

Galveston Bay Estuary Program

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October 9, 2019

Dear Galveston Bay Council Members:

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

Wednesday, October 16, 2019

9:30AM – 12:30 PM

Meeting location:

Harris-Galveston Subsidence District

1660 West Bay Area Blvd,

Friendswood, TX 77546-2640

(281) 486-1105

Information for the **October 16, 2019** meeting is attached as noted below.

1. Galveston Bay Council Agenda for October 16, 2019
2. Draft April 17, 2019 Galveston Bay Council Meeting Minutes
3. Proposed FY 2021 Work Plan Budget
4. Proposed FY 2021 Project Proposal Summaries

Sincerely,

Lisa M. Marshall

Program Manager

Galveston Bay Estuary Program (GBEP)



GALVESTON BAY COUNCIL QUARTERLY MEETING

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

AGENDA: Wednesday, October 16, 2019

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

Action Item: Approval of July 17, 2019 Meeting Minutes

Report of the Program (Lisa Marshall)

Announcement: Resolutions to Support The Galveston Bay Plan, 2nd Edition, The Comprehensive Conservation and Management Plan for the Galveston Bay Ecosystem

Report of the Chair (Helen Paige)

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

Announcement: Newly appointed Texas Parks and Wildlife Department representative

9:50 A.M.: **Presentations & Discussion:** Fiscal Year 2021 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

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

11:00 A.M.: **Presentation:** *Texas Department of State Health Services Re-evaluation of Upper Galveston Bay Fish and Shellfish Consumption Advisory* – Andrew Myers, Texas Department of State Health Services

11:40 A.M. **Presentation:** *FEMA Coastal Flood Risk* – Lauren Schmied, Federal Emergency Management Agency

12:15 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 21, 2020*; April 15, 2020; July 15, 2020; and October 14, 2020. 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.

*Date change due to the State of the Bay Symposium

GALVESTON BAY ESTUARY PROGRAM

DRAFT - Galveston Bay Council (GBC) Meeting Minutes – July 17, 2019

Attendees:

Galveston Bay Council Chair: Helen Paige (Marinas)

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

Estuary Program Staff Lead: Lisa Marshall, Galveston Bay Estuary Program (GBEP)

The July 17, 2019 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, Winfred Colbert, Jeff DallaRosa, Albert Gonzales, Lori Hamilton, Rebecca Hensley, Cruz Hinojosa, Jace Houston, Doug Jacobson, Brian Koch, Mike Lee, Will Nipper, Helen Paige, Ana Partin, Pamela Plotkin, Caimee Schoenbaechler, Ronnie Schultz, Linda Shead, Sharron Stewart, Bob Stokes, Lori Traweck, Kirk Wiles, Tracy Woody

Members Not Present/Delegates: Caryn Brooks, Andrea Catanzaro, Glenn Clingenpeel, John Huffman*, Audrey Kuklenz, Kristin Lambrecht, Garry McMahan*, Nancy Parra, Russ Poppe*, Melissa Porter*, Taylor Rieck, Hanadi Rifai, Rusty Senac, Mary Beth Stengler, Rusty Swafford, Jeff Taebel*, Matthew Tilimon

(*=Member designated a proxy)

Proxies Present (Council member absent/designated proxy): John Huffman/Scott Williams, Garry McMahan/Mollie Powell, Russ Poppe/Glenn Laird, Melissa Porter/Julie McEntire + Dianna Ramirez, Jeff Taebel/Todd Running

Current Vacancies: None

Other Attendees: Philip Bedient, Tom Douglas, George Guillen, Lizfazio Hale, Debra Harper, Kerry Niemann, Amanda Rinehart, Kim Wright.

Additional GBEP Staff present: Cynthia Clevenger, Lindsey Lippert, Kristen McGovern, Christian Rines, Mary Stiles.

Call to Order: Introduction of Members and Delegates

Helen Paige called the meeting to order and requested introductions and confirmed a quorum with Lisa Marshall.

