordinators will be announcing the priorities from their subcommittees later in the meeting.

Ms. Marshall announced the program has a Mickey Leland intern working at GBEP for the summer. Unfortunately, like everyone else, she is having to telework. Her name is Vanessa Zemke, and she is in the Master of Public Service and Administration Program at Texas A&M's Bush School of Government and Public Service and she is studying Public Management, with a concentration in Marine and Environmental Policy. Ms. Zemke is helping GBEP with implementation tracking for the Galveston Bay Plan, 2<sup>nd</sup> Edition as well as a project for the Partners in Litter Prevention. GBEP is happy to have her for the summer.

**Presentation: *Texas General Land Office's Regional Flood Studies* - Tyler Payne, Texas General Land Office (GLO)**

Tyler Payne provided an overview on the Community Development and Revitalization Program. Mr. Payne reported that GLO is responsible for veteran's affairs, land leases, oil spills, the permanent school fund, and coastal resources for Texas. Governor Perry designated GLO with responsibility for long-term disaster recovery and mitigation for the state in 2011. Governor Abbott extended that designation in 2016 through 2020. GLO also administers the Federal Emergency Management Agency short-term housing missions.

Mr. Payne provided an overview of the grants that are open and are currently administered or have been previously administered by GLO. The \$3 billion Hurricane Ike allocation, followed by \$5.6 million for Hurricane Harvey, and the mitigation for Harvey is \$4.3 billion in funding. Total funding is \$14.3 billion that will be administered. Texas Community Development Block Grant (CDBG) has requirements, and one of the biggest requirements is location; they are only allowed to work in counties associated with disasters.

Mr. Payne reported GLO is working with federal, state regional, local and academic partners to create the Texas Disaster Information System (TDIS). TDIS seeks to gather reliable and accurate information through data sharing agreements. TDIS will not act as a data clearinghouse. The two primary goals:

- Provide reliable and accurate data to decision makers before, during and after disasters.
- Help local communities build more competence by providing the tools and training to effectively conduct comprehensive community planning.

GLO has two TDIS contracts: TDIS Design (University of Texas – Center for Space Research) and TDIS Creation (Texas A&M University, Contracting Pending). TDIS datasets will be identified and prioritized. Web Portal capabilities will have the ability to query and export all data in accordance with security protocols and laws, validate users/roles and display data appropriately, and develop a comprehensive community planning platform.

GLO's target audience is primary stakeholders and organizations that share data, e.g., Federal and State agencies, regional planning and oversight organizations, local governments and insurance organizations. The web portal will mostly target decision-makers such as elected officials, disaster response personnel, recovery and mitigation planners, and local government planners, but will also be available to the general population. GLO reached out to federal and state entities to request high quality data.

Mr. Payne reported on the regional flood studies:

- Four-year contract
- Budget: \$25M/region (\$75M total)
- Four-phase study
  - 1) Data Collection and Outreach
  - 2) Flood Model Development
  - 3) Alternatives Analysis and Cost-Benefit Analysis
  - 4) Recommendations and Pursuit of Additional Mitigations Funds
- GLO-CDR will be contracting with USACE to serve as technical assistance
- Mitigation Funds:
  - 1) Texas allocated \$4.29 billion for mitigation
  - 2) State will run planning has a projected budget of \$214 million
  - 3) Planning survey will close June 30, 2020

**Presentation: *Water and Sediment Quality (WSQ) Focus and Priorities* – Christian Rines, GBEP WSQ Coordinator**

Christian Rines provided a brief overview of the WSQ subcommittee by going over some of the subcommittee's past and most recent accomplishments, needs/gaps and goals of the group, and identified priorities. Ms. Rines reported that the last WSQ subcommittee meeting was held June 10, 2020. Ms. Rines presented the priorities selected by the WSQ subcommittee for fiscal 2022 funding:

- Green infrastructure and soil health projects/monitoring to improve water quality;
- Supporting management measures and watershed-based plans;
- Waterway trash, marine debris, and/or macroplastics and microplastics.

**Presentation: *Bacterial Source Tracking (BST) on Tributaries of Trinity and Galveston Bays* - Terry Gentry, Ph.D, Texas A&M University**

Terry Gentry reported on Bacterial Source Tracking (BST), which is used to determine sources of fecal contamination. The method is based on uniqueness of bacteria from

individual sources. A variety of different methods are used, but it often works best as part of a toolbox type approach. Mr. Gentry reported that there are two library-dependent BST methods that use DNA fingerprinting, both with advantages/disadvantages. He also discussed the development of Texas *E. coli* BST Library.

The Texas *E. coli* BST Library (Volumes 1-20) contains 1,886 *E. coli* isolates from 1,645 different human and animal samples. It was developed by collecting over 4,000 domestic sewage, wildlife, livestock and pet fecal samples and screening over 7,000 isolates for clones and host specificity. Additional isolates are being added from ongoing and future BST projects in other areas of Texas.

