GALVESTON BAY COUNCIL QUARTERLY MEETING

Location: Harris-Galveston Subsidence District, 1660 West Bay Area Blvd, Friendswood, TX 77546-2640

AGENDA: Wednesday, October 17, 2018

9:30 A.M.: **Call to Order:** Introduction of Members and Delegates

Action Item: Approval of July 18, 2018 Meeting Minutes

Report of the Program (Lisa Marshall)

Report of the Chair (Helen Paige)

Action Item: Annual conflict of interest form completions – all council members and proxies sign annually

Action Item: Approval of nomination of Cruz Hinojosa, citizen to represent Underrepresented Communities

9:50 A.M.: **Presentations & Discussion:** Fiscal Year 2020 Galveston Bay Estuary Program (GBEP) Work Plan. A series of short presentations by GBEP staff covering the projects and programmatic costs being proposed

10:30 A.M.: **Break**

10:45 A.M.: **Presentation & Discussion**: "Microplastics in Galveston Bay and the Gulf" (Theresa Morris - Turtle Island Restoration Network)

11:05 A.M.: **Presentation & Discussion:** The Galveston Bay Plan, 2nd Edition- Final Draft Overview (Kathy Janhsen - Houston-Galveston Area Council)

12:00 P.M.: **Action Item:** Council approval of the Galveston Bay Plan, 2nd Edition.

12:35 P.M.: **Council Member Roundtable:** News, Announcements and Discussion

12:25 P.M.: **Public comments**

12:30 P.M.: **Adjourn**

Upcoming Galveston Bay Council Meeting Dates: January 16, 2019, April 17, 2019, July 17, 2019; October 16, 2019. Meetings are held on the third Wednesday of the quarter from 9:30 am-12:30 pm. If there are known conflicts, Council members are welcome to propose alternate dates to the Council.

GALVESTON BAY ESTUARY PROGRAM

DRAFT - Galveston Bay Council (GBC) Meeting Minutes – July 18, 2018

Attendees:

Galveston Bay Council Chair: Helen Paige (Marinas)

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

Estuary Program Staff Lead: Sarah Bernhardt, Galveston Bay Estuary Program (GBEP)

The July 18, 2018 quarterly GBC meeting was held at Harris-Galveston Subsidence District, 1660 West Bay Area Blvd., Houston, Texas, from 9:30 AM to 12:30 PM.

Members Present: Scott Alford, Christine Bergren, Glenn Clingenpeel, Patrick Cuty, Albert Gonzales, Brian Koch, Mike Lee, Helen Paige, Nancy Parra, Ana Partin, Pamela Plotkin, Hanadi Rifai, Kate Saul, Caimee Schoenbaechler, Ronnie Schultz, Linda Shead, Lori Traweek

Members Not Present/Delegates: Caryn Brooks, Andrea Catanzaro*, Phillip Goodwin*, Rebecca Hensley, Kelly Holligan*, Jace Houston*, John Huffman, Doug Jacobson, Audrey Kuklenz, Kristin Lambrecht*, Garry McMahan*, Will Nipper*, Russ Poppe*, Taylor Rieck, MaryBeth Stengler, Sharron Stewart, Rusty Swafford, Jeff Taebel*, Chuck Wemple, Kirk Wiles, Tracy Woody, Bob Stokes*

(*=Member designated a proxy)

Proxies Present (council member absent/designated proxy):
Andrea Catanzaro/Jeff Pinsky, Phillip Goodwin/Richard Chapin, Kelly Holligan/Kerry Niemann, Jace Houston/Kim Wright, Kristin Lambrecht/Manual Martinez, Garry McMahan/Jaqueline Munoz, Will Nipper/Mariz Valdez, Russ Poppe/Glenn Laird, Bob Stokes/Scott Jones, Jeff Taebel/Todd Running

Current Vacancies: None

Other Attendees: Mollie Powell, Peter Riger, Rusty Senac, Matt Singer, Marsha Towns

Additional GBEP Staff present: Cynthia Clevenger, Cassidy Kempf, Lindsey Lippert, Lisa Marshall, Mary Stiles, Kristen McGovern

Call to Order: Introduction of Members and Delegates

Helen Paige called the meeting to order and requested introductions.

Action Item: Approval of April 18, 2018 Meeting Minutes

Helen Paige opened the meeting with approval of the minutes. Motion was requested for approval. Brian Koch moved to approve the minutes, and Lori Traweek seconded the motion. The minutes were approved with one correction.

Report of the Chair:

Helen Paige announced that Sarah Bernhardt would announce action items that need to be addressed.

Sarah Bernhardt announced the Budget and Priorities (B&P) Subcommittee met in June. There are two action items for the Council to consider today. The first action item is to change the Bylaws.

As part of the revision of the Galveston Bay Plan, 2nd Edition it was proposed to change the membership and title for the Minority Community representative seat to Underrepresented Communities. This follows the most recent US Census data that showed that the Houston-Galveston region is one of the most racially and ethnically diverse cities in the nation, with no major group composing a majority. With this change, the Underrepresented Community seat will preserve the intention of the position to ensure representation by racial or ethnic groups that are not otherwise represented on the Council.

The other position modification is to change the Galveston County Chambers of Commerce seat to Nature Tourism. This proposed change was brought to the Budget & Priorities Subcommittee by current Galveston County Chambers of Commerce representative Chuck Wemple, H-GAC, who had been representing the Greater Houston Economic Alliance.

Ms. Bernhardt announced that the Council is seeking a nomination to fill the Underrepresented Communities position. The Nominations committee has been pursuing several different avenues. Any suggestions, leads, or volunteers should contact the Estuary Program.

Helen Paige announced that the U.S. Coast Guard has designated Patrick C. Cuty. Mr. Cuty is the Port Security/Maritime Infrastructure Recovery Specialist and he represents the CTCAC Executive Administrator, U.S. Department of Homeland Security, United States Coast Guard, Sector Houston-Galveston.

Action Item: Presentation and approval of revised Bylaws (to reflect changes to the interests represented by two seats on the Council: Underrepresented Communities (formally Minority Communities) and Nature Tourism (formerly Galveston County Chambers of Commerce). Nancy Parra motioned to approve, and Linda Shead seconded. The motion was approved by the council.

Action Item: Approval of the nomination of Jeff DallaRosa, CenterPoint Energy to represent Utilities. Linda Shead announced her nomination for Jeff DallaRosa in which she read his biography. Brian Koch moved to approve the nomination, and Lori Traweek second the motion. The motion was approved by the Council.

Action Item: Approval of nomination of Chambers County Commissioner Rusty Senac to represent Nature Tourism. Lori Traweek announced her nomination for Rusty Senac in which she read his biography. A motion was requested to approve the nomination. Nancy Parra motioned for approval and Lori Traweek seconded. The motion was approved by the Council.

Action Item: An action item was added to the agenda to approve the nomination of Mr. Cuty to the Council to represent the Coast Guard. Glenn Clingenpeel approved the motion, Lori Traweek second the motion and all council members approved.

Report of the Program:

Ms. Bernhardt announced that the GBEP team completed interviews yesterday for the Budget and Quality Programs position to replace Bryan Eastham who retired on May 31, 2018. Anticipated start date will be in August.

Ms. Bernhardt announced the launch of GBEP's newly redesigned website in late August. She also introduced Kristen McGovern as the new summer Mickey Leland environmental intern. Kristen is working on a geodatabase of past GBEP projects.

Action Item: Presentation and Approval of Minor Revision to Fiscal Year 2019 Galveston Bay Estuary Program Budget:

Ms. Bernhardt announced there was a minor change to the FY 2019 Work Plan. GBEP was able to secure leftover FY 2018 administrative funding, and allocate it to an existing project, Seafood Evaluation in a Portion of Galveston Bay. The difference, along with some overestimated administrative funding from FY 2019, was reallocated to complete the Highland Bayou Watershed Protection Plan. Sarah presented a word document that showed changes in table format to the Council members.

Helen Paige requested motion to approve the minor budget change to the FY 2019 GBEP Budget. Linda Shead motioned for approval, followed by Brian Koch who seconded. The motion was approved by the Council.

Subcommittee Reporting:

Natural Resources Uses (NRU) featured project: Conservation Assistance Program Fiscal Year 2011-2017, Matt Singer, Director of Land Conservation, Galveston Bay Foundation:

Matt Singer, Director of Land Conservation for the Galveston Bay Foundation (GBF) gave a presentation for the NRU's Conservation Assistance Program. The Conservation Assistance Program (CAP) provides regional support for land conservation efforts within the Galveston Bay watershed. The CAP partnership between GBEP and GBF provides financial resources to coordinate, develop and implement land acquisition projects, provide transactional support to local conservation organizations, and organize a workgroup of natural resource partners dedicated to perpetual land conservation efforts within the Galveston Bay watershed. Program objectives include identifying and developing priority land acquisition projects, implementing conservation strategies, negotiating fee simple and conservation easement acquisitions, and closing land conservation projects.

Tasks identified to accomplish the CAP objectives include: (1) grant administration; (2) coordination of a land conservation workgroup; (3) conservation project tracking; (4) preparation of grant proposals to secure acquisition funding; (5) implementation of

conservation projects and identified strategies; and (6) public outreach related to regional land conservation efforts.

CAP efforts from 2011 to 2017 resulted in success of the program goals and objectives. Successful conservation projects were completed in Chambers, Galveston, and Brazoria Counties and high priority habitats were protected within target geographic areas. GBF led efforts on four successful conservation projects and provided support to partner organizations to compete five projects. The Galveston Bay watershed gained more than 5,000 acres of perpetually conserved lands as a direct result of CAP investment.

Hanadi Rifai announced that Mr. Jim Neece passed while on a post-retirement trip with his wife. He had been a project manager for several Houston and Galveston Bay projects and had been a good colleague and supporter of the programs and projects in her region. He will be missed. The council observed a moment of silence in Mr. Neece's honor.

Break

Ms. Bernhardt announced that she will be leaving the Estuary program in August to take on the role of President and CEO of the Bayou Preservation Association. She is proud of all the accomplishments GBEP has made over the last five years. She will still be seeing everyone, as she will remain in the Houston area working on watershed issues.

Presentation & Discussion: Houston Zoo Initiatives Making a Difference in our Watershed, Peter Riger, Vice-President of Conservation and Education, Houston Zoo

The Houston Zoo Wildlife Conservation Program supports efforts in nearly two dozen countries around the world. The program represents a critical piece of the Zoo's organizational mission to connect communities with animals to inspire action to save wildlife. The goal for the conservation program is to save animals and their habitats, and they do this by educating people to care and to realize the value of nature as a key element in their quality of life.

The Zoo is also dedicated to local Texas wildlife and has been active in long-term conservation projects in the Galveston Bay watershed and Texas Gulf Coast. Several teams from the Zoo regularly lead beach and bay cleanups and are participating in a program to eliminate sea turtle entanglement from monofilament fishing line.

In partnership with NASA's Johnson Space Center and the U.S. Fish and Wildlife Service, the Zoo also manages a captive breeding program for the Attwater's prairie chicken. When the birds hatch and grow large enough, they are slowly introduced and released into the wild at the Attwater Prairie Chicken National Wildlife Refuge.

Celebrating the biodiversity of Texas, the Zoo is launching a new Texas Wetlands exhibit at the front of the zoo. The habitat will feature alligators, bald eagles, whooping cranes, turtles and waterfowl. The exhibit opens in the Spring of 2019.

To reduce single use plastic items, the Zoo has done away with single use plastic bags, plastic straws, and plastic water bottles. The Zoo participates in outreach and education about single use plastics through their education programs as well as exhibits and shows with the sea lion team.

Presentation & Discussion: GulfCorps, Marsha Towns, Partnership Director-Gulf Coast Student Conservation Association (SCA)

Marsha Towns' presentation outlined and described 'What is Gulf Corps?' It is a $7 million RESTORE Act Grant administrated by NOAA with funding from Restore Bucket Two. The restoration project has a 3-Year term from August 2017 to July 2020. Ms. Towns described the program structure, the history of the partnership of the grant's joint applicants, and the recent Conservation Corps activity in the Gulf of Mexico prior to the award for Gulf Corps to the Nature Conservancy. Sub-awardees are The Corps Network and the Student Conservation Association. The presentation also included a list of which organizations participated in the Conservation Corps in Year 1 of the 3 Year grant project. Ms. Towns shared the expectations for Year 2 which include an overview of the orientation, Corps capabilities, and training. Gulf-wide orientation is provided by the SCA. Ms. Towns showed the project activities and described how projects are selected.

Council Members Roundtable: News and Announcements

Ronnie Schultz: Job opening at the Galveston County Health District: Water Pollution Manager.

Pamela Plotkin: "STRAWS" documentary will be showing at Rice University at 6:30 7/18/2018. It will also be shown in Corpus Christi and South Padre in the fall. Screening provided by Sea Grant and the Citizens Environmental Coalition.

Todd Running: The 2018 Basins Highlight Report that focuses on the Houston Ship Channel and Chocolate Bayou is complete and available on the Houston-Galveston Area Council website.

Brian Koch: The 319 Request for Proposals (RFP) will open in August. A Cedar Bayou Watershed Partnership stakeholder meeting is scheduled for August 9th in Baytown.

Glenn Laird: Reminded everyone to go the Harris County Flood Control District (HCFCD) website to review the bond proposal. Comments are due by August 25th.

Caimee Schoenbaechler: The Flood Assessment will be released in August. Flood protection grant applications closed on July 11th and will be taken to the Board on September 28th. TWDB has a job vacancy for a flood modeler. Dr. Quigg's Environmental Flows project is almost complete, and the final report will be submitted in August. This might be a good presentation for the Council.

Scott Jones: On August 15th, Galveston Bay Foundation will announce the 2018 Galveston Bay Report Card results at the Buffalo Bayou Partnership office located at 1019 Commerce St. from 9:30 – 10:30am.

Kerry Niemann: Regarding RESTORE: The draft State Expenditure Plan (bucket 3) is posted for public comment. Due to Hurricane Harvey, Governor Abbott and Commissioner Baker determined that the plan will focus on hurricane recovery efforts, ecological and economic, as well as resiliency-related programs for the area. A programmatic, rather than project-specific, plan has been developed. Selection of specific projects will be done upon the RESTORE Council's approval of the programmatic plan and in conjunction with the Governor's Commission to Rebuild Texas (CRT). The 45-day comment period will end at 5:00 pm on Monday, August 27th.

Regarding the Texas Coastal Nonpoint Source Management Program:

The GLO and TCEQ continue to work with NOAA and EPA on approval of six (6) remaining conditions. The deadline to submit an approvable program is June 2019.

- The remaining conditions are:
    - watershed protection, site development, existing development, new development, and roads, highways, and bridges, which have been combined
    - 2nd informal submittal – summer 2018
- On-site Disposal Systems
    - OSDS Contributions to Nitrogen Limited Waters
        - formal submittal – summer 2018
    - Inspection of OSDS at a frequency adequate to ascertain if they are failing
        - informal submittal – summer 2018

Regarding the TMDL Program: The Lower San Antonio River Implementation Plan is scheduled to go to agenda for approval on August 8.

Regarding the NPS Program: The annual Request for Grant Applications is open and will close on July 31st. Two to $3 million dollars in federal funds is available to pass through to selected project to develop CWA Section 319 contracts. A 40% match is required.

Regarding the 2016 Integrated Report: Public Comments were accepted between May 4 and June 5 and is anticipated to be going to Commissioner's Agenda for approval on October 17. Following that, it will be submitted to EPA for approval.

Regarding Water Quality Standards: They were adopted by the Commission on February 7, 2018 and became effective as a state rule on March 1st. They are now with EPA pending approval.

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.