Action Item: Approval of April 17, 2019 Meeting Minutes

Ms. Paige opened the meeting with approval of the minutes. A motion was requested for approval. Lori Traweck moved to approve the minutes, and Winfred Colbert seconded the motion and clarified that the minutes were approved without corrections.

Report of the Program (Lisa Marshall)

- Ms. Marshall announced the program is updating Galveston Bay Council contact information database and requested members confirm their contact information with Mary Stiles during the break.
- A new timeline is set for the State for the Bay Symposium: abstracts are due August 19th; presenters will be notified in early October; agenda will be sent out mid to late October.
- Proposals for the FY 2021 project development process are due to the subcommittee coordinators by July 22.
- Priorities for each of the subcommittees and the dates for their next meetings will be presented later in the meeting.

Report of the Chair (Helen Paige):

Ms. Paige announced nominations for a new chair and vice chair. Request for nominations were opened to the members. Ms. Paige nominated Glenn Clingenpeel as chair, followed by reading his biography. Ms. Shead seconded the nomination. Ms. Shead nominated Albert Gonzales as vice chair followed by reading his biography. Bob Stokes seconded the nomination. Ms. Paige requested a motion to approve the new chair and vice chair positions. GBC members approved the nominations. Doug Jacobson abstained from voting.

Ms. Paige announced Patrick Cuty, our U.S. Coast Guard representative, was recently transferred. The new representative is Matthew Tilimon. Mr. Tilimon was unable to attend the meeting. Ms. Paige read his biography to the council members.

Announcement: Resolutions to Support *The Galveston Bay Plan, 2nd Edition, The Comprehensive Conservation and Management Plan for the Galveston Bay Ecosystem*

Ms. Paige announced the Budget and Priorities (B&P) subcommittee developed a resolution in support of the new Galveston Bay Plan, 2nd Edition (The Plan). A copy of the resolution is included in the handout packet and can be provided to GBC council electronically.

Ms. Paige stated the resolution can be used as a template for organizations or revised as needed. The B&P subcommittee would like to present resolutions at the State of the Bay Symposium in January 2020. The GBC members were asked to consider taking the resolution back to their organizations to receive approval or provide to other municipalities or organizations that they are affiliated with to adopt a resolution to support the implementation efforts of The Plan.

Presentation: Philip B. Bedient, Ph.D., PE, Rice University SSPEED Center - "Galveston Bay Park Plan: A Vision for Houston and Galveston Bay"

Mr. Bedient reported that the Galveston Bay Park Plan is a corollary to the Coastal Spine and would provide 10,000 acres of park land with public access while helping to protect the Houston-Galveston industrial complex and the west side of Galveston Bay to 25 ft, raise the Texas City levee to 25 ft, install a levee on the backside of Galveston Island, elevate evacuation routes on FM 3005 and Highway 87, provide sand

nourishment for beaches, and potentially extend the Galveston levee to Pelican Island. The Park is expected to be constructed in 2025-2027 and would cost \$3-6 billion. Circulation and salinity studies have already been completed, and historical and current oyster reefs have been analyzed. The Port of Houston has plans to deepen and widen the Houston Ship Channel, and the material could potentially be used to build The Park. The Park would include event and dining options, campgrounds, a marina, event space, and fishing opportunities.

Mr. Bedient reported current plans include one main gate and several mechanical gates. The number of mechanical gates could be increased to improve circulation if necessary. The gates would remain open and would only be closed in the event of an expected surge.

Council members expressed the need for:

- Studies of how nutrient cycling would be impacted;
- Studies of the impacts to species other than oysters due to changes in nutrient cycling, salinity; and
- Getting NOAA involved, as there may be impacts to marine mammals.