The Texas Water Resources Institute (TWRI) team conducted monthly water sampling for one year at locations on Buffalo, Double, Cedar and Dickinson bayous and Clear Creek. By working with local experts, the team was able to identify significant contributors of bacteria in each watershed, for which fecal samples were obtained. The isolates of these fecal samples were then used to supplement the Texas *E. coli* BST Library. These isolates, in addition to those already contained within the library, were then matched up to the isolates obtained from the water samples. The BST analysis performed by TWRI provided a unique profile that identified and quantified the different contributors of *E. coli* for each watershed. Results from this study indicate that wildlife (non-avian and avian) were the leading contributors of bacteria (56%). Contributors of this category include wildlife such as feral hogs, raccoons, opossums, rodents, and other small mammals, as well as various avian sources. Cattle and other livestock, as well as domestic pets, make up an additional 15% of the identified isolates. Human sources accounted for 8% of the total classifications. Surprisingly, 20% of the sources were unidentifiable, which is rare given other studies across the state. It is also worth noting that TWRI was unable to distinguish between isolates of different non-avian species, such as deer and feral hogs. Feral hogs are a known contributor of bacteria in our waterways and should therefore be differentiated from other wildlife given current population numbers and their reproductive capacity. Recent studies indicate a higher potential for bacteria generated by feral hog to infect humans. TWRI is aware of the need to differentiate feral hogs from other sources and will do so, should funding be secured. Additional information on this project may be found by accessing the final report on the GBEP website.

## **Subcommittee Updates**

### ***Monitoring and Research (M&R)***

Kristen McGovern reported that the M&R subcommittee meeting was held March 4, 2020. Ms. McGovern presented the priorities selected by the subcommittee for fiscal 2022 funding:

- Contaminant fate and transport and/or effects of contaminants (especially from chemical and oil spills) on species populations;
- Estimation of spatial/temporal trends in point source and/or nonpoint source loading and compliance with effluent standards; and



- Effects of increased frequency of flood tides and erosion on species populations.

### ***Natural Resource Uses (NRU)***

Lindsey Lippert reported the NRU subcommittee meeting was held on June 23, 2020. Ms. Lippert presented the priorities selected by the NRU Subcommittee for fiscal 2022 funding:

- Habitat Acquisition - the subcommittee agreed that the continuation of land conservation efforts is a priority for implementation in fiscal 2022.
- Enhancement of Existing or Ongoing Restoration/Conservation Efforts was agreed by the subcommittee that addressing the needs of completed or ongoing efforts that may need additional maintenance or support was priority. This includes, but is not limited to, issues such as expansion of project footprints, post-construction erosion issues (such as a breach), additional capacity of nesting habitat, and intrusion of invasive species.
- Benefit to Native Fish and Wildlife - update of a fiscal 2021 priority. Projects should benefit Federal and State Listed Species or Species of Greatest Conservation Need (SGCN) but can also benefit nongame fish and wildlife. Nongame fish and wildlife refers to all animals that have no legal hunting season; species that are not hunted like robins, lizards, armadillos, etc.
- Funding or Work Leverage - continuation of a fiscal 2021 priority. Efforts must be made to expand projects beyond the scope of GBEP dollars and promote collaboration and partnerships.

### ***Public Participation and Education (PPE)***

Cynthia Clevenger reported the PPE subcommittee meeting was held on June 18, 2020. Ms. Clevenger reported the priorities selected by PPE subcommittee:

- Mapping/database identifying underrepresented communities and a needs assessment for volunteer and stewardship programs and opportunities for those underrepresented communities.
- Programs building capacity to target and partner with underrepresented communities that encourage diversity, equity, and addresses language barriers.
- Create and facilitate a workshop that convenes thought leaders, stakeholders, and partners to address how to partner with underrepresented communities to deliver environmental education and outreach efforts. As an outcome of the workshop, develop a plan of action on how to deliver programs in the Galveston Bay watershed for underserved communities.
- Programs that address careers in the environmental field targeting high school-aged youth, young adults in college, and young professionals. Programs may encourage careers in, but not limited to, natural resource management, formal and informal education and outreach, and environmental communication.

### **Council Members Roundtable: News and Announcements**

**Glenn Clingenpeel (TRA)** - TRA is moving along with the flood planning process. Hydrology and hydraulic modeling work will inform behavior of the Trinity and San Jacinto Rivers. Management receives regular updates from Human Resources on COVID-19 and they are operating at 50% capacity.

**Bryan Eastham (TPWD)** - Commercial Oyster Mariculture rules have been approved, and TPWD will begin accepting applications for permits on September 1. TPWD is operating at 20% capacity and staff are back on the boats.

**Lori Hamilton (TCEQ)** - There have been several staffing changes at TCEQ. L'Oreal Stepney and Ramiro Garcia have been named Co-Deputy Executive Directors for the TCEQ, and Earl Lott has been named Deputy Director of the Office of Water. Amy Settemeyer has been named Assistant Division Director of the Water Quality Planning Division. Due to COVID-19, most of the agency is teleworking, with only essential personnel in office. All Commission Agendas and hearings are being held virtually.

**Cruz Hinojosa (Underrepresented Communities)** - Mr. Hinojosa thanked everyone who voted in this unprecedented situation with the pandemic. The Environmental Community Advocates of Galena Park and the League of United Latin America Citizens (LULAC) partnered to prepare 300 meals and provided them for free to Galena Park residents to alleviate some of the food strain caused by COVID-19.

**Brian Koch (TSSWCB)** - The TSSWCB 319 Request for Proposal will be released in August. Currently TSSWCB offices are rotating staff or working from home. Staff are not traveling and are preparing for pending budget cuts.

**Kristin Lambrecht (TDA)** - TDA is operating at 25% capacity. The State Office of Rural Health is working to distribute personal protective equipment to rural hospitals, working on getting rural products direct to the public, and providing safety training to farmers for selling products to the market.

**Mike Lee (USGS)** - The USGS is operating with full field staff and 50% office staff.

**Helen Paige (Marinas)** - Marinas are doing very well. People are using more boats, and boat sales have increased to the highest rate in 10 years.

**Nancy Parra (League of Women Voters)** - Activities have been affected by COVID-19. The organization cannot register people to vote in person, so the LOWV is figuring out how to reach people to register to vote. It has been problematic getting poll workers; most volunteers are retired and are in high-risk categories. LOWV is working to recruit younger workers. The "vote by mail" measure was overturned by a higher court, and the Supreme Court has issued a stay.

**Ana Partin (INEOS/EHCMA)** - INEOS has continued production with non-essential personnel teleworking.

**Russ Poppe (HCFCD)** – HCFCD currently had over \$400 million in construction, with \$30 million in contracts approved on July 14, 2020. HCFCD was deemed essential but are operating at 10% in the office and no more than two people per vehicle in the field.

**Hanadi Rifai (UH)** – During COVID-19, all academics were moved online, and all research was canceled. UH is now at 25% occupancy and will have three different ways to open in the fall.

**Caimee Schoenbachler (TWDB)** – TWDB is teleworking, cancelling all events. Now they have voluntary reentry at 10% capacity in offices. TWDB has developed COVID-19 field procedures and are moving forward with flood planning. Hiring flood positions, including Coastal Flood Modeler.

**Jeff Taebel (H-GAC)** – H-GAC is working with Houston Wilderness to continue supporting conservation efforts in the watershed, including holding listening sessions with local elected officials. Future meetings with regional resource managers are planned to convey results of the listening sessions. Due to COVID-19, H-GAC has a voluntary limited return of 10%, but due to local infection numbers rising there is a temporary hold on staff returning and everything is virtual. H-GAC is looking at updating field procedures.

**Sue Theiss (TXDOT)** – Ms. Theiss is looking forward to working with the GBC. TXDOT is currently teleworking with a voluntary 10% staff return. All meetings and hearings are virtual. TXDOT updates include the Gulf Freeway PEL is upcoming; August 11<sup>th</sup> Galveston Causeway to 61<sup>st</sup> Street presentation; Pelican Island Bridge Replacement; I-45 North Houston EIS will be ready by the end of summer.

**Lori Traweek (GCA)** – GCA has a robust COVID-19 strategy and staff are following those practices. Ms. Traweek will be retiring November 16<sup>th</sup>; Ms. Elizabeth (Liz) Fazio-Hale will be nominated as the new representative on the GBC. Trash Bash 2020 was canceled but 4,300 shirts were printed. Those shirts were donated to the Shriners Hospital and local homeless ministries.

**Matthew Tilimon (USCG)** – There is new leadership in Galveston; Captains Smith and Donahue.

**Kerry Niemann Regarding the (TCEQ) TMDL Program:**

- Two TMDLs for indicator bacteria in the Corpus Christi Bay Beaches, Cole Park, and Ropes Park are scheduled to go to Agenda to release for public comment on August 12<sup>th</sup>.
- One TMDL and one Implementation Plan for indicator bacteria in Carancahua Bay are scheduled to go to Agenda for adoption and approval respectively on August 26<sup>th</sup>.
- Twenty-three TMDLs for indicator bacteria, DO, and pH in Adams Bayou, Cow Bayou, and associated tributaries are scheduled to go to Agenda for adoption on August 26<sup>th</sup>.

Regarding the NPS Program: The Request for Grant Applications solicitation closes on Friday, July 31<sup>st</sup>.

Regarding the 2020 Integrated Report: EPA approved the report on May 12, 2020.

Regarding Water Quality Standards: The Surface Water Quality Standards Advisory Work Group held two half-day meetings on June 29 and June 30, 2020. The agenda and handouts are available on the TCEQ website.