Adjourn: Meeting was adjourned at 12:08pm

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Galveston Bay Council Subcommittees' Proposed Projects for Fiscal Year 2020 Galveston Bay Estuary Program (GBEP) Work Plan

GBEP Programmatic Proposed Priorities

Proposed GBEP programmatic project titles:

1. State of the Bay Symposium
2. Mickey Leland Environmental Internship Program (MLEIP)

Natural Resources Uses (NRU) Subcommittee Proposed Priorities

Proposed NRU project titles:

1. Conservation Assistance Program
2. Clear Creek Riparian Restoration
3. GBF Kemah Living Shoreline Habitat Protection and Restoration Project
4. Sylvan Rodriguez Habitat Restoration Project
5. GIFT Freshwater Wetland Restoration at USFWS Anahuac / ABNC Hyacinth

Public Participation and Education (PPE) Subcommittee Proposed Priorities

Proposed PPE project titles:

1. River, Lakes, Bays 'N Bayous Trash Bash
2. Galveston Bay Report Card Public Assessment/ Community-Based Social Marketing

Water/Sediment Quality (WSQ) Subcommittee Proposed Priorities

Proposed WSQ project titles:

1. Bacterial Source Tracking (BST) on Tributaries of Trinity and Galveston Bays
2. Highland Bayou Watershed Protection Plan
3. Occurrence of Microplastics in Tributaries to Galveston Bay
4. Coordinating Implementation of a Watershed Protection Plan for Double Bayou
5. Targeted Bacteria Monitoring Project

Monitoring and Research (M&R) Subcommittee Proposed Priorities

Proposed M&R project titles:

1. Heavy metals and Pb Isotopes in Galveston Bay Waters and Sediments
2. Characterizing PCBs and Dioxin in the Houston Ship Channel and Galveston Bay Post Harvey
3. PB Isotopes and Heavy Metal Concentrations in Galveston Bay Oysters

GBEP Programmatic Project Summaries

1.

Project Title: State of the Bay Symposium

Project Lead: TBD

Proposed Funding: $ 25,000 (Federal)

Project Description: The State of the Bay Symposium is a two-day event held every 3-5 years during which program partners, subcommittee members, local universities, and the general Galveston Bay community are invited to share results of projects that have been completed within the Galveston Bay watershed.

Notes: Funding provides printing of event materials such as the agenda, signage, and other communication materials as well as poster session display boards.

2.

Project Title: Mickey Leland Environmental Internship Program (MLEIP)

Project Lead: TBD. Texas Commission on Environmental Quality (TCEQ) selected staffing management firm.

Proposed Funding: $ 7,500 (Federal)

Project Description: The GBEP program manager will work with a summer intern for up to 12 weeks to complete a project that implements the Galveston Bay Plan.

The GBEP Mickey Leland Intern for summer 2020 will 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 (NEP), and the local, stakeholder-based program designed to implement a CCMP and its' strategic action plan. The GBEP program areas, as identified in The Galveston Bay Plan are Water and Sediment Quality (WSQ), Monitoring and Research (M&R), Public Participation and Education (PPE), and Natural Resources (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 of the WSQ, M&R, PPE, and NRU dependent upon timing of the internship and the quarterly meetings of the subcommittees. 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: Funding provides approximately 12 weeks of full time funding for one university level junior, senior or graduate summer intern.

NRU Project Summaries:

1.

Project Title: Conservation Assistance Program

Project Lead: Galveston Bay Foundation

Proposed Funding: $100,000 (Federal)

Project Description: This project will provide continued funding of 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.

Notes: Existing project; funded in FY2018.

2.

Project Title: Clear Creek Riparian Restoration

Project Lead: Bayou Preservation Association thru Harris County Pct 1

Proposed Funding: $36,000 (State)

Project Description: The objective of the Clear Creek Riparian Restoration project is to continue the restoration of riparian forested areas at Challenger Seven Memorial Park along Clear Creek by removal of invasive, exotic species. This phase of the project will focus on 16.5 acres of a 34-acre riparian band encompassing ~250 feet of forest along Clear Creek and its back bays. A "first clearing" of invasive species will be conducted over 40 to 50 event days per year. The "first clearing" will be followed by a "mop-up" at each location to achieve approximately 90% removal of invasive species in the targeted areas. This habitat restoration work will be led by Bayou Preservation Association's contractor, EBR Enterprises, which has approximately 18 years of experience in invasive, exotics removal and habitat restoration in the southeast Texas area. Labor will be provided by paid young adults from the Student Conservation Association, volunteers recruited by the Bayou Preservation Association, and Harris County supervised inmates.

Notes: Existing Project. Phase I, which will begin in fall 2019, aims to clear 15 acres of the targeted 34-acre riparian band of invasive species. The project will leverage $37,000 from volunteers and Harris County inmates (in-kind labor), local government entities, and private partners.

3.

Project Title: GBF Kemah Living Shoreline Habitat Protection and Restoration Project

Project Lead: Galveston Bay Foundation

Proposed Funding: $65,000 FY2020, $35,000 FY2021 (State)

Project Description: The proposed project will restore intertidal marsh while protecting coastal upland habitats at a 30+ acre property that was recently purchased by the Galveston Bay Foundation (GBF) on the western shore of Galveston Bay. The property's shoreline is one of the few unarmored shorelines in the vicinity, and erosion has greatly affected the shape and habitat makeup. The shoreline is distinctly concave and features a high bluff where there once was a gentle gradation from uplands down to high and low marsh and open bay. The following activities and associated outcomes have been identified for this project: 1) Construct up to 900 feet of rock/rip-rap wavebreaks off the property's shoreline, following the natural curvature of the historical shoreline to reduce wave energy impacting the shoreline from Galveston Bay, halt erosion of the shoreline, and promote deposition of suspended sediments landward of the structure. 2) Transplant native marsh vegetation shoreward of the breakwater to augment the shoreline stabilization process and restore an estimated 3-4 acres of intertidal marsh habitat. 3) Directly involve 100 community volunteers in the transplanting of smooth cordgrass at the project site, allowing the public to participate directly in the wetland restoration process. The proposed living shoreline project is the first step for GBF to develop a premiere education destination on Galveston Bay as well as GBF's headquarters. The long-term goal is to complete several demonstration habitat restoration projects on the property in addition to the living shoreline, including oyster reefs, freshwater wetlands, and prairie restoration.