Presentation: Amanda Rhinehart, Artist Boat – “We Back the Bay Project Presentation”

Ms. Rhinehart reported following the Memorial Day Flood in 2015 and the Tax Day Flood in 2016, Artist Boat began to develop a project to give students more background on why flooding happens in the Houston-Galveston area and what students can do to help improve the situation. Increasing development as well as increasing trends in precipitation mean that the Houston area will continue to experience these flooding events.

The “We Back the Bay!” project engaged 600 middle and high school students at five schools. At each school, Artist Boat provided professional development workshops for the teachers, eco-art workshops and kayak adventures for the students, and a \$4500 grant to design an outdoor habitat, such as a rain garden, wetland pond, or water retention system. One stipulation of the grant was that 10% of the budget had to be used to develop a student-designed social outreach campaign (preferably using Back the Bay campaign materials). Pre- and post- survey results indicated that related knowledge, attitudes, and stewardship behaviors were improved among students that participated in the project.

The project aims to build awareness of the causes and impacts of nonpoint sources (NPS) on Galveston Bay, develop critical thinking skills necessary to mitigate NPS from the bay, create actions to increase water conservation, and reduce storm water run-off from school campuses. “We Back the Bay!” also builds on the GBEP’s outreach Back the Bay campaign.

Subcommittee Updates:

- **Public Participation and Education (PPE):** Cynthia Clevenger presented the FY 2021 priorities of the PPE Subcommittee:
 - Supporting underrepresented communities;
 - K-12 formal education programs; and
 - Needs/data assessment for formal environmental education, non-formal outreach and education, identifying underrepresented communities.
- **Water and Sediment Quality (WSQ):** Christian Rines presented the FY 2021 priorities of the WSQ Subcommittee:
 - Supporting management measures and watershed-based plans;
 - Health and green infrastructure; and
 - Waterway trash, marine debris, and/or macroplastics and microplastics.
- **Monitoring and Research (M&R):** Kristen McGovern presented the FY2021 priorities of the M&R Subcommittee:
 - Larval transport within the estuary;
 - Macroplastics and/or microplastics in water, sediment, and organisms; and
 - Emerging contaminants in water, sediment, and organisms.

Presentation: Natural Resource Uses (NRU) Subcommittee Focus and Priorities

Lindsey Lippert gave a presentation on the Plan Actions and FY 2021 Priorities of the NRU Subcommittee. Ms. Lippert gave a brief overview of the 1995 Galveston Bay Plan and 2015 Strategic Action Plan goals and programmatic results of previous implementation efforts by activity and habitat type. Ms. Lippert outlined the NRU subcommittee process of developing the framework and goals of the 2018 Galveston Bay Plan Revision, and how those goals correlate to the original plans. Ms. Lippert finally outlined the FY 2021 priorities for the NRU Subcommittee:

- Land acquisition;
- Benefit to Federal and State Listed Species or Species of Greatest Conservation Need; and/or
- Brings funding or work leverage to the subcommittee.

Council Members Roundtable: News and Announcements

Todd Running - H-GAC is currently managing two supplemental projects to help low-income homeowners repair or replace failing on-site sewage facilities (OSSFs). There will be two OSSF workshops for homeowners at Brazosport College - Thursday, September 26th from 6:00-8:00 PM, and Saturday, October 12th from 9:00-11:00 AM.

TMDL - H-GAC is working with stakeholder groups to develop Implementation Plans (I-Plan) for TMDLs in Chocolate Bayou and Oyster Creek to reduce bacteria levels. They are also conducting watershed characterizations of Halls and Mustang Bayous for future TMDL I-Plans.

Bacteria Implementation Group (BIG) - The BIG is currently in its 5th year of implementation and is working to update I-Plans. A Coordination and Policy committee

meeting will be held July 23rd at 1:00 PM and San Jacinto River, East and West Fork meeting will be held July 24th at 1:00 PM. The BIG fall meeting is scheduled for October 29th at 1:00 PM.

Watershed Protection Plans – The Cypress Creek Watershed Partnership will hold its first stakeholder meetings on Tuesday, July 23rd 1:30–3:30 PM in Cypress, and from 5:30–7:30 PM in Spring to start discussions for the development of a Cypress Creek WPP.

Coastal Communities Work Group Subcommittee - Will meet July 31st from 1:30–3:00 PM at the Alvin Library.

Clean Waters Initiative and Coastal Communities Work Group - Will meet on August 8th from 10:00–12:00 PM at the North Harris County Regional Water Authority.

Brian Koch - TSSWCB will be sending out a request for proposals mid-August.

Caimee Schoenbaechler – The 2019 Texas Legislature and Governor Abbott greatly expanded the Texas Water Development Board's (TWDB) role in flood planning and financing. The TWDB will not be administering a new state flood planning program. This program establishes a state and regional flood planning process, with flood planning regions based on river basins. The first regional flood plans will be due in 2023, and the first state flood plan will be due in September 1, 2024.

The legislature also made a one-time transfer of \$793 million from the Rainy-Day Fund to create a new flood funding program to be administered by the TWDB. The program is designed to make the implementation of drainage and flood projects more affordable for Texas communities and to meet immediate needs for funding. The funding will become available in FY 2020.

The legislature provided the TWDB funding to collect more flood-related data, advance its river and coastal modeling capabilities, and distribute critical flood information through an online dashboard. TWDB is working to get programs up and running as soon as possible and to hire staff of 66 new FTEs for the new roles. TWDB will request stakeholders' input on a variety of issues at workshops around the state (Orange, Tomball, Lake Jackson) later in the summer.

Ms. Schoenbachler asked if anyone was interested in the updates they can sign up on the TWDB home page to receive emails. The sign-up location is under the agency Hot Topics section and the box "Flood Information" must be checked, under FAQ's.

Linda Shead - The Bayou Preservation Association will have its 2019 Annual Symposium "The Dirt on Watersheds: The Quest for Healthy Soil" on October 30th, 8:30 AM–3:00 PM.

Lori Traweek – Announced the Gulf Coast Authority's 50th Anniversary and introduced the new Assistant General Manager, Ms. Lizfazio Hale.

Kerry Niemann – Announced the following updates on behalf of the TCEQ's Water Quality Planning Division.

Regarding the TMDL Program:

The Oso Creek TMDL, Lavaca River TMDL and Implementation Plan, and Navasota River TMDL and Implementation Plan are scheduled to go to Agenda for adoption and approval on July 31st, August 14th, and August 28th respectively.

Regarding the NPS Program: The Request for Grant Applications solicitation closes July 31st.

Regarding the 2018 Integrated Report: The Commission adopted the draft 2018 Texas 303(d) List on June 26, 2019.

Regarding Water Quality Standards: The public comment period for the 2021 water quality standards closed on April 8.

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.

RESTORE

Re: Bucket 1 (which is the Direct Component to the States to strengthen resiliency, economy, and tourism): TCEQ RESTORE staff continue to prepare federal applications for submission to the Treasury to receive grant awards for Bucket 1 funds. TCEQ will submit seven federal applications consisting of 22 of the 26 projects in the accepted Multiyear Implementation Plan (MIP). Each project will be included in one of the seven applications associated with the eligible activity that it was listed for under in the MIP. Projects moving forward to the application phase were selected in consultation with the Office of the Governor. Approximately \$97 million is currently available to Texas through Bucket 1.

Re: Bucket 2 (which is the Council Selected Restoration Component to support coordination w/experts and elected officials): The Council members and staff are currently in the process of reviewing comments and expect to finalize the Planning Framework document no later than early August 2019. The draft Planning Framework document is available at www.restorethegulf.org. The final Planning Framework will guide the Council in developing program and project proposals for consideration for funding under the next round of the Bucket 2 grant. That round of funding is estimated to be \$360 million for the five Gulf Coast states. To select what proposals to submit on behalf of Texas, Executive Director Toby Baker will host two public meetings. The purpose of the public meetings will be to receive comments on potential project proposals that he will post on the Council's website in August. The meetings will be held on September 9 and 10, 2019. Details on the projects can be found at restorethegulf.org.

Re: Bucket 3 (which is the Spill Impact Component): On March 4th the Initial State Expenditure Plan was approved. The plan will focus on Hurricane Harvey recovery

efforts and the distribution of approximately \$31 million. Other plans will be developed in later years as additional Bucket 3 funds become available. Texas is expected to receive a total of \$121 million through Bucket 3 by the end of 2031.

Detailed information on the public meetings and other Texas RESTORE Act activities can be found on the restorethetexascoast.org website.

Julie McEntire – The GLO’s CMP Cycle 25 pre-proposals are currently under review; request for full proposals will be sent in October. The GLO is also hosting a series of living shoreline workshops in late July to early August.

Doug Jacobson – The Plastic Pollution Prevention Partnership (P3P) is hosting the Plastic Pollution Symposium in Galveston on October 29 at Moody Gardens. Visit www.donttrashagoodthing.org for more information.

Cruz Hinojosa – The Environmental Defense Fund, Texas Southern University, and the Environmental Advocates of Galena Park received a community outreach grant for education, outreach on air quality and environmental issues.

Public Comments: None

Adjourn: Meeting was adjourned at 12:02 PM

Upcoming Galveston Bay Council Meeting Dates: October 16, 2019; January 15, 2020; April 15, 2020, July 15, 2020. Meetings are held on the third Wednesday of the quarter from 9:30 AM-12:30 PM.

FY 2021 GBEP Proposed Budget					
					FY 2022*
Category	Grantee	Recommendation	State Funding	Federal Funding	
Programmatic Costs					
Salaries, Fringe, and Indirect	N/A		\$ 73,126.26	\$ 641,279.83	
General Operational Costs	N/A		\$ 32,760.74	\$ 8,746.17	
Website Hosting & Maintenance (3 websites)	Wilkins Group			\$ 6,000.00	
GBEP Mickey Leland Summer Intern	N/A			\$ 7,500.00	
Regional Monitoring Database*	HARC	\$ 135,830.00		\$ 100,000.00	\$ 100,000.00
NRU					
1. Conservation Assistance Program	GBF	\$ 100,000.00		\$ 83,822.50	
2. The 6th Addition to the Coastal Heritage Preserve Through an Acquisition at Middle Tract, Galveston Island, TX**	TPWD	\$ 125,000.00	\$ 125,000.00		
3. Stream Corridor Restoration Through Invasive Species Control along Big Gulch Gully	BPA thru HCP2	\$ 36,000.00	\$ 36,000.00		
Jones Bay Oystercatcher Habitat Restoration and Enhancement	GBF thru TPWD		\$125,000		
PPE					
1. Audubon TERN citizen science in Schools: Students as field researchers	Audubon TX thru HCDE	\$ 50,000.00		\$ 50,000.00	
2. Regional Coordination of the River, Lakes, Bays'N Bayous Trash Bash®	HGAC	\$ 15,000.00		\$ 10,000.00	
3. Microplastics in the Galveston Bay Watershed: The Big Impacts of Tiny Pollution	TIRN thru UHCL	\$ 64,458.50		\$ 64,458.50	
WSQ					
1. Targeted Bacteria Monitoring (Phase II)	BPA thru H-GAC	\$ 40,000.00		\$ 40,000.00	
2. Baseline Assessment of Microplastics in Galveston Bay*	USGS	\$ 45,000.00	\$ 45,000.00		\$ 45,000.00
3. Outreach Implementation for Galveston Bay Watershed Water Quality Projects	H-GAC	\$ 40,000.00	\$ 28,113.00	\$ 11,887.00	
M&R					
1. Galveston Bay Oyster Microplastics: Baselines and Impacts	TAMUG	\$ 90,427.00		\$ 90,427.00	
2. The Effect of Microplastics on the Base of Marine Food Webs	TAMUG	\$ 37,000.00		\$ 37,000.00	
3. The Distribution, Fate, and Transport of Emerging Contaminants in Galveston Bay*	TAMU Oceanography	\$ 98,428.00		\$ 48,879.00	\$ 49,549.00
FY 2021 Funding Requests			\$ 340,000.00	\$ 1,200,000.00	\$ 194,549.00
FY 2020 Funding Allocation			\$ 340,000.00	\$ 1,200,000.00	
Difference			\$ -	\$ -	

*Additional FY 2022 funding approval is requested for three projects.

**Artist boat/TPWD must secure grant funds. The Jones Bay Oystercatcher is an alternate project.

GALVESTON BAY ESTUARY PROGRAM (GBEP) PROJECT PROPOSALS FOR FISCAL YEAR 2021 WORK PLAN

GBEP Programmatic Proposals

1. GBEP Website Hosting and Maintenance
2. Mickey Leland Environmental Internship Program
3. Regional Monitoring Database

Natural Resources Uses (NRU) Subcommittee Proposals

1. Conservation Assistance Program (year 3/5)
 2. The 6th Addition to the Coastal Heritage Preserve Through an Acquisition at Middle Tract, Galveston Island, Texas
 3. Stream Corridor Restoration Through Invasive Species Control along Big Gulch Gully
- ** Jones Bay Oystercatcher Habitat Restoration and Enhancement

Public Participation and Education (PPE) Subcommittee Proposals

1. Audubon TERN Citizen Science in Schools: Students as Field Researchers
2. Regional Coordination of the River, Lakes, Bays 'N Bayous Trash Bash®
3. Microplastics in the Galveston Bay Watershed: The Big Impacts of Tiny Pollution

Water/Sediment Quality (WSQ) Subcommittee Proposals

1. Targeted Bacteria Monitoring (Phase II)
2. Baseline Assessment of Microplastics in Galveston Bay
3. Outreach Implementation for Galveston Bay Watershed Water Quality Projects

Monitoring and Research (M&R) Subcommittee Proposals

1. Galveston Bay Oyster Microplastics: Baselines and Impacts
2. The Effect of Microplastic on the Base of Marine Food Webs
3. The Distribution, Fate, and Transport of Emerging Contaminants in Galveston Bay

GBEP Programmatic Project Summaries

1.

Project Title: GBEP Website Hosting and Maintenance

Project Lead: Wilkins Group

Proposed Funding: \$6,000 (Federal)

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

- 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: Tasks for the Back the Bay website include maintenance and updates as needed throughout the year, hosting, and domain name registration.
- <https://gbep.texas.gov/galveston-bay-plan/>: Tasks for the Galveston Bay Plan, 2nd Edition website include maintenance and updates as needed throughout the year, hosting, and domain name registration.

2.

Project Title: Mickey Leland Environmental Internship Program

Project Lead: TBD. Texas Commission on Environmental Quality 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 2021 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, 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.

3.

Project Title: Regional Monitoring Database

Project Lead: Houston Advanced Research Center

Proposed Funding: \$200,000 (Federal; \$100,000 in FY2021 and \$100,000 in FY2022)

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: New project.

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 FY2019 and FY2020.

2.

Project Title: The 6th Addition to the Coastal Heritage Preserve Through an Acquisition at Middle Tract, Galveston Island, Texas

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 45 acres of coastal habitat. The purchased tract would be added to and be managed as part of the 754 acre 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 \$1,000,000 from the United States Fish and Wildlife Service 2020 National Coastal Wetlands Grant (CWPPRA). Artist Boat will provide the balance of the required \$333,335 match in cash and currently has commitment letters for a total of \$7,500 from 11 stakeholders in the community. CWPPRA funded projects are expected to be announced between January and May 2020.

3.

Project Title: Stream Corridor Restoration Through Invasive Species Control along Big Gulch Gully

Project Lead: Bayou Preservation Association (via Harris County Precinct 2 Pass Thru)

Proposed Funding: \$36,000 (State)

Project Description: The project proposal aims to restore up to approximately 10 acres of forested wetland and riparian corridor through removal of selective invasive, exotic plant species along Big Gulch Gully, a tributary of Greens Bayou at Jim and JoAnn Fonteno Family Park. The project would start in the fall of 2020, with a target of up to approximately 10 acres of riparian forest, encompassing a band of about 2,000 feet in length along the park's Big Gulch frontage, from its western boundary along the Flood Control Unit #P107-03-01 upstream to the eastern boundary, along a line roughly parallel with Wallisville Road, using the various park road and trail clearings as the northern boundary of the project site.

Notes: New Project; the project will leverage \$35,000 from volunteer and county in-kind (labor and debris removal), local government, private partners, and an Invasive Species Riparian Workshop grant.

** Jones Bay Oystercatcher Habitat Restoration and Enhancement

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

Proposed Funding: \$125,000 (State)

Project Description: Should the Coastal Heritage Preserve not be awarded CWPPRA, funding will be shifted to the Jones Bay Oystercatcher Habitat Restoration and Enhancement Project to enhance up to four remnant islands in Jones Bay. The project will create higher elevations to improve nesting habitat, and enhance/create up to one-acre of oyster reef complex near each nesting island, providing foraging habitat for nesting oystercatchers and their young.

PPE Project Summaries

1.

Project Title: Audubon TERN Citizen Science in Schools: Students as Field Researchers

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

Proposed Funding: \$50,000 (Federal)

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: New project.

2.

Project Title: Regional Coordination of the River, Lakes, Bays 'N Bayous Trash Bash®

Project Lead: Houston-Galveston Area Council

Proposed Funding: \$10,000 (Federal)

Project Description: The proposal aims to support Texas's largest, single-day, volunteer-based waterway cleanup event—River, Lakes, Bays N' Bayous Trash Bash®. Supporting the personnel costs of the Houston-Galveston Area Council regional coordinator for Trash Bash® ensures continuity throughout the process and consistency in planning and execution from year to year. Trash Bash planning is a year-round process and requires ongoing planning, maintenance, and attention every month.

Notes: Existing project FY2019 and FY2020. Funds will go toward administrative costs for Houston-Galveston Area Council to coordinate the Trash Bash event.

3.

Project Title: Microplastics in the Galveston Bay Watershed: The Big Impacts of Tiny Pollution

Project Lead: Turtle Island Restoration Network (via University of Houston Clear Lake Pass Thru)

Proposed Funding: \$64,458.50 (Federal)

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: New project.

WSQ Project Summaries

1.

Project Title: Targeted Bacteria Monitoring (Phase II)

Project Lead: Bayou Preservation Association with Houston-Galveston Area Council

Proposed Funding: \$40,000 (Federal)

Project Description: The Bayou Preservation Association, in partnership with the Houston-Galveston Area Council, using information from the Bacteria Implementation Group (BIG), aims to reduce bacteria concentrations in impaired streams in the BIG project area. The objectives of the Targeted Bacteria Monitoring project are to: (1) investigate bacteria sources in the most bacteria-impaired waterways in the BIG project area; and (2) work with local jurisdictions to reduce or eliminate those sources. Low-cost targeted bacteria monitoring will pinpoint bacteria discharge sources in BIG's top 10 and then will report those locations and sources to local jurisdictions to reduce or eliminate sources.

Notes: Existing Project.

2.

Project Title: Baseline Assessment of Microplastics in Galveston Bay

Project Lead: United States Geological Survey

Proposed Funding: \$90,000 (State; \$45,000 in FY2021 and \$45,000 in FY2022)

Project Description: To better understand the spatial distribution and abundance of microplastics entering Galveston Bay, the United States Geological Survey, in cooperation with GBEP, will start a Phase 1 study in FY2020 assessing the occurrence in tributaries to Galveston Bay. The proposed project for FY2021 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 FY2020 study. Sampling sites will be selected in coordination with the GBEP subcommittees and will also be informed by the results from the FY2020 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.

3.

Project Title: Outreach Implementation for Galveston Bay Watershed Water Quality Projects

Project Lead: Houston-Galveston Area Council

Proposed Funding: \$40,000 (Federal \$11,887 and State \$28,113)

Project Description: Houston-Galveston Area Council has invested heavily in the coastal portion of its service region, especially in the area of water quality. In 2017, Houston-Galveston Area Council received a three-year 319 Nonpoint Source Program grant to conduct water quality outreach in areas in EPA-accepted watershed protection plans in the four coastal counties. That funding, along with additional funding from the Texas Commission on Environmental Quality Total Maximum Daily Load Program, allowed Houston-Galveston Area Council to reach out to 24 small communities (cities or census-designated places) to conduct needs assessment, evaluate needs, identify funding sources, create an outreach plan and materials, and help these communities begin conversations with their residents to change behaviors that increase nonpoint source water pollution in their waterways. The primary focus of the project is reducing bacteria levels-through education and outreach about pet waste, fats, oils, and grease, litter and illegal dumping, and on-site sewage facility maintenance.

Houston-Galveston Area Council is requesting funding for salary, travel, and outreach materials to implement the plans in their respective areas, while providing a unified regional approach easily adaptable to each specific plan. This funding will allow for a fourth year of outreach, to capitalize on relationships that have been slowly built and nourished over three years under a 319 nonpoint source program grant.

Notes: New Project; funds will support implementation of existing watershed protection plans and other watershed-based plans.

M&R Project Summaries

1.

Project Title: Galveston Bay Oyster Microplastics: Baselines and Impacts

Project Lead: Texas A&M University at Galveston

Proposed Funding: \$90,427 (Federal)

Project Description: The project proposal aims to quantify (per gram of living tissue) types and amounts of microplastics in Galveston Bay oysters. Researchers will concurrently sample surface water for microplastics to determine whether oysters are selectively filtering or retaining certain types. Project researchers will also examine

variation across major bay regions, as well as any relationship between microplastics loads and oyster physiological condition. Researchers will coordinate with other GBEP project leaders to align sampling locations so that findings can be linked spatially.

Notes: New Project; the project will leverage existing GBEP funded tributary sampling results by examining spatial relationships between United States Geological Survey findings of loading patterns in tributaries and downstream locations with higher or lower microplastic loads in oyster tissue. The project also leverages existing research equipment (boats, FTIR, ventilation systems, high-resolution microscopes) at Texas A&M University at Galveston.

2.

Project Title: The Effect of Microplastic on the Base of Marine Food Webs

Project Lead: Texas A&M University at Galveston

Proposed Funding: \$37,000 (Federal)

Project Description: The project proposal aims to 1) investigate how microplastic exposure affects physiological and swimming performance in filter-feeding (clupeid) fishes (this study = gulf menhaden and bay anchovies), and 2) investigate the trend of plastic accumulation in filter-feeding fishes in Galveston Bay over the last 77 years using a Galveston Bay specific collection at TAMU. Clupeid fishes hold importance at the base of marine food webs and are particularly susceptible to microplastic pollution due to their feeding mode.

Notes: New Project; the project will leverage existing research equipment (swim tunnel respirometer) at Texas A&M University at Galveston, as well as an existing collection of Galveston Bay fishes spanning 77 years.

3.

Project Title: The Distribution, Fate, and Transport of Emerging Contaminants in Galveston Bay

Project Lead: Texas A&M University

Proposed Funding: \$98,428 (Federal; \$48,879 in FY2021 and \$49,549 in FY2022)

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 Galveston Bay water and sediment. The project will extend a currently funded quarterly time series beginning in June 2017 to five years.

Notes: New Project; the project will leverage an existing quarterly time series data set beginning in June 2017.