Regarding the Clean Rivers Program: The calendar of Steering Committee Meeting dates may be accessed from the statewide Coordinated Monitoring Schedule. Meetings occur throughout the year and help to establish monitoring priorities.

Dianna Ramirez (GLO) - GLO is teleworking; locally the oil spill program is teleworking but still conducting patrols. All meetings including the Technical Advisory Committee for the Texas Coastal Resiliency Master Plan are virtual. As the nonfederal sponsor for the Texas Coastal Study, the GLO is reaching out to potential partners on the ecosystem restoration components.

**Public Comment:** None

**Adjourn:** Meeting was adjourned at 11:47 a.m.

**Upcoming Galveston Bay Council Meeting Dates:** October 21, 2020, January 20, 2021, April 21, 2021, July 21, 2021. Meetings are held on the third Wednesday of the quarter from 9:30 a.m.-12:30 p.m.

## FY 2022 GBEP Proposed Budget

Category	Grantee	Original Funding Request	FY 2022 Staff Recommendation		*FY 2023	NOTES:
			State Funding	Federal Funding		
Baseline Costs						
Salaries, Fringe, and Indirect	N/A	\$ 616,900.00	\$77,400	\$ 616,900.00	\$ -	*State funding for salary is from a different department (index) outside of GBEP and is not calculated as part of the GBEP budget
General Operational Costs	N/A	\$ 30,000.00	\$ 32,113.00	\$ 8,245.00	\$ -	
Programmatic Costs						
1. Annual Website Hosting & Maintenance (2 websites)	Wilkins Group	\$ 6,000.00	\$ -	\$ 4,000.00	\$ -	
2. Back the Bay Website Redesign	Wilkins Group	\$ 25,000.00	\$ -	\$ 25,000.00	\$ -	
3. Mickey Leland Environmental Internship Program	Goodwill Staffing Services	\$ 7,500.00	\$ -	\$ 7,500.00	\$ -	
4. Regional Monitoring Database	HARC/GTRI	\$ 100,000.00	\$ -	\$ 104,018.00	\$ 35,931.00	PRIOR APPROVAL FROM GBC _ NO CHANGES
WSQ						
5. Baseline Assessment of Microplastics in Galveston Bay	USGS	\$ 45,000.00	\$ -	\$ 28,500.00	\$ -	PRIOR APPROVAL FROM GBC _ NO CHANGES
6. Supporting the Use of Green Infrastructure in the Lower Galveston Bay Watershed	H-GAC	\$ 60,000.00	\$ 42,887.00	\$ 2,113.00	\$ -	
7. Townwood Park Green Stormwater Infrastructure	HPARD	\$ 90,000.00	\$ -	\$ 55,000.00	\$ -	
8. ALTERNATIVE: Watershed Protection Plan Development for Clear Creek	H-GAC	\$ 30,000.00	\$ -	\$ -	\$ -	
NRU						
9. Conservation Assistance Program	GBF	\$ 100,000.00	\$ -	\$ 100,000.00	\$ -	
10. The 7th/8th Additions to the Coastal Heritage Preserve	TPWD	\$ 150,000.00	\$ 125,000.00	\$ -	\$ -	
11. Jones Bay Oystercatcher Habitat Restoration and Enhancement	GBF thru TPWD	\$ 150,000.00	\$ 75,000.00	\$ -	\$ -	
12. ALTERNATIVE: Sylvan Rodriguez Park Habitat Restoration	HPARD	\$ 75,300.00	\$ -	\$ -	\$ -	
PPE						
13. Audubon TERN citizen science in Schools: Students as field researchers	Audubon TX thru HCDE	\$ 50,000.00	\$ -	\$ 40,000.00	\$ -	
14. Microplastics in the Galveston Bay Watershed: The Big Impacts of Tiny Pollution	TIRN thru UHCL	\$ 51,888.00	\$ -	\$ 50,000.00	\$ -	
15. Mobilizing the Environmental Education Community through Prairie Education	NTPA, CEC, EcoRise thru UHCL	\$ 89,467.00	\$ -	\$ 51,520.00	\$ -	
M&R						
16. The Distribution, Fate, and Transport of Emerging Contaminants in Galveston Bay	TAMU Oceanography	\$ 49,549.00	\$ -	\$ 5,490.00	\$ -	PRIOR APPROVAL FROM GBC _ NO CHANGES
17. Effects of Erosion Control Structures on Shoreline Marsh Species Populations	TAMUG	\$ 69,305.00	\$ -	\$ 38,165.00	\$ 31,140.00	
18. The Fate of Emerging PFAS Pollutants in Shellfish And Fish of Galveston Bay	TAMUG	\$ 105,549.00	\$ -	\$ 63,549.00	\$ 42,000.00	
FY 2022 Funding Requests		\$ 1,901,458.00	\$ 275,000.00	\$ 1,200,000.00		
FY 2022 Anticipated Funding Allocation		\$ 1,475,000.00	\$ 275,000.00	\$ 1,200,000.00		
Difference		\$ -	\$ -	\$ -		

GALVESTON BAY ESTUARY PROGRAM (GBEP) PROJECT PROPOSALS

FISCAL YEAR 2022 WORK PLAN

<b><u>GBEP Programmatic Proposals</u></b>	
1.	GBEP Website Hosting and Maintenance
2.	Back the Bay Website Redesign
3.	Mickey Leland Environmental Internship Program
4.	Regional Monitoring Database
<b><u>Water/Sediment Quality (WSQ) Subcommittee Proposals</u></b>	
5.	Baseline Assessment of Microplastics in Galveston Bay
6.	Supporting the Use of Green Infrastructure in the Lower Galveston Bay Watershed
7.	Townwood Park Green Stormwater Infrastructure
8.	ALTERNATIVE: Watershed Protection Plan Development for Clear Creek
<b><u>Natural Resources Uses (NRU) Subcommittee Proposals</u></b>	
9.	Conservation Assistance Program
10.	The 7 <sup>th</sup> /8 <sup>th</sup> Additions to the Coastal Heritage Preserve
11.	Jones Bay Oystercatcher Habitat Restoration and Enhancement
12.	ALTERNATIVE: Sylvan Rodriguez Park Habitat Restoration
<b><u>Public Participation and Education (PPE) Subcommittee Proposals</u></b>	
13.	Audubon TERN Citizen Science in Schools: Students as Field Researchers
14.	Microplastics in the Galveston Bay Watershed: The Big Impacts of Tiny Pollution
15.	Mobilizing the Environmental Education Community through Prairie Education
<b><u>Monitoring and Research (M&amp;R) Subcommittee Proposals</u></b>	
16.	The Distribution, Fate, and Transport of Emerging Contaminants in Galveston Bay
17.	Effects of Erosion Control Structures on Shoreline Marsh Species Populations
18.	The Fate of Emerging PFAS Pollutants in Shellfish and Fish of Galveston Bay

## **GBEP Programmatic Summaries**

### **1. GBEP Website Hosting and Maintenance**

Project Lead: Wilkins Group

Proposed Funding: \$4,000 (Federal)

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

- [www.gbep.texas.gov](http://www.gbep.texas.gov): Tasks for the GBEP website include maintenance and updates as needed throughout the year, hosting, and domain name registration.
- [www.backthebay.org](http://www.backthebay.org): Tasks for the Back the Bay website include maintenance and updates as needed throughout the year, hosting, and domain name registration.

### **2. Back the Bay Website Redesign**

Project Lead: TBD

Proposed Funding: \$25,000 (Federal)

Project Description: Redesign the website as a resource to support education and outreach efforts in the region with the Back the Bay messaging.

Notes: The website was originally designed to support the Back the Bay campaign. Redesign will keep many of the current creative assets and will add more partner resources using the Back the Bay messaging. The redesign will be created with the input of the PPE and other subcommittees.

### **3. Mickey Leland Environmental Internship Program**

Project Lead: TBD; TCEQ selected staffing management firm.

Proposed Funding: \$7,500 (Federal)

Project Description: The GBEP Mickey Leland Intern for summer 2022 will intern for up to 12 weeks and work directly with the GBEP Program Manager to complete a project that implements the Galveston Bay Plan. The intern will learn about the Clean Water Act Section 320 National Estuary Program, and the local, stakeholder-based program designed to implement a comprehensive conservation and management plan and its' strategic action plan. The GBEP program areas, as identified in The Galveston Bay Plan are WSQ, M&R, PPE, and NRU. In addition to interacting with the entities and groups that represent the GBEP's stakeholders, the intern will have the opportunity to participate in summer field site visits, attend GBEP staff meetings, Galveston Bay Council meetings, and subcommittee meetings dependent upon timing of the internship. It is anticipated that 90% of the internship will be desk work, with approximately 10% field opportunities, such as boat tours or marsh planting. The project will result in a short white paper written by the summer intern and at least one power point presentation.

Notes: Annual Project; funding provides approximately 12 weeks of full-time funding for one university level junior, senior or graduate summer intern.

#### **4. Regional Monitoring Database**

Project Lead: Houston Advanced Research Center

Proposed Funding: \$104,018 (Federal); \$130,001 (Federal) funded in FY 2021 and \$35,931 (Federal) is set aside for funding in FY 2023

Project Description: The Regional Monitoring Database will gather environmental datasets related to the lower Galveston Bay watershed in cooperation with federal, state, and local governments, as well as universities and research organizations to evaluate progress in reaching a sustainable Galveston Bay ecosystem and identify gaps in monitoring programs. The Regional Monitoring Database will consist of an interactive, web-based application with data download capabilities and will be developed with input from stakeholders.

Notes: Existing project. Year 2 (FY 2022) and Year 3 (FY 2023) of funding were approved by B&P and the GBC in FY 2021.

### **WSQ Project Summaries**

#### **5. Baseline Assessment of Microplastics in Galveston Bay**

Project Lead: United States Geological Survey

Proposed Funding: \$28,500 (Federal); \$61,500 (Federal and State) funded in FY 2021

Project Description: To better understand the spatial distribution and abundance of microplastics entering Galveston Bay the United States Geological Survey, in cooperation with GBEP, started Phase 1 in FY 2020 assessing the occurrence of microplastics in tributaries to Galveston Bay. The proposed project for FY 2021 is a Phase 2 expansion of this study and will assess microplastics in the open waters of the Galveston Bay complex and, if present, assess the categories of microplastics to supplement the dataset collected in the FY 2020 study. Sampling sites will be selected in coordination with the GBEP subcommittees and will also be informed by the results from the FY 2020 study in the tributaries. Specific locations within Galveston Bay can also be coordinated with other project proposals submitted for consideration regarding microplastics to leverage scientific efficacy.

Notes: Existing Project. Year 2 (FY 2022) of funding was approved by B&P and the GBC in FY 2021.

#### **6. Supporting the Use of Green Infrastructure in the Lower Galveston Bay Watershed**

Project Lead: Houston-Galveston Area Council

Proposed Funding: \$45,000 (State \$42,887; Federal \$2,113)

Project Description: The project objective is to place in the hands of local decision makers, the recommended green infrastructure practice list that is based on local and regional data. H-GAC through this project will:

- Convene and organize a project committee (e.g. EIH, HARC, TX AgriLife, HCFCD, HC, COH);
- Compile all available local BMP data, catalogued by practice(s);



- Complete analysis of BMP data and/or utilize existing analysis;
- Compare analysis with state and national examples from areas of common soils and precipitation;
- Recommend BMPS based on performance;
- Host at minimum one NPS workshop targeted to MS4 operators and local governments; and
- Write a final report that includes a distribution and outreach plan.

Notes: New Project; the project will leverage \$10,000 of in-kind services from H-GAC.

## **7. Townwood Park Green Stormwater Infrastructure**

Project Lead: Houston Parks and Recreation Department

Proposed Funding: \$55,000 (Federal)

**Project Description:** The Townwood Park Green Stormwater Infrastructure (GSI) Project will create three GSI demonstration features to support future implementation of GSI in parks and private development in Houston. The establishment of these features will provide a needed nature-based approach to water quality and quantity concerns for the City of Houston and will be a key step in addressing Houston's resiliency challenges.

The Houston Parks and Recreation Department (HPARD) will create two bioretention demonstration projects in Townwood Park to slow stormwater runoff and support infiltration and water retention. Native grasses and forbs, collected locally and propagated by HPARD, will be installed to provide beatification, infiltration, and water quality improvements in the systems.

HPARD will create a 3.6-acre vegetated filter strip within Townwood Park by restoring the forested riparian corridor along Sims Bayou. Much of the existing vegetation at the site has been cleared by past stream channelization and park development. HPARD will work with staff and volunteers to amend the soil, and install a mix of native trees, shrubs, grasses and wildflowers into the site.

Interpretive signage will be installed adjacent to each feature to identify them as City approved GSI examples for the incentive program. The signs will provide information on the functions of GSI, the connections of Houston's watersheds to Galveston Bay, and the role that community members play in protecting our waterways.

Notes: New Project; HPARD will provide project management and maintenance of the green stormwater infrastructure features, all native herbaceous plants, and 75% of the native trees for the project.

## **8. *ALTERNATIVE: Watershed Protection Plan Development for Clear Creek***

Project Lead: Houston-Galveston Area Council

Proposed Funding: \$30,000 (State)

**Project Description:** H-GAC is currently working with TCEQ on a Clean Water Act Section 319 watershed protection plan (WPP) development project for Clear Creek, expected to initiate in FY 2021 and continue through FY 2024. The effort will produce

an EPA 9-Element watershed-based plan and conduct NPS education and outreach elements during the project. Preliminary work was completed as part of a TMDL project, during which strong local support for full development specific to this watershed was expressed. Water quality issues impacting recreation, local economies, public health, and the environment persist in this subsidiary watershed of the greater Galveston Bay Watershed.

Funding under this project would be used to support the existing federal funding and local match for the project, as supplemental local match. The intended use of the funds will be to cover staff time and related allocation expenses (Fringe, indirect, travel, meeting and office supplies, etc.) for:

- Stakeholder facilitation and WPP development (other than modeling and data assessment tasks requiring a QAPP)
- Outreach and education in the watershed, including NPS-oriented H-GAC workshops, outreach presence at local events, and support and coordination with partner agencies on joint outreach events.
- Supplemental outreach efforts in coordination with GBEP or GBEP partners to forward Galveston Bay Plan goals in this watershed.

Notes: New Project; the project will leverage \$220,780 from Section 319 and additional local match from various sources.

#### **NRU Project Summaries:**

##### **9. Conservation Assistance Program**

Project Lead: Galveston Bay Foundation

Proposed Funding: \$100,000 (Federal)

Project Description: This project proposal aims to continue support for the Conservation Assistance Program to build upon the GBEP's successful land conservation efforts in the lower Galveston Bay watershed. Project objectives include preservation of coastal wetlands and natural areas, facilitation of a conservation workgroup of local stakeholders for project input, and to provide technical, legal, and grant writing assistance for coastal habitat conservation projects.

Efforts will be prioritized within the West Galveston Bay Conservation Initiative and the East Galveston Bay Conservation initiative in order to maximize return on investment. Land parcels within these two priority areas will help protect habitats critical to the sustainability of native plant and animal populations, protect regional biodiversity, and maintain local water quality.

Notes: Existing Project; this funding would constitute year four.

## **10. The 7<sup>th</sup>/8<sup>th</sup> Addition to the Coastal Heritage Preserve**

Project Lead: Texas Parks and Wildlife Department

Proposed Funding: \$125,000 (State)

Project Description: The objective of this proposal is to acquire funds to purchase and conserve approximately 88 acres of coastal habitat. The purchased tracts would be added to and be managed as part of the Coastal Heritage Preserve (Artist Boat). This project will conserve breeding, nesting, foraging, roosting, and wintering habitats that benefit numerous coastal-dependent and migratory bird species and protect coastal habitats that are breeding, nursery, juvenile and foraging habitat to marsh resident fishery species.

Notes: New Project; the project will leverage up to \$2,599,400 from the USFWS National Coastal Wetlands Grant (CWPPRA). Artist Boat will provide the balance of the required match in cash and currently has commitment letters for a total of \$55,000 from stakeholders in the community. CWPPRA funded projects are expected to be announced between January and May 2021.

## **11. Jones Bay Oystercatcher Habitat Restoration and Enhancement**

Project Lead: Galveston Bay Foundation (via Texas Parks and Wildlife Department)

Proposed Funding: \$75,000 (State)

Project Description: The project proposal aims to restore up to four remnant islands in Jones Bay in order to reverse the declines in oystercatcher reproduction success. As documented by GCBO's 10 years of research on the Galveston Bay oystercatcher population, the degradation of small bay islands has led to a significant decrease in their reproduction success. In addition to creating higher elevations to provide more resilient nesting habitat, GBF plans to enhance and/or create up to one-acre of oyster reef complex near each nesting island, thus providing foraging habitat for nesting oystercatchers and their young. It is anticipated that this project will provide ample habitat to support up to eight additional nesting pairs of oystercatchers in Jones Bay.

Notes: New Project; the project will leverage \$1,729,500 from GLO CEPRA/GOMESA Program, Phillips 66, and in-kind services from GBF.

## **12. *ALTERNATIVE: Sylvan Rodriguez Habitat Restoration Project***

Project Lead: Houston Parks and Recreation Department

Proposed Funding: \$75,300 requested (State)

Project Description: The project proposal aims to complete the restoration of the final 19 acres of the Sylvan Rodriguez Habitat Restoration Project. The Houston Parks and Recreation Department is currently working on a multi-phased project that will result in 72 acres of coastal prairie and riparian habitat. This phase (Phase III) of the project will complete the restoration of the final 19 acres of prairie (12.5 acres of which is currently Chinese Tallow forest, and 6.5 of which is currently grassland in need of enhancement). A hydro-axe contractor will chip invasive tree species, leaving a mulch layer that will improve soil quality and provide the basis for a new prairie habitat to form. An herbicide contractor will treat the cut stumps and remove any invasive species that appear at the site after chipping occurs. The site will be seeded with native prairie plant species and will be planted with grasses and forbs propagated by HPARD.

Notes: Alternative Project; the project would leverage \$485,200 from the GLO Coastal Management Program and the City of Houston.

## **PPE Project Summaries**

### **13. Audubon TERN Citizen Science in Schools: Students as Field Researchers**

Project Lead: Audubon Texas (via Harris County Department of Education Pass Thru)

Proposed Funding: \$40,000 (Federal); \$49,323 (Federal) funded in FY 2021

Project Description: Audubon Texas is partnering with the Harris County Department of Education. The project aims to engage local, underserved schools and communities within the Galveston Bay watershed in citizen science research concerning colonial waterbird foraging habitats within the school's backyard. Teachers and students will develop an understanding of the scientific method, observational, and problem-solving skills through the study of conservation education and collection of local bird data.

Notes: Existing project.

### **14. Microplastics in the Galveston Bay Watershed: The Big Impacts of Tiny Pollution**

Project Lead: University of Houston Clear Lake Environmental Institute of Houston in partnership with Turtle Island Restoration Network

Proposed Funding: \$50,000 (Federal); \$64,458 (Federal) funded in FY 2021

Project Description: This project expands an ongoing citizen science project with Florida SeaGrant and Mississippi State University looking at microplastics Gulf-wide. The funds from this project will expand the program to connect the entire Galveston Bay watershed. The project also includes watershed education opportunities for classrooms with lesson plans connecting students and schools to Galveston Bay throughout the region. Turtle Island Restoration Network will partner with the University of Houston Clear Lake to additionally characterize the spatial distribution of plastic debris along the bay shorelines.

Notes: Existing project.

### **15. Mobilizing the Environmental Education Community Through Prairie Education**

Project Lead: University of Houston Clear Lake Environmental Institute of Houston in partnership with the Citizens Environmental Coalition, EcoRise, and Native Prairies of Texas Association

Proposed Funding: \$51,520 (Federal)

Project Description: This project will collect regional data from the lower Galveston Bay watershed and add to an existing state-wide environmental education mapping project to identify underserved school districts (and students) that do not currently receive, and could benefit from, informal environmental education programming. The prairie programs, which include ecosystems surrounding Galveston Bay, will serve as the demonstration project/case study for how a program can adapt to meet the identified needs of the community. Lessons learned and a list of districts that need services will be shared with regional stakeholders.

Notes: New Project; one year of funding for a two-year proposed project. Project will leverage \$30,000 from Shell Deer Park (secured); \$15,000 from TPWD (secured), \$20,000 from Centerpoint (secured) for both years.

## **M&R Project Summaries**

### **16. The Distribution, Fate, and Transport of Emerging Contaminants in Galveston Bay**

Project Lead: Texas A&M University

Proposed Funding: \$5,490 (Federal); \$92,938 (Federal) funded in FY 2021

Project Description: The project proposal aims to conduct quarterly field observations over two years in Galveston Bay to understand the distributions, fate, and transport of a group of emerging contaminants, including per- and polyfluorinated alkyl substances (PFAS) and pharmaceutical and personal care products (PPCP) in water and sediment. The project leverages the currently funded quarterly observation cruises (June 2017 to March 2020) and will extend the time series to five years.

Notes: Existing Project. Year 2 (FY 2022) of funding was approved by B&P and the GBC in FY 2021.

### **17. Effects of Erosion Control Structures on Shoreline Marsh Species Populations**

Project Lead: Texas A&M University at Galveston

Proposed Funding: \$69,305 (Federal); \$38,165 in FY 2022 and \$31,140 in FY 2023)

Project Description: This project will examine whether the presence or absence of erosion control structures (breakwaters) influence species populations in shoreline marsh areas of Galveston Bay. This will be accomplished by surveying nekton and zooplankton in Galveston Bay shoreline marsh areas with and without breakwater or sill structures and examining productivity patterns.

Notes: New Project; this project leverages in-kind supplies from TAMUG (research equipment, laboratory space, vessels and vessel maintenance), and in-kind services from TAMUG Co-PIs.

### **18. The Fate of Emerging PFAS Pollutants in Shellfish and Fish of Galveston Bay**

Project Lead: Texas A&M University at Galveston

Proposed Funding: \$105,549 (Federal); \$63,549 in FY 2022 and \$42,000 in FY 2023)

Project Description: This project proposes to measure emerging per- and polyfluoroalkylated substances (PFAS) pollutant body-burdens in shellfish and fish from Galveston Bay. In addition, the likely effects of exposure to PFAS pollutants on the fish and shellfish will be assessed by measuring the activities of enzymes that are biomarkers of health or stress. These two measurements will be compared. While not implying causation, any correlation between pollutant concentrations and stress biomarker levels will indicate the association of high pollutant body-burdens and stress response.

Notes: New Project; this project leverages in-kind services from TPWD (collected fish and shellfish samples), in-kind supplies from TAMUG (research equipment, laboratory space) and in-kind services from TAMUG Co-PIs.

## **Galveston Bay Council - Diversity, Equity, and Inclusion Statement**

Just as natural ecosystems depend on biodiversity to thrive, the long-term preservation of the Galveston Bay estuary depends on the equitable, just and inclusive engagement of all communities throughout the watershed.

The Galveston Bay Council is committed to diversity, equity, and inclusiveness as a core policy and fundamental operating principle. It is the policy of the council to engage in an active and ongoing process that affirms human diversity in its many forms, encompassing but not limited to ethnicity, race, gender, sexual orientation and identification, age, economic circumstance, class, disability, geography, and religion.

The Council seeks diversity and equity to ensure that a range of perspectives, opinions, and experiences are recognized and considered in achieving the mission of protecting and preserving the Galveston Bay Estuary.

DRAFT