Notes: New Project. The project will leverage $191,000 from the United States Fish and Wildlife Service Coastal Program, the National Fish and Wildlife Foundation's Gulf Coast Conservation Grants Program, and Environmental Resources Management.

4.

Project Title: Sylvan Rodriguez Habitat Restoration Project

Project Lead: Houston Parks and Recreation Department

Proposed Funding: $100,000 (Federal)

Project Description: The objective of this project is to restore 72 acres of coastal prairie and riparian habitat to a city park to support the overall city goal of implementing green infrastructure as a tool to mitigate flooding, improve water quality, and enhance wildlife habitat. Sylvan Rodriguez Park is a 113.5-acre park that was acquired by the City of Houston in 1991, at which time it consisted of coastal prairie habitat, including numerous prairie potholes and drainage features. The park is bordered by Horsepen Bayou, which flows downstream into Armand Bayou. In the absence of natural processes such as fire and intermittent grazing by buffalo, the park became inundated by Chinese tallow trees and other woody vegetation. By the mid-2000s, the Houston Parks and Recreation Department (HPARD) had developed the southwestern portion of the park. In a multi-phased project, the HPARD will restore 72 acres of coastal prairie and riparian habitat, enhance public education, and construct

public access amenities, including approximately 1,900 feet of boardwalk to allow visitors access to the wetlands. The phase of the project proposed will fund invasive species removal by a contractor and native tree and shrub plantings by volunteer groups led by Student Conservation Association Crews. Volunteers will be educated on the importance of riparian ecosystems and promote stewardship and appreciation of natural area parks in local communities. Restoration areas will be monitored to measure changes in the composition and diversity of plant and animal species and provide an indicator of future management needs.

Notes: New Project. The project will leverage $99,869 from the Coastal Management Program.

5.

Project Title: Green Infrastructure for Texas - Anahuac Freshwater Wetland Restoration / Armand Bayou Water Hyacinth Control

Project Lead: Texas AgriLife Extension/Armand Bayou Nature Center

Proposed Funding: $40,000 (State)

Project Description: Phase II of the proposed restoration project at Anahuac National Wildlife Refuge includes the restoration of 320 acres of fallow farm field to prime freshwater wet prairie habitat. Phase II includes planting of all 320 acres.

Notes: Existing Project; funded in FY 2018. Phase I was completed, which included site mapping and initial survey work. The project will leverage $430,132 from Texas Master Naturalists and Ducks Unlimited.

PPE Project Summaries

1.

Project Title: River, Lakes, Bays 'N Bayous Trash Bash

Project Lead: Houston-Galveston Area Council

Proposed Funding: $10,000 (Federal)

Project Description: Trash Bash is the largest single-day waterway cleanup in the state of Texas, with 15 sites across the region and 4,000–5,000 volunteers annually. The scale and scope of the event requires year-round administration and coordination. GBEP funds would be used to support personnel costs of the regional coordinator to ensure consistency in planning and execution from year to year.

Notes: Existing project, new contract.

2.

Project Title: Galveston Bay Report Card Public Assessment/ Community-Based Social Marketing

Project Lead: Galveston Bay Foundation

Proposed Funding: $61,000 (Federal)

Project Description: The lower Galveston Bay Watershed is home to more than six million people representing an eclectic mix of cultures, ethnicities, and socioeconomic groups. This project will implement Community-Based Social Marketing, which is a targeted community-level approach to outreach and behavior change, to better understand how to educate communities on the importance of conserving Galveston Bay. The first step of the project will involve conducting a region-wide public assessment about the attitudes and concerns of diverse Galveston Bay stakeholders. The second step of the project will consist of pilot studies in three distinct communities with the goal of developing campaigns and materials that are tailored to the needs and interests of each of the communities as well as specifically target and mitigate any barriers that each community may face in terms of access to and comprehension of the report card as well as obstacles residents may face in terms of adopting behaviors to preserve the bay.

Notes: New project.

WSQ Project Summaries

1.

Project Title: Bacterial Source Tracking (BST) on Tributaries of Trinity and Galveston Bays

Project Lead: Texas Water Resources Institute

Proposed Funding: $80,000 per year for 3 years (Federal)

Project Description: Through this project, a water quality monitoring regime will be employed that will help decisions makers make appropriate recommendations for addressing the bacteria impairments in Buffalo, Double, Cedar, and Dickinson Bayous and Clear Creek. Monthly sampling will be conducted by TWRI at one site on each waterbody for 12 months (5 total sites). Field parameters collected will include pH, temperature, conductivity, and dissolved oxygen. Samples will be delivered to the Texas A&M University (TAMU) Soil and Aquatic Microbiology Laboratory (SAML) where E. coli will be prepared for BST analysis. SAML will also conduct library-dependent BST and analyze *E. coli* isolates (4 isolates per sample) using the ERIC-PCR and RiboPrinting combination method. TWRI will collect approximately 75 known source samples from the local watersheds to improve the accuracy of the BST results. Known source sample isolates will be archived in the Texas *E. coli* BST Library. Results of both the known source sampling and BST analysis will be reported in a project final report and presented as necessary.

Notes: This project was approved for $240,000 for three years of funding. $80,000 has been allocated annually for FY2018, 2019, and 2020. Shared again as a courtesy.

2.

Project Title: Highland Bayou Watershed Protection Plan (WPP)

Project Lead: Texas Community Watershed Partners/Texas AgriLife Extension Service

Proposed Funding: $5,767 (Federal)

Project Description: Update the Highland Bayou Watershed Protection Plan to include load reduction estimates which incorporate flow data for bacteria, continue the stakeholder engagement process, and to shepherd the WPP through the TCEQ and EPA Region 6 approval process.

Notes: Existing project. Texas Institute for Applied Environmental Research (TIAER) conducted an analysis for the TCEQ Total Maximum Daily Load (TMDL) program last year (FY2018) to develop a way to model flow to determine loads and in turn to be utilized for the bacteria impairments for the draft WPP. This data will be used to complete the WPP and submit it to the EPA for review. $62,595 has already been allocated. The additional $5,767 will fund the project for the full two years for $68,362.

3.

Project Title: Occurrence of Microplastics in Tributaries to Galveston Bay

Project Lead: United States Geological Survey

Proposed Funding: $35,000 FY2020, $40,000 FY2021 (State)

Project Description: The objectives of this project are to investigate the occurrence and types of microplastics (i.e. fibers, fragments, microbeads) present in 4 watersheds draining to Galveston Bay. Microplastics are small plastic particles less than 5 mm in diameter derived from degradation or mechanical breakdown of larger plastic objects and introduced to waterways through urban runoff and wastewater effluent. Microplastics ingested by living organisms can cause serious health effects, including digestive system obstruction, impaired reproduction, malnourishment, and death. Microplastics also have high sorption capacities, enabling the accumulation of organic pollutants, pathogens, and metals. To date, no studies that assess the occurrence and abundance of microplastics in tributaries of Galveston Bay have been published. Collecting microplastics samples in this region can provide information about the spatial distribution and concentrations of microplastics in the Galveston Bay watershed and set the foundation for future study. USGS will collect microplastics and water quality samples at major tributaries to Galveston Bay including the San Jacinto River, Trinity River, Buffalo Bayou, and Double Bayou. Each site will be sampled 2-3 times throughout the duration of the project, including a sample during baseflow

conditions and a sample during a high flow event. Results will provide preliminary information on the occurrence of microplastics in the Galveston Bay watershed and will include a quantification of microplastic particles by categories. Data will be evaluated for variability between baseflow and event-based samples. Differences in concentrations between watersheds will also be assessed. The results of this reconnaissance study will provide a preliminary assessment of where microplastics are potentially being introduced to Galveston Bay and provide the foundation for future study and abatement.

Notes: New project.

4.

Project Title: Coordinating Implementation of a Watershed Protection Plan (WPP) for Double Bayou

Project Lead: Geotechnology Research Institute

Proposed Funding: $ 63,358 (State)

Project Description: The project objective is to coordinate implementation of the Double Bayou Watershed Protection Plan through surface water quality monitoring to support implementation of the Double Bayou WPP. In 2012, GTRI worked with the USGS and Shead Conservation Solutions with funding from Texas State Soil and Water Conservation Board (TSSWCB)/EPA and GBEP/TCEQ to develop a Watershed Protection Plan (WPP) for Double Bayou, which has been approved by stakeholders and the EPA. The proposed project will provide for water quality data collection efforts, maintaining stakeholder efforts and beginning implementation of the WPP. This project will address the current water quality problems of dissolved oxygen and bacteria in the streams. Maintaining an effective monitoring program will provide critical water quality data that will be used to judge the effectiveness of WPP implementation efforts and serve as a tool to measure water quality restoration.

Notes: Current project, new contract. $363,196 in 319 federal funds (leverage) requested from TSSWCB. GBEP FY2018 funds spent thus far have supported data gathering to update the current existing Double Bayou data set: from the TCEQ Clean Rivers Program database, the National Oceanic and Atmospheric Administration operated Anahuac rain gage; and the USGS operated West Fork Lower gage station. Processing and analysis of updated project data sets has begun. Additional funds will support implementation of the WPP.

5.

Project Title: Targeted Bacteria Monitoring Project

Project Lead: Houston-Galveston Area Council

Proposed Funding: $25,000 FY2020, $15,000 FY2021 (Federal)

Project Description: The objectives of the Targeted Bacteria Monitoring Project are to: (1) investigate bacteria sources in the most bacteria-impaired waterways in the Bacteria Implementation Group's project area; and (2) work with local jurisdictions to reduce or eliminate those sources. The proposed project will identify significant bacteria sources in the 10 stream segments with the highest geomeans of E. coli concentrations and report findings to local jurisdictions with the goal of implementing corrective actions, such as the identification of collection system leaks and overflow problems, infrastructure repairs, increased WWTF sampling, and resident education. Student Conservation Association interns will be trained to conduct the bacteria sampling. Texas Stream Team protocols will be used for bacteria testing (instead of a laboratory certified by the National Environmental Laboratory Accreditation Program), as the goal is to identify relative differences in bacteria levels to narrow down the geographic location of the potential source, rather than to use the data for regulatory purposes. Outreach efforts will convey the results to other jurisdictions and the public.

Notes: New project.

M&R Project Summaries

1.

Project Title: Heavy Metals and Pb Isotopes in Galveston Bay Waters and Sediments

Project Lead: Texas A&M University

Proposed Funding: $46,911 FY2020, $19,067 FY2021 (Federal)

Project Description: The objective of this project is to evaluate heavy metal concentrations, which can be toxic to humans and benthic/pelagic communities, and Pb (lead) isotope ratios in Galveston Bay waters and sediments over a seasonal cycle to evaluate the toxicity of the bay and identify any industrial pollution sources. Seasonal sampling trips beginning in June 2017 revealed that 50% of stations sampled were "at risk" of sediment toxicity for mercury, arsenic, antimony, chromium, and nickel. Baseline measurements are required to determine whether observed variability/ enrichment was Harvey-related or caused by natural seasonal variability. Four seasonal cruises will be conducted in 2018-2019 to analyze water and sediment concentrations of 10 toxic heavy metals and a variety of tracer elements that will enable tracing of active biogeochemical processes. Data generated by this study will be used in conjunction with heavy metal loadings in oysters to facilitate pollution reduction and mitigation efforts and better understand heavy metal biogeochemical cycling (i.e. controls on water-sediment partitioning) in anthropogenically-influenced estuaries and to track the societal/economic impact of heavy metal toxin fluxes and distributions.

Notes. New project. This project will leverage $20,000 (ship time) from Texas A&M University.

2.

Project Title: Characterizing PCBs and Dioxin in the Houston Ship Channel and Galveston Bay Post Harvey

Project Lead: University of Houston

Proposed Funding: $60,000 (Federal)

Project Description: The main objective of this project is to monitor sediment and tissue polychlorinated biphenyl (PCB) and dioxin concentrations in the Houston Ship Channel (HSC) and Galveston Bay (GB) system post-Harvey. The University of Houston (UH), under contract with the Galveston Bay Foundation (GBF), is presently conducting a fish and crab dioxin tissue testing study in the San Jacinto River and the Houston Ship Channel at 20-40 locations within a 5-mile radius of the San Jacinto River Waste Pits (SJRWP) Superfund site. Date collected post-Harvey with funding from the National Science Foundation indicated that sediment concentrations for both PCBs and dioxins have changed within the HSC and GB since they were last sampled in 2011-2012, with some sites exhibiting higher concentrations in comparison to historical levels. Additionally, it has been reported that the protective cap on the SJWRP site incurred failures during Hurricane Harvey, potentially exposing the waste material in the pits to the San Jacinto River waters. The goals of the proposed project are to 1) expand the geographical scope of the current study to the entirety of the HSC and GB to develop a comprehensive understanding of the levels of dioxin and PCBs in the system and 2) to evaluate the congener profiles for the two constituents in comparison to historical patterns to determine correlations with existing or new potential sources. The tissue target species will be identical to those collected in prior studies and include killifish, blue crab, catfish, spotted sea trout, red drum, southern flounder, among others. Sediment sampling will aid in the identification of potential sources and hot spots within the system and in the analysis of observed changes in the distribution of the two constituents in GB and the HSC. The sampling results will be compared to their historical counterparts and to the most recent dataset collected by UH in 2017 post Harvey. Significant trends and/or observed shifts will be identified, including those related to congener distributions, locations of hot spots, increases in either constituent in tissue or sediment, and observed levels of total PCBs and dioxin total equivalent concentrations. The findings will be synthesized in the context of the current seafood advisories in place for the HSC and Galveston Bay.

Notes: New project. This project will leverage $245,000 from the Galveston Bay Foundation.

3.

Project Title: Pb Isotopes and Heavy Metal Concentrations in Galveston Bay Oysters

Project Lead: University of Houston

Proposed Funding: $33,845 per year for two years (Federal)

Project Description: The objective of this project is to measure lead isotope ratios and heavy metal concentrations in Galveston Bay oysters to evaluate industrial pollution

and Pb (lead) biogeochemical cycling in Galveston Bay. Recent research indicates that pollutant Pb, likely from the local petroleum industry, is present in Galveston Bay sediments and may pose a risk to biota within the bay. Because oysters are sedentary, reside in bottom sediments, and accumulate metals from the water column and sediments, they are widely used as bio-indicators for detecting environmental contamination. Lead isotopes provide an efficient fingerprinting method for determining the sources and pathways of pollution because they do not undergo detectable physico-chemical fractionation processes in the natural environment. For this reason, each Pb source possesses its own unique isotopic composition or "fingerprint" by which it can be traced. Together, the combination of Pb isotopes and heavy metal abundances are a powerful tool for constraining pollutant sources and fluxes. Data generated by this study will be used in conjunction with ongoing work on Galveston Bay waters and sediments to facilitate pollution reduction, remediation, and mitigation efforts in Galveston Bay and to better understand Pb biogeochemical cycling in polluted estuaries. This type of approach to tracing industrial pollution has been heavily undersubscribed in the U.S. and this study would represent the first of its kind within Galveston Bay. As such this project serves as a test bed for future work in Galveston Bay as well as for other major U.S. water systems.

Notes: New project. Samples will be collected at no cost to the project via collaboration with Texas Parks and Wildlife.

FY 2020* Subcommittee Recommended Project Budget					
			FY 2020		*FY 2021
Category	**Grantee**	**Original Funding Request**	**State Funding**	**Federal Funding**	
Programmatic Costs					
Salaries, Fringe, and Indirect	N/A		$ -	$ 630,000.00	
General Operational Costs	N/A		$ 27,000.00		
Website Hosting & Maintenance (3 websites)	Wilkins Group			$ 6,000.00	
State of the Bay Symposium	TBD			$ 25,000.00	
GBEP Mickey Leland Summer Intern	N/A			$ 7,500.00	
NRU					
Conservation Assistance Program	GBF	$ 100,000.00	$ -	$ 100,000.00	
Clear Creek Riparian Restoration	BPA thru Harris County Pct 1	$ 36,000.00	$ 36,000.00	$ -	
GBF Kemah Living Shoreline Habitat Protection and Restoration Project	GBF ***MUST SECURE ILIA	$ 100,000.00	$ 65,000.00	$ -	
Sylvan Rodriguez Habitat Restoration Project	HPARD	$ 100,000.00	$ 50,000.00		
GIFT Freshwater Wetland Restoration at USFWS Anahuac / ABNC Hyacinth	Texas Agrilife and ABNC	$ 40,000.00	$ 40,000.00	$ -	
PPE					
Trash Bash	H-GAC	10,000	$ -	$ 10,000.00	
Galveston Bay Report Card Public Assessment/Community-Based Social Marketing	GBF via HARC	61,000	$ -	$ 61,000.00	
WSQ					
Bacteria Source Tracking (Previously Approved FY 18-20 Project)	Texas Water Resources Institute	$80,000		$80,000	
Highland Bayou Watershed Protection Plan	Texas AgriLife	$5,767		$5,767	
Occurrence of Microplastics in Tributaries to Galveston Bay	USGS	$75,000	$35,000		
Coordinating Implementation of a Watershed Protection Plan for Double Bayou	GTRI	$63,358	$31,679		
Targeted Bacteria Monitoring Project	H-GAC	$40,000		$25,000	
M&R					
Heavy metals and Pb Isotopes in Galveston Bay Waters and Sediments (Approval Requested for FY 2020 AND FY 2021)	Texas A&M University	$65,978		$46,911	$19,067
Characterizing PCBs and Dioxin in the Houston Ship Channel and Galveston Bay Post Harvey	University of Houston	$60,000		$60,000	
PB Isotopes and Heavy Metal Concentrations in Galveston Bay Oysters (Approval Requested for FY 2020 AND FY 2021)	University of Houston	$67,690		$33,845	$33,845
FY 2020 Funding Requests			$ 284,679.00	$ 1,091,023.00	
FY 2019 Funding Allocation			$ 272,113.00	$ 1,200,000.00	
Difference			($12,566.00)	$108,977.00	

FY *2020 (Staff Proposed) Balanced Budget					
			FY 2020		*FY 2021
Category	**Grantee**	**Original Funding Request**	**State Funding**	**Federal Funding**	
Programmatic Costs					
Salaries, Fringe, and Indirect	N/A		$ -	$ 638,977.00	
General Operational Costs	N/A		$ 32,755.00		
Website Hosting & Maintenance (3 websites)	Wilkins Group			$ 6,000.00	
State of the Bay Symposium	TBD			$ 25,000.00	
GBEP Mickey Leland Summer Intern	N/A			$ 7,500.00	
NRU					
Conservation Assistance Program	GBF	$ 100,000.00	$ -	$ 100,000.00	
Clear Creek Riparian Restoration	BPA thru Harris County Pct 1	$ 36,000.00	$ 36,000.00	$ -	
GBF Kemah Living Shoreline Habitat Protection and Restoration Project	GBF ***MUST SECURE ILIA	$ 100,000.00	$ 65,000.00	$ -	
Sylvan Rodriguez Habitat Restoration Project	HPARD	$ 100,000.00		$ 100,000.00	
GIFT Freshwater Wetland Restoration at USFWS Anahuac / ABNC Hyacinth	Texas Agrilife and ABNC	$ 40,000.00	$ 40,000.00	$ -	
PPE					
Trash Bash	H-GAC	10,000	$ -	$ 10,000.00	
Galveston Bay Report Card Public Assessment/Community-Based Social Marketing	GBF via HARC	61,000	$ -	$ 61,000.00	
WSQ					
Bacteria Source Tracking (Previously Approved FY 18-20 Project)	Texas Water Resources Institute	$80,000		$80,000	
Highland Bayou Watershed Protection Plan	Texas AgriLife	$5,767		$5,767	
Occurrence of Microplastics in Tributaries to Galveston Bay	USGS	$75,000	$35,000		
Coordinating Implementation of a Watershed Protection Plan for Double Bayou	GTRI	$63,358	$63,358		
Targeted Bacteria Monitoring Project	H-GAC	$40,000		$25,000	
M&R					
Heavy metals and Pb Isotopes in Galveston Bay Waters and Sediments (Approval Requested for FY 2020 AND FY 2021)	Texas A&M University	$65,978		$46,911	$19,067
Characterizing PCBs and Dioxin in the Houston Ship Channel and Galveston Bay Post Harvey - Continued Review Needed	University of Houston	$60,000		$60,000	
PB Isotopes and Heavy Metal Concentrations in Galveston Bay Oysters (Approval Requested for FY 2020 AND FY 2021)	University of Houston	$67,690		$33,845	$33,845
FY 2020 Funding Requests			$ 272,113.00	$ 1,200,000.00	
FY 2019 Funding Allocation			$ 272,113.00	$ 1,200,000.00	
Difference			$0.00	$0.00	