

FISCAL YEAR 2014
ANNUAL WORK PLAN



A PROGRAM OF THE TCEQ

May 2013

FISCAL YEAR 2014 ANNUAL WORK PLAN
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LIST OF ACRONYMS

American Recovery and Reinvestment Act	ARRA
Bacteria Implementation Group	BIG
Coastal Impact and Assistance Program	CIAP
Clean Water Act	CWA
Comprehensive Conservation Management Plan	CCMP
Fats, Oils, and Grease	FOG
Galveston Bay Council	GBC
Galveston Bay Plan	The Plan
Galveston Bay Estuary Program	GBEP
Galveston Bay Foundation	GBF
Galveston Bay Information Center	GBIC
Gulf Intracoastal Waterway	GIWW
Government Performance and Results Act	GPRA
Houston-Galveston Area Council	H-GAC
Houston Ship Channel	HSC
Implementation Plan	I-Plan
Memoranda of Agreement	MOA
Monitoring and Research	M&R
National Marine Fisheries Service	NMFS
National Oceanic and Atmospheric Administration	NOAA
Natural Resources Conservation Service	NRCS
Natural Resource Uses	NRU
Nonpoint Source	NPS
On Site Sewerage Facilities	OSSF
Public Participation & Education	PPE
Quality Assurance Project Plan	QAPP
Request for Grant Applications	RFGA
Research Coordination Board	RCB
State Revolving Fund	SRF
Texas A & M University	TAMU
Texas A&M University Galveston	TAMUG
Texas Department of State Health Services	TDSHS
Total Maximum Daily Load	TMDL
Texas General Land Office	GLO
Texas Commission on Environmental Quality	TCEQ
Texas Parks and Wildlife Department	TPWD
Texas State Soil and Water Conservation Board	TSSWCB
U.S. Environmental Protection Agency	EPA
U.S. Fish and Wildlife Service	USFWS
United States Geological Survey Water Resources	USGS
Watershed Protection Plan	WPP
Water Quality Improvement Projects	WQIP
Water/Sediment Quality	WSQ

SECTION 1: PROGRAM OVERVIEW

Galveston Bay is the largest and one of the most productive estuaries in Texas and sits adjacent to one of the most heavily urban industrialized areas in the nation. The Galveston Bay Estuary Program (GBEP) service area encompasses 232 miles of estuarine shoreline along the upper Texas Coast and incorporates the 5-county area bordering Galveston Bay: Liberty, Chambers, Harris, Galveston and Brazoria counties.

GBEP was established in 1989 to provide comprehensive management of this vital resource. In 1990, GBEP began working with a diverse group of stakeholders to develop a comprehensive plan that would receive broad based support from and involvement by federal and state agencies with jurisdiction in Galveston Bay, industries and businesses, local government officials, commercial and recreational fisherman, conservation organizations, and citizens. In 1994, The Galveston Bay Plan (The Plan), the Comprehensive Conservation and Management Plan (CCMP), was complete, and in 1995 it was approved by the Governor of Texas and the U.S. Environmental Protection Agency (EPA) Administrator. This effort was jointly funded by the EPA and the Texas Commission on Environmental Quality (TCEQ).

The Plan identifies 82 action items to protect and restore the health and productivity of the estuary while supporting continued economic growth and public use of the Bay. GBEP received a grant from EPA to begin implementing The Plan in 1995. This grant ran from FY 1995-1999 and is now closed. Subsequent grants have run from FY 2000 – 2003, FY 2004 - FY 2007, FY 2008 – 2010, and FY 2011-2013. Over 200 implementation projects were initiated under these grants. This work plan outlines the first year of projects to be implemented in the sixth grant that will run from FY 2014 to FY 2016.

The Galveston Bay Estuary Program has received fifteen national awards for its partnerships and progress in implementing The Plan and preserving Galveston Bay.

PRE 2008 AWARDS

- Four awards from Coastal America (one in 1999, Clear Creek Habitat Restoration, using beneficial uses of dredge material, one in 2002 for Galveston Island State Park Habitat Restoration, one in 2003 for Habitat Restoration at Jumbile Cove, and one in 2005 for San Jacinto State Park),
- Recognition award from NASA for Galveston Bay Estuary restoration and five years of implementation,
- National Wetland Conservation Award for Delehide Cove Protection and Restoration from the U.S. Fish and Wildlife Service in 2006
- EPA Gulf of Mexico Program Gulf Guardian Partnership Award for the Brays Bayou Urban Wetlands project
- The Fisheries and Habitat Conservation Partnership award for the cumulative habitat conservation work on the part of the NRU Subcommittee
- Two EPA Gulf of Mexico Program Gulf Guardian Awards to GBEP partners, including an award in the non-profit category to SCENIC GALVESTON for the Virginia Point Coastal Preserve, which GBEP played an instrumental role, and an award in the individual category to Dick Benoit, a highly active local citizen.

FY 2008-PRESENT AWARDS

- EPA Gulf of Mexico Program awarded First Place Gulf Guardian Award in the Partnership category in for the East Bay Shoreline Protection Project
- The Department of Interior's Collaborative Conservation award for the East Bay Shoreline Protection Project
- EPA's Gulf of Mexico Program Gulf Guardian Partnership Award for North Deer Island
- Coastal America Partnership Award for North Deer Island Protection Project
- Coastal America Partnership Award for Savannah Oaks Conservation Project

SECTION 2: INTRODUCTION

GBEP, a special non-regulatory program of the TCEQ, is a partnership of local governments, business and industry, conservation organizations, bay user groups, and resources agencies, charged with implementing The Galveston Bay Plan, the Comprehensive Conservation Management Plan for Galveston Bay. GBEP is part of the Office of Water-Water Quality Planning Division. A Program Manager and staff of six located in the Houston-Galveston area directly oversee implementation. Program staff responsibilities are as follows.

- Acquire, manage, and disburse funds to implement specific actions in The Plan;
- Provide for coordination and communication among state and federal resource agencies for the many cross jurisdictional issues;
- Coordinate, monitor and track implementation activities of Plan Partners;
- Identify and communicate bay improvements to agencies, stakeholders, and the public;
- Conduct public outreach and education to increase awareness of Galveston Bay;
- Advocate conservation of the estuary; and,
- Maintain stakeholder involvement in the decision-making process through the Galveston Bay Council (GBC) and its subcommittees.



Picture: Diamondback Terrapin in West Bay – Taken by Lindsey Lippert

SECTION 2.1: GALVESTON BAY ESTUARY PROGRAM ORGANIZATIONAL STRUCTURE

The TCEQ's Galveston Bay Estuary Program has the primary responsibility for coordinating and administering the work plan. Program staff and job descriptions are described below.

Sarah P. Bernhardt, M.S., Ph.D., Program Manager, is responsible for overall implementation of The Galveston Bay Plan, including: securing and managing funds to support operations, staff, and projects; fostering stakeholder involvement to facilitate Plan implementation; managing program staff and operations to ensure efficient use of resources; and representing GBEP on national, state, and local boards and committees and at national and state conferences/events to garner federal and state support.

Lindsey Lippert, Natural Resource Uses (NRU) Coordinator, is responsible for coordinating implementation of Habitat, Species, Freshwater Inflows, Shoreline Management, and Spills and Dumping actions in The Plan; coordination of Invasive Species Workgroup and NRU subcommittee of the GBC; implementing specific projects to restore and protect habitat and manage and control invasive species; maintaining Government Performance and Report Act (GPRA) and EPA reporting; coordinating quality assurance, and also serves as the contracts specialist and grants coordinator for GBEP.

Steven R. Johnston, Monitoring and Research Coordinator, Water/Sediment Quality (WSQ) Coordinator, is responsible for coordinating implementation of storm water, wastewater, septic systems, seafood safety, and research actions in The Plan; coordinating the Regional Monitoring Program, including data management/reporting, and development and application of environmental indicators; facilitating the Monitoring/Research Subcommittee of the GBC; and researching, evaluating and reporting findings concerning scientific and technical issues impacting Plan implementation.

Cynthia Clevenger, Community Relations Specialist is responsible for building relationships and developing communication channels and dialogue with local government officials, private sector, and other outside organizations key to implementing The Plan. This position facilitates cross-sectoral learning of public relations and marketing activities for the Galveston Bay watershed; organizes and manages community relations events and the State of the Bay symposium; tracks emerging stakeholder community concerns/issues. In the absence of a Communications Coordinator these tasks are delegated to Ms. Clevenger: coordinates the Public Participation and Education (PPE) subcommittee; provides information to stakeholders, the general public and media; oversees the Galveston Bay Public Awareness campaign; promotes special events and projects; and website maintenance.

Mary Stiles, Education Coordinator and Outreach Support, handles GBEP exhibiting events, coordinates the K-Adult task force of the PPE subcommittee, maintains Program contacts database, conducts K-12 presentations, and supports general activities of the PPE Team and Subcommittee. She also handles purchasing and timekeeping.

Doretta G. Thomas, Administrative Assistant, is responsible for travel coordination, vehicle and equipment maintenance and repairs, mail, correspondence, office safety, and general administrative support for the Program Manager.

Vacant, Natural Resource Specialist

SECTION 2.2: FY 2013 GOALS AND ACCOMPLISHMENTS

GBEP partners made notable achievements in improving water quality, restoring wetlands, protecting unique habitats and educating the public in 2013. These achievements are highlighted in the following sections.

HABITAT & LANDSCAPE-LEVEL CONSERVATION: CREATING, RESTORING, & PROTECTING COASTAL HABITAT

Since 2000, GBEP and its partners created, protected, and enhanced 21,150 acres of important coastal habitats, leveraging approximately \$80,000,000 in local, industry, state, and federal contributions.

In FY 2013, GBEP protected and restored 1,775 acres of wetlands and coastal habitats, protected 1,750 linear feet of bay shoreline, and leveraged an additional \$676,000 in local, industry, state, and federal contributions. Through projects currently in progress, GBEP and partners will protect or restore an additional 5,000 acres of coastal habitat.

Activities included restoring wetlands at Starvation Gap and throughout West Bay, controlling Brazilian pepper tree and other invasive species on Galveston Island and at Armand Bayou Nature Center, and constructing rock breakwaters on Moses Lake. Through the NRU Subcommittee's coordination, the Dickinson Bayou Wetland Restoration Project was awarded a National Coastal Wetlands grant through the U.S. Fish and Wildlife Service, and a Coastal Management Program grant through the Texas General Land Office and National Oceanic and Atmospheric Administration (NOAA).

Although GBEP partnerships' habitat conservation efforts are bay-wide, focus has been given to West Bay. These combined, collective efforts in West Bay were highlighted in the President's 2011 Fifty-State America's Great Outdoors Report as one of the country's most promising projects. The report highlights initiatives in each state for conservation, recreation and reconnecting people to the outdoors.



Picture: Galveston Bay Council Members and TCEQ Deputy Executive Director Richard Hyde touring West Bay projects, October 2012 – Taken by Ericka McCauley

IMPROVING & PROTECTING WATER QUALITY: SUPPORTING CORE CLEAN WATER ACT PROGRAMS

In support of EPA's core Clean Water Act goals GBEP has worked to build capacity of local stakeholders through watershed protection planning (WPP) and implementation of water quality improvement projects (WQIP). Through this effort in coordination with other water programs of TCEQ and local stakeholders, 90% of impaired waters in the 5 county region surrounding Galveston Bay have some level of watershed protection or improvement being enacted.

Watershed Protection Plans

Bastrop Bayou

The Bastrop Bayou WPP has been sent to TCEQ for review. GBEP provided initial funding to complete a risk assessment of the watershed and supplied local match for the \$319 grant and staff support during the development of the WPP. Planning efforts have led to local support for the annual Trash Bash clean up; seeking of additional funds by the county and the local community of Demi John to resolve the community's chronically failing septic systems; and a donation of 300 acres of land along Bastrop Bayou by DOW Chemical. In 2013, watershed representatives continued to meet with GBEP to determine any GBEP resources needed to implement the plan.

Highland Bayou

The Watershed Characterization Report was completed in FY 2011 using \$275,000 of American Recovery and Reinvestment Act funds. Additional environmental data has been collected for this 5(c) waterbody in conjunction with the Clear River's Program; completion of a landscape analysis of non-point sources (NPS) of pollution; identified potentially failing septic systems; and completed one-on-one meetings with local planners and decision makers. In 2013, the project continued using \$320 funding to complete the first five elements and continue outreach efforts.

Dickinson Bayou

The Dickinson Bayou WPP is being revised due to EPA comments and the completion of the bacteria I-Plan. The Implementation-Plan (I-Plan) has been submitted to the TCEQ for comment and approval. GBEP supported the development of the WPP and provided staff support to develop the I-Plan. In 2013, watershed representatives continue to meet with GBEP to determine any GBEP resources needed to implement the plan.

Armand Bayou

The Armand Bayou Characterization Report was completed in 2005. In FY 2013 Armand Bayou Watershed Partnership, which GBEP is a partner and provides technical support, successfully became a non-profit and hired its first watershed coordinator. GBEP staff will be working with the partnership to apply for additional funding to complete the WPP and begin implementation.

Bacteria Implementation Plan

The Bacteria Implementation Group (BIG) I-Plan was completed in FY 2011 with staff support from GBEP. In 2013, the watershed coordinator continued to meet with GBEP to determine if any GBEP resources were needed to implement the plan.

Cedar Bayou

With suggestion from GBEP, the Houston-Galveston Area Council and Texas State Soil and Water Conservation Board (TSSWCB), using \$1.1 million in \$319 funding, commenced development of a WPP on Cedar Bayou in FY 2011. GBEP is providing matching funds and staff support for development of the WPP.

Double Bayou

The Double Bayou Watershed Characterization Report was completed in early FY 2012 using \$206,322 in FY 2014 Annual Work Plan
Galveston Bay Estuary Program

American Recovery and Reinvestment Act funds, \$50,000 from the Total Maximum Daily Load (TMDL) Program and \$12,000 from GBEP. Accomplishments include additional environmental data collected for this 5(c) waterbody; completion of a landscape analysis of non-point sources of pollution; and completed one on one meetings with local planners and decision makers. The project leads received funding from TSSWCB's §319 program for completing a WPP starting in FY2012. In 2013, the watershed representatives continued to meet with GBEP to determine if GBEP could assist with match support.

Water Quality Improvement Projects

Dickinson Bayou

Initial implementation of the Dickinson Bayou WPP has begun with a TCEQ §319 Program grant with support from GBEP. A rain garden was completed on June 4, 2011 at Dickinson City Library. The garden handles run-off from the 10,000 square foot roof. A ten acre storm water wetland was created within the Clear Falls Clear Creek Independent School District detention basin and completed on December 31, 2011. In FY 2013 the contractor continued to monitor the site, remove non-indigenous species, and plant additional species.

Clear Creek

The City of League City with encouragement from GBEP, sought a 2011 TCEQ §319 Program grant to control NPS pollution within the city limits. Through the million dollar grant and match from GBEP, League City will create a highly visible NPS best management feature park for residents, city staff and local developers. Additional tasks in FY 2014 will include reviewing existing city ordinances and establishing retrofit best management practice recommendations for established neighborhoods to control NPS run-off. The revised ordinances will also be used to encourage the use of NPS best management practices in new developments.

GBEP, Harris County and the Houston Advanced Research Center have partnered to use \$900,000 in Coastal Impact Assistance Program (CIAP) funding to preserve Clear Creek riparian habitat and protect water quality from future development. This project is still underway and is anticipated to be completed in 2014.

Armand Bayou

GBEP granted to the Environmental Institute of Houston \$544,000 to retrofit a detention pond, creating a 1.5 acre storm water wetland. The wetland was completed in August 2011 and treats run-off from 45 acres of buildings and parking lots on the University of Houston Clear Lake campus. Funding supported two years of monitoring before, during and after construction to provide important quality assured monitoring of the site. Monitoring will be completed in 2013 and all data will be provided to the public. In addition, the project once complete in FY 2013 evaluates the ability of treating water from Horsepen Bayou, an impaired tributary to Armand Bayou, pumped during dry weather through the storm water wetland by a solar pump.

Galveston and Brazoria Counties Storm Water Wetland

GBEP began in FY 2013 to establish a storm water wetland program in two counties which expect to double in population size by 2030. The program will work in concert with city and county governments to establish a storm water wetland program and technology transfer. The program will work through one-on-one meetings, technical workshops, establishment of a task force and funding assistance to create demonstration projects. The work will continue through FY 2015.

IMPROVING RESOURCE MANAGEMENT THROUGH TARGETED RESEARCH THAT INCREASES ECOSYSTEM UNDERSTANDING

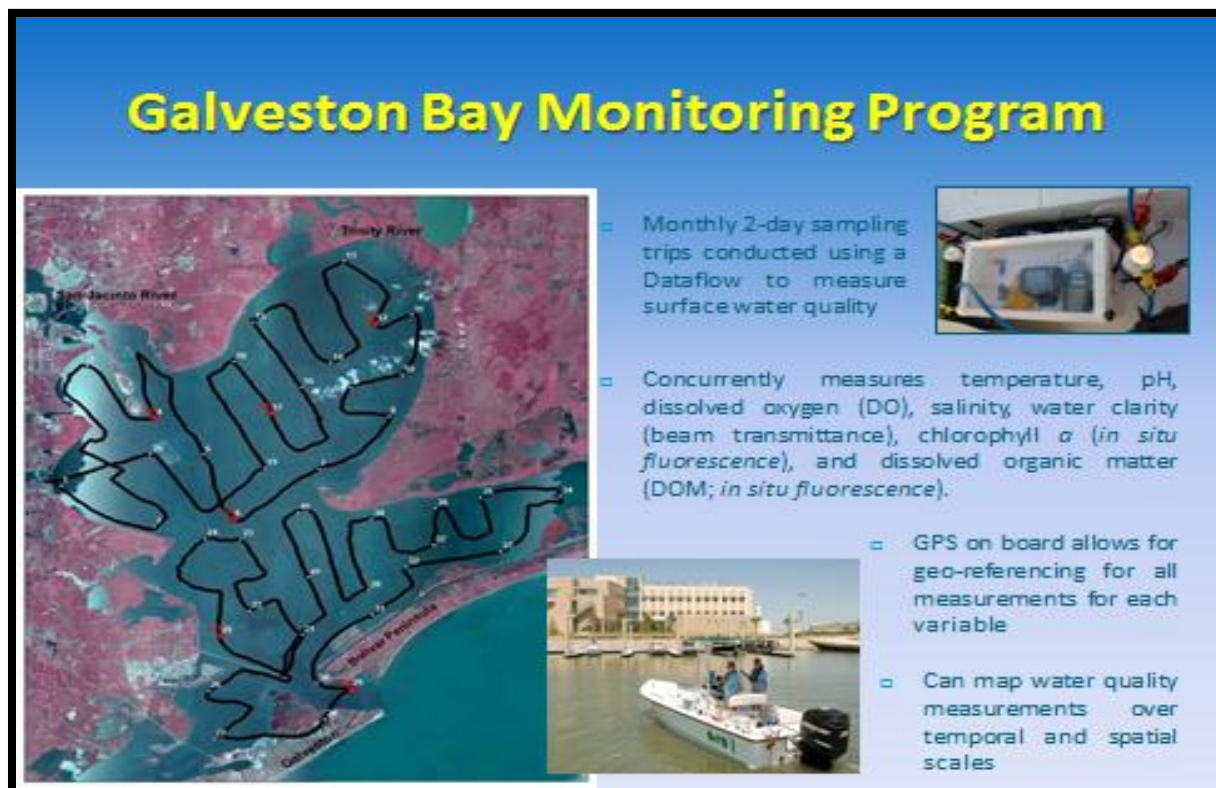
GBEP continues to focus on providing ecosystem based monitoring and research and encourage new information to inform resources managers through maintaining and updating a prioritized project spreadsheet. From this work projects such as the role of freshwater inflows on the bays plankton and sediment and nutrient loadings from the bays major rives have been funded. In addition, several projects that have been identified as knowledge gaps have received funding by Texas Sea Grant or the Coastal Management Program.

Plankton Response

Results are beginning to provide a more comprehensive understanding of the relationship between the fresh water pulsed inflow (frequency, magnitude, and mode) events and estuarine ecosystem health thus allowing state water managers to optimize diversions while minimizing impacts to estuarine health. FY 2011 and 2012 focused on responses by indicator species, *Rangia* and *Vallisneria*, to fresh water inflows. These species were hypothesized by members of the Galveston Bay-Bay and Basin Expert Science Team for use in establishing future environmental flow budgets. This project will be completed in 2013.

Sediment and Nutrient Loadings

This study is evaluating the variability of nutrient and sediment concentrations and loads entering Galveston Bay during a variety of flow conditions from freshwater inflows, including the Trinity River, San Jacinto River, and Buffalo Bayou. Crews are collecting samples at locations near the entrance into Galveston Bay. Samples are being collected for nutrients (total and fractions of Nitrogen and Phosphorus), and sediment (total suspended and size fractionation) concentration using USGS methods for an equal discharge increment. Discharge measurements are also being collected at the time of sampling. Samples are being collected over a period of time to adequately characterize the stream flow entering Galveston Bay with particular emphasis on high-flow conditions. The project will be completed in 2014.



Data Source: Dr. A. Quigg, Texas A&M University-Galveston

CONTINUE BUILDING REGIONAL SUPPORT FOR PUBLIC PARTICIPATION AND EDUCATION

The Public Participation and Education subcommittee continued supporting the Galveston Bay Public Awareness campaign in FY2013. Stakeholders identified fostering public support and building public stewardship on a large scale as the second highest priority for GBEP's Charting the Course to 2015: Galveston Bay Strategic Action Plan. To address this priority and to strategically build regional support for sustaining a healthy Galveston Bay, GBEP collaborated on bay-related, community-based initiatives; expanded partnerships with local governments; led discussions on bay-related and Gulf-related issues and concerns; and executed the only regional, partner-supported campaign to increase awareness of Galveston Bay. Examples of these activities include:

- Supported community-based events such as Trash Bash, Bay Day, Pearland July 4th Celebration, FeatherFest, and Ole Tyme Days in Liberty;
- Garnered support for the campaign with Houston-area businesses and conservation groups, and local governments in key watersheds: Dickinson, Cedar Bayou, and Armand Bayou;
- Partnered with a local news station;
- Tracked news related to ongoing issues such as freshwater inflows and beneficial use materials for dredging;
- Increased awareness of Galveston Bay and its value and behavior changes that help protect the bay through a coordinated, regionally implemented campaign;
- Revised and rebranded the Galveston Bay Drive and Discover guide for print and online.

Galveston Bay Public Awareness Campaign

GBEP implemented a public awareness, stakeholder-involved campaign to reinforce implementation of The Plan's priorities. The goals of the Galveston Bay Public Awareness and Education Campaign—called *Back the Bay*—are to build awareness of the value of Galveston Bay, and encourage and incentivize actions that support habitat conservation, water conservation, and water quality improvement.

In FY2012 the campaign had a combined 144 million impressions, the number of times people may have seen or heard about the campaign through web, television, print and outdoor advertising. Since the launch of the campaign advertising with local Houston area NBC television station KPRC Channel 2, our partnership with them has achieved the following: over 10 million impressions on the Justweather.com (KPRC Channel 2 website); and 4,150 click-thrus to BacktheBay.org. The fixed widget on the Weather home page delivered 55 percent of all the impressions, yet delivered 65 percent of all the click-thrus. Also, an estimated 1.8 million viewers ages 18 and older have seen the TV ads since March 26, 2012 through August 31, 2012.



In FY2013, the campaign was implemented on a regional level in all 5 counties adjacent to Galveston Bay including Brazoria, Chambers, Galveston, Harris and Liberty counties. Implementation initiatives include: continued partnerships with KPRC Channel 2, local governments, the Houston-Galveston Area Council (H-GAC), Galveston Bay Foundation, Armand Bayou Watershed Partnership, Artist Boat; and increasing awareness of Galveston Bay, its recreational activities, and positive behavior changes citizens can do at home.

The awareness campaign was awarded a \$1 million CIAP grant for the campaign to implement the habitat conservation module of the campaign. Initiatives for this module include developing a new print ad, TV spot and online presence focusing more on habitat conservation.

In April 2013, GBEP launched its 2013 partnership with KPRC Channel 2 and Click2Houston.com. GBEP began airing 7-second and 15-second television ads during weekly newscasts promoting resident's connection to Galveston Bay—a key campaign message—and the campaign brand, *Back the Bay*. GBEP also placed online advertisements on the Weather page of Click2Houston.com (KPRC Channel 2's website). These ads feature the value of Galveston Bay as well as residents' connection to the bay. Additionally, KPRC Channel 2 contributed a TV banner called a snipe that runs during specific NBC broadcast programs such as the Today Show, Tonight Show with Jay Leno, and Saturday Night Live.

New for the FY2013 media campaign implementation was the creation of 60 and 30 second radio spot. The public service announcement ran on four of Houston's popular radio stations from April 1, 2013 through August 2013.

Galveston Bay Drive and Discover Guide

In connection to the Public Awareness Campaign, GBEP partnered with the Galveston Bay Foundation and KPRC Channel 2 to revise and update the Galveston Bay Drive and Discover Guide. The guide is being developed for the web and a mobile app that is compatible with tablets and smartphones.

Trash Bash

In March 2013, GBEP coordinated the 20th Annual Trash Bash cleanup at Mason Park along Brays Bayou—a predominantly Spanish-speaking neighborhood, and one of 17 sites across the Houston-Galveston area. The event promotes environmental stewardship and encourages volunteers to do their part at home by properly disposing of trash, household chemicals, and pet waste.

Over 200 volunteers collected an estimated 2,020 lbs. of trash at Mason Park. Their efforts enabled 15 lbs. of materials to be recycled. Each year, Trash Bash meets or surpasses volunteer goals. In one day, volunteers from all over the Houston-Galveston area cleaned 163 miles of shoreline, collected approximately 98,745 lbs. of trash—including 477 tires—and recycled 5,700 lbs. of trash.



Picture: Back the Bay exhibit at a local event – Taken by EnviroMedia

FY 2013 LEVERAGING

EPA Funds to Program (Section 320)	Other Federal Funds (Role - Primary)	State Funds to Program (Role - Primary)	Local Government Funds to Program and In-Kind (Role-Primary)	Private to GBEP Projects & In-kind (Role - Significant)
\$597,333	\$1,404,000	\$920,000	\$272,000	\$0

FY 2013 TRAVEL AND TECH TRANSFER

Event, Location, Purpose	Staff Person	Amount
GLO Technical Advisory Committee, Galveston TX, Sept. 2012 -Discuss regional needs for restoration and conservation on the Texas coast.	Lindsey	\$15
Surface Water Quality Workshop, Corpus Christi TX, Dec. 2012 - Staff gave a presentation covering the Estuary Program and major initiatives including water quality, restoration, conservation, and public outreach campaign.	Steven	\$150
Watershed Protection Meeting, Columbus TX, March 2013 - Staff attended quarterly meeting to assist the Texas State Soil and Water Conservation Board coordinate watershed protection efforts in the coastal and east Texas region.	Steven	\$0
SeaGrant Advisory Board Meeting, Port Aransas TX, April 2013 - Staff assisted Texas Sea Grant develop research priorities and review grant proposal packages and applications.	Steven	\$30
RESTORE-Habitat Houston Meeting, Houston TX, May 2013 -Exchange ideas and discuss strategies for implementation of RESTORE funding in Texas	Lindsey	\$0
Trinity River Authority Clean Rivers Meeting, Arlington, April 2013 - Staff attended the Clean Rivers meeting to provide input on Estuary Program activities and to coordinate monitoring and research efforts along the Trinity River watershed.	Steven	\$150
Coastal Bend Bays and Estuary Program's Program Evaluation Site Visit by EPA, Corpus Christ, TX, May 2013 - New program manager participated as an observer during two days of the site visit.	Sarah	\$135
Total		\$480

SECTION 2.3 STRATEGIC ACTION PLAN GOALS TO FOCUS ON IN FY 2014

- Create, restore, and protect important coastal habitats.
- Reduce NPS pollutant loads through coordination with local watershed initiatives and implementing water quality improvement projects.
- Create a sense of personal ownership and shared responsibility among all cultural components of the community, including the public, industry and government.
- Ensure that stakeholders receive the knowledge necessary to act on GBEP's priorities in ways that benefit the bay and the entire community.

FY 2014 EXPECTED OUTCOMES

- Create, restore, and protect important coastal habitats.
- Increased coordination and more strategic implementation of water quality improvement activities in Armand Bayou, Double Bayou, Cedar Bayou, Highland Bayou, Clear Creek, and Dickinson Bayou watersheds.
- Increase technical transfer from demonstration projects with local governments concerning the value of storm water wetlands for improving storm water and assisting implementation of their NPDES permits.
- Inform and educate approximately 1.8 million adults and children and 4 local governments through presentations, exhibiting events, voluntary events, and the *Back the Bay* campaign.
- Continue to build a brand for Galveston Bay across the Houston-Galveston region through the implementation of *Back the Bay* campaign.
- Continue to elevate the prominence of Galveston Bay issues in the local media and the general public's ability to recall Galveston Bay issues through a targeted media blitz (public service announcements, paid advertisements, social media, and increased media coverage) in Brazoria, Chambers, Galveston, Harris and Liberty counties.

FY 2014 EXPECTED OUTPUTS

- Conserve and protect 500 acres of habitat.
- Restore and enhance 500 acres of habitat.
- Complete one draft WPP to be submitted to the EPA for review.
- Begin one water quality implementation project in Galveston or Brazoria County.
- Complete stormwater retrofit ordinance review and best management practice recommendation in League City, Texas.
- Facilitate one \$319 funded project and/or State Revolving Fund (SRF) proposal with a local government.
- Complete six presentations to bay user groups, civic groups, non-profit organizations and schools and provide exhibits at ten local events.
- Continue implementing the Galveston Bay Awareness and Education campaign.
- Develop and deliver ten televised and web-based environmental stories concerning Galveston Bay.

FY 2014 STATE AND FEDERAL FUNDING

The total cost of the FY 2014 work plan is \$1,024,000. Fifty percent (\$512,000) of the project cost is provided by federal funds; fifty percent (\$512,000) in match is being provided by TCEQ through general revenue. These figures exclude additional state and local funding.

DIVISION	AMOUNT	% OF TOTAL
Office of Water/GBEP	\$1,024,000	100%
Total	\$1,024,000	100%

Budget Detail- See Also Budget Worksheets (Page 19)	
Salaries (Includes Fringe and Indirect)	\$490,435
Travel	\$2,000
Capital	\$0
Supplies	\$1,008
Contracts	\$130,000
Other	\$400,577
Total	\$1,024,000

PROJECT SCHEDULE

The execution of the tasks associated with this work plan will occur over a 36-month period, which is anticipated to begin September 1, 2013, and end August 31, 2016. The exact start date of the work plan and all due dates for deliverables are contingent upon the actual date the grant funds are awarded and able to be contracted out.

The projects outlined in this work plan were developed by the Natural Resource Uses Subcommittee, Water and Sediment Quality Subcommittee, Monitoring Subcommittee, Public Participation and Education Subcommittee, and the Monitoring and Research Subcommittees, ranked by the Budget and Priorities Subcommittee, and submitted to the Galveston Bay Council for approval in April. The Council approved projects listed in this work plan at the April 24, 2013 quarterly meeting.

The project work plans will be submitted to TCEQ Quality Assurance Officer and EPA Project Officer for review to determine which projects in the work plan will require a Quality Assurance Project Plan (QAPP). Under the authority granted by EPA to TCEQ to approve QAPPs for GBEP, GBEP staff and their project partners will develop QAPPs for projects determined by TCEQ and EPA during the work plan review as requiring QAPPs. QAPPs will be developed in accordance with EPA QA/R-5.

SECTION 3: FY 2014 PROJECTS
SECTION 3.1: FY 2014 FEDERAL PROJECTS BY PROGRAM ELEMENT

PROJECT NAME	YEARS	FY 2014 BUDGET REQUEST			STATUS
		Federal	State Match	Total 2014 GBEP Budget	
Program Administration (Annual)	2014	\$246,721.50	\$246,721.50	\$493,443	Annual
GBEP Website	2014	\$758.50	\$758.50	\$1,517	Annual
ADMIN TOTAL				\$494,960	
<i>No Federally funded NRU Projects</i>	N/A	\$0	\$0	\$0	N/A
NRU TOTAL				\$0	
1. Galveston Bay Fats, Oil and Grease Campaign	2014-2015	\$25,000	\$25,000	\$50,000	New Project
2. Highland Bayou Watershed Protection Plan	2012-2015	\$50,000	\$50,000	\$100,000	Ongoing
WSQ TOTAL				\$150,000	
3. GB Public Awareness Campaign	2010-2015	\$65,000	\$65,000	\$130,000	Ongoing
4. Trash Bash 2014	2014	\$2,500	\$2,500	\$5,000	Annual
PPE TOTAL				\$135,000	
5. Status and Trends	2014-2015	\$25,000	\$25,000	\$50,000	New Project
6. Research and Monitoring Request for Grant Applications (RFGA)	2014-2015	\$97,020	\$97,020	\$194,040	New Project
M&R TOTAL				\$244,040	
FUNDING REQUEST GRANT TOTAL				\$1,024,000	

SECTION 3: FY 2014 PROJECTS

SECTION 3.2: FY 2014 FEDERAL PROJECT DESCRIPTIONS

3.2A - NRU Projects for FY 2014

No Federally Funded NRU Projects

3.2B - WSQ Projects for FY 2014

1. Galveston Bay Fats, Oil and Grease Campaign

CCMP Actions Implemented: WSQ-1,5,6; PS-2; PPE-3

Grantee/Contractor: Galveston Bay Foundation

FY14 Budget: \$50,000

Project Total: \$50,000

Milestones: upon signature to 05/31/2015

Project Period: 2014-2015

Status: This would be a new project in FY 2014.

Description: A region-wide community outreach campaign to reduce FOG (fats, oils and grease) from being deposited in the sewer system is needed in order to reduce bacteria loading into Galveston Bay from sanitary sewer overflows. Improper disposal of FOG in residential homes and apartment complexes by individuals can be a large contributor to the overall sanitary sewer overflow issue. For example, 54% of overflow reports from 2001 to 2011 were grease related in the Oyster Waters TMDL region alone. Preliminary discussions at the February 2013 Education and Outreach Roundtable at H-GAC identified that there is a need and interest in a regional approach to FOG outreach. The case can be made to consider FOG a NPS, particularly regarding single and multi-family residential areas, due to the widespread nature of the problem and difficulty tracking down FOG inputs from so many individual sources. The City of Dallas has developed a highly successful Cease the Grease outreach campaign and the Galveston Bay Foundation will spearhead the adoption of this campaign throughout the Upper Gulf Coast region in collaboration with the Oyster Waters I-Plan stakeholders and all of the regional watershed groups. Once established, all groups in the region (watershed groups, schools, municipalities, etc.) will be invited to tie into this campaign. In addition, GBF will partner with the *Back the Bay* campaign to promote the outreach materials.

Outputs/Products: Public outreach campaign, materials, and implementation tracking.

Outcomes

Short-term: FOG marketing and outreach materials.

Intermediate: Voluntary compliance tracking on the number of households the campaign reaches

Long Term: Fewer overflow reports.

Pressures (+/-): Decrease in the number of overflow reports and fewer impaired waterbodies.

2. Highland Bayou Watershed Protection Plan

CCMP Actions Implemented: WSQ-1,2,6,7; NPS-1,2,3,4,5,6,10,11,12,13,14; PS-1,2,5

Grantee/Contractor: TX AgriLife Extension

FY14 Budget: \$100,000

Project Total: \$475,000

Milestones: upon signature to 05/31/2015

Status: This is the third and final phase of the project which will complete the final four elements of the WPP. The first five elements were completed under the ARRA grant (\$275,000) and an additional \$100,000 grant from GBEP.

Description: This phase will result in the completion of the Highland/Marchand Bayou nine element WPP. The watershed covers five municipalities although Hitchcock, La Marque, and Bayou Vista together cover approximately 85% of the watershed. The grant funding opportunities opened by a WPP are motivating the communities to participate in the WPP process. One or more grant proposals will be identified and developed concurrently with the WPP, with the goal of having a workable application ready for submission. Potential ideas discussed include collection system repairs and upgrades, which are sorely needed in some neighborhoods and would likely having an impact on bacteria levels in the bayou. The communities may qualify for SRF funding. This project phase would also entail the implementation of programmatic efforts, like education and outreach.

Outputs/Products: Increase local stakeholder support and involvement; support core EPA Clean Water Act Programs; build capacity for areas to secure federal funding; identify conservation areas and priorities in support of future watershed based habitat conservation.

Outcomes

Short-term: Watershed Protection Plan

Intermediate: Implementation of Watershed Protection Plan

Long Term: Improved water quality

Pressures (+/-): Decreased pollutant loads

3.2C - PPE Projects for FY 2014

3. Galveston Bay Public Awareness and Education Campaign

CCMP Actions Implemented: All

Grantee/Contractor: EnviroMedia Social Marketing

FY 14 Budget: \$130,000 (GBEP) / \$350,000 (CIAP)

Total Budget: \$5,000,000

Milestones: upon signature to 08/31/2015

Project Period: 2014

Status: This project was initially approved by TCEQ and EPA for the FY 2008 work plan. Implementation is scalable and was designed to be carried out over several years with funding being added as it became available. The original contract was signed 2/3/10, and requires annual renewal amendments. Funding for bay-wide implementation (i.e., Brazoria, Galveston, Harris, Chambers and Liberty counties) began in September 2011 (FY 2012).

Description: GBEP developed a regional public stewardship campaign, called *Back the Bay*, to increase public awareness and education about Galveston Bay. The campaign offers a fun and interactive way for residents to learn about the benefits of, and their connection to, our region's most valuable natural resource. The campaign also features conservation tips that benefit the bay. The campaign will be used to reinforce implementation of The Plan's priorities. This specifically includes: watershed-based, water-quality-improvement initiatives; habitat conservation; and freshwater inflows.

The campaign is being implemented in a phased rollout through August 2015. The campaign is comprehensive in nature and includes two phases. The first phase started with a pre-research project (Summer 2010) and a pilot program project in a limited geographical region (Summer 2011) and post-pilot research (Summer 2011). These projects developed and tested campaign messages, as well as creative and other tactics, and a campaign plan. The second phase began Spring 2012, and expanded to the entire five-county region. In order to maximize awareness and effectiveness, the campaign will expand as quickly as the budget allows both geographically and in terms of the media mix.

Outputs/Products: In FY2014, the campaign will focus on a large media buy in both television and radio, and continuing with online, outdoor and print media. The campaign's effectiveness will again be tested with end of year research, and messaging, tactics, and creative will be adjusted as necessary.

Outcomes

Short-term: Increase awareness of bay's value among target audiences through a branding Galveston Bay, targeting media outlets to increase news coverage on the bay and its challenges

Intermediate: Identify desired behaviors for habitat preservation, increase in water quality and water consumption, identify barriers to desired behavior change in target audiences; continue to increase awareness of bay's value among target audiences through a branding Galveston Bay, targeting media outlets to increase news coverage on the bay and its challenges.

Long Term: Change behaviors of audiences that are associated with habitat loss, degraded water quality, and water consumption in appropriate-identified percentage of the Houston-Galveston area targeted audiences—those whose behavior change will affect the most positive change. (Percentage of behavior change—as well as type—and target audiences to be determined through extensive preliminary research before campaign implementation and throughout campaign implementation.)

Pressures (+/-): Ability to raise funds through FY 2015—the project end date and competing management priorities.

4. Trash Bash 2014

CCMP Actions Implemented: PPE-1, PPE-3, PPE-5, SD-5

Grantee/Contractor: Houston-Galveston Area Council

FY 14 Budget: \$1,500

Total Budget: TBD

Milestones: Upon approval thru 8/31/14

Project Period: 2014

Status: This is an annual project funded at various levels each year. TCEQ and EPA approved the project for the FY 13 work plan, and GBEP is proposing it again for FY 14.

Description: Trash Bash is a successful volunteer-based litter cleanup event that has been held at multiple sites in the Houston-Galveston area on an annual basis since 1994. The mission of Trash Bash is to "promote environmental stewardship of our watershed through public education by utilizing hands-on educational tools and by developing partnerships between environmental, governmental and private organizations." This grant's funds help promote and implement the Trash Bash 2014 by paying for items such as, but not limited to, supporting staff to coordinate activities with site leads and collect and share results, printing and postage of promotional materials and for acquiring supplies for the participating sites.

Outputs/Products: Final report including a copy of the press release, media advisory, a paid advertisement, number of trash bash sites, number of volunteers and hours, number of exhibitors, number of partners organizing the event, number of save-the-date cards mailed to potential participants, and a survey.

Outcomes

Short-term: Increase number of new participants by 10%; increase pounds of trash collected by 1%; increase pounds of materials recycled by 10%; increase awareness level of the connection between littering, how litter enters into our waterways, and the negative impacts it has on neighboring communities, fish and wildlife by 10% at one Trash Bash location (Mason Park); increase news coverage of the Trash Bash event and the harmful environmental impacts of littering on our area waterways by 10%; increase the dollar value of free publicity from the news coverage by 10%.

Intermediate: Increase awareness of behavior changes associated with litter prevention in a neighborhood located next to Mason Park.

Long Term: Increase awareness level of the connection between littering, how litter enters into our waterways, and the negative impacts it has on neighboring communities, fish and wildlife by 10% at all Trash Bash locations (Mason Park). Decrease the amount of trash flowing into area waterways through educating citizens on appropriate behavior changes i.e. do not litter in your neighborhood, along the roads, etc.

Pressures (+/-): Continued increase in the amount of trash flowing into area waterways from influxes in populations not familiar with the harmful environmental impacts of littering and disconnection with community pride associated with litter-free neighborhoods.

3.2D – M&R Projects for FY 2014

5. Status and Trends

CCMP Actions Implemented: All

Grantee/Contractor: TBD

FY 2014 Budget: \$50,000

Total Project Budget: TBD

Milestones: upon signature to 12/31/2014

Project period: 2014-2015

Status: Status and Trends is conducted annually and is needed to meet reporting requirements.

Description: A selected organization will be funded to continue GBEP's Status and Trends project. The organization will coordinate with the Houston Advanced Research Center to transfer the existing Status and Trends infrastructure; develop a QAPP; house and maintain the infrastructure according to quality assurance protocols; update the databases with the latest high quality data concerning water quality and quantity, habitat, wildlife, and other Galveston Bay related environmental, economic and social data; support and provide public access to the data via the internet; provide summary analysis for GBEP, GBC, GBC subcommittee, resource managers, local governments, universities, schools and the general public; and make presentations to interested organizations and associations, i.e. State of the Bay Symposium.

Outputs: Agency data acquired; databases updated; QAPP; website updated; presentations; and final report.

Outcomes

Short-term: Annual update of all state and federal environmental data.

Intermediate: Website maintained, improve, updated, and users tracked.

Long Term: Use of data and website by Estuary Program, stakeholders, researchers, decision makers, and the public.

Pressures (+/-): Loss of data and ability of access has been a long term concern that is eliminated by maintaining an annual Status and Trends project.

6. Research and Monitoring RFGA

CCMP Actions Implemented: RSC-2, 4

Grantee/Contractor: TBD

FY 2014 Budget: \$194,040

Total Project Budget: TBD

Milestones: upon signature to 12/31/2015

Project period: 2014-2015

Status: New Project in 2014. Potential projects would assist current research related to beneficial flows being carried out by Texas A&M University-Galveston (TAMUG) and efforts by other organizations to conduct ecosystem based modeling and economic valuation.

Description: The Research and Monitoring RFGA will implement the top four project areas identified and prioritized by the Research and Monitoring Subcommittee. One to three projects will be selected for funding base on the quality of submitted grant applications. Selected projects could use funds across multiple fiscal years. The top four project areas are: Beneficial Flows: Quality, Quantity, and Patterns; Fauna of Galveston Bay: Benthic, Nekton, and Colonial Waterbirds; Wetland Habitat Management; and Economic and Social Valuation of Galveston Bay Habitats.

Outputs: Data collected; peer reviewed articles; bibliography; analysis; presentations; and final report.

Outcomes

Short-term: One to three Galveston Bay ecosystem based research and monitoring projects being conducted.

Intermediate: Available data and supportable conclusions to be used by resource managers and future CCMP implementation and planning.

Long Term: Improved CCMP management of Galveston Bay

Pressures (+/-): RFGA provides an incentive for universities and research organizations to increase their efforts on researching Galveston Bay and supplementing Estuary Program funding with other sources, e.g. Coastal Management Program and Texas Sea Grant.

SECTION 4: FY 2014 GRANT BUDGET SPREADSHEET

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY		(c) FY: 2014		(d) As of Date: 08/06/13		
(a) GRANT TITLE: EPA-GBEP FY 2014 Grant		(e) Match: Fed.% 50%		State % 50%		
(b) USAS NO.: 900577		(f) Agency Fund: 1535				
(j) DIV #: 5400		(g) EPA Goal #				
(k) DIVISION: Water Quality Planning		2 (and 4)				
		(h) Strategy #				
		01-01-02				
		(i) PRG.ELEMENT NAME				
		Natural Resources Uses				
		(2) PRG.ELEMENT NAME				
		Water & Sediment Quality				
		(3) PRG.ELEMENT NAME				
		Public Part. & Education				
		(4) PRG.ELEMENT NAME				
		Monitoring & Research				
		(5) PRG.ELEMENT NAME				
		Administration				
		(6) PRG.ELEMENT NAME				
(l) EXPENSE ITEMS		(m) TOTAL COSTS				
Work Years: >>>>>>		1.00				
1-SALARIES: >>>>>>		328,908				
(Base Salary + Release)						
2-CONTRACTS: >>>>>>		130,000				
3-TRAVEL: >>>>>>		2,000				
4-OTHER: >>>>>>		400,557				
5-SUPPLIES: >>>>>>		1,008				
6-EQUIPMENT: >>>>>>						
7-CONSTRUCTION: >>>>>>						
SUBTOTAL		\$ 862,473				
(q) FRINGE: 21.77%		71,603				
(r) INDIRECT COST: 27.34%		89,923				
GRAND TOTAL		\$ 1,024,000				
(v) MATCH AMOUNTS BY PE:						
FEDERAL: >>>>>>		-				
DIRECT: >>>>>>		512,000				
INDIRECT: >>>>>>		-				
EXTERNAL: >>>>>>		-				
(w) TOTAL GRANT FUNDING		\$ 512,000				
(x) NOTES/COMMENTS:		See Budget Summary below for details.				

2014 GBEP Budget Summary	Program Element	Amount	Work Plan Page #
Salaries		\$ 328,908	
Salaries for staff members of GBEP	5	\$ 328,908	N/A
Contracts		\$ 130,000	
1. Galveston Bay Public Awareness Campaign	3	\$ 130,000	15
Travel		\$ 2,000	
1. Travel for Staff to attend ANEP Fall Meeting Destination: Mobile, AL -- Purpose: Tech Transfer Date: November 13-15, 2013	5	\$ 1,000	N/A
2. Travel for Staff to attend ANEP Spring Meeting Destination: TBD -- Purpose: Tech Transfer Date: TBD	5	\$ 1,000	N/A
Other		\$ 400,557	
1. Galveston Bay Fats, Oil and Grease Campaign	2	\$ 50,000	14
2. Highland Bayou Watershed Protection Plan	2	\$ 100,000	14
3. Trash Bash 2014	3	\$ 5,000	16
4. Status and Trends	4	\$ 50,000	5
5. Research and Monitoring Request for Grant Applications (RFGA)	4	\$ 194,040	6
6. GBEP Website Hosting	5	\$ 1,517	N/A
Supplies		\$ 1,008	
Toner Cartridges for Printers	5	\$ 808	N/A
Supplies for Outreach and Exhibits	5	\$ 200	N/A
Fringe and Indirect		\$ 161,527	
2014 Grant Total		\$ 1,024,000	

SECTION 5: FY 2014 STATE PROJECTS

SECTION 5.1: FY 2014 STATE PROJECTS BY PROGRAM ELEMENT

The projects outlined in this work plan were developed by the Natural Resource Uses Subcommittee, Water and Sediment Quality Subcommittee, Monitoring Subcommittee, Public Participation and Education Subcommittee, and the Monitoring and Research Subcommittees, ranked by the Budget and Priorities Subcommittee, and submitted to the Galveston Bay Council for approval in April. The Council approved projects listed in this work plan at the April 24, 2013 quarterly meeting. All amounts are dependent upon available state funding.

PROJECT NAME	YEARS	FY 2014 REQUEST	Total Project Cost
Administration	2014	\$30,000	Annual
ADMIN TOTAL		\$30,000	
1. Oyster Lake Shoreline Protection Phase II	2013-2015	\$80,000	Securing additional funding from CCA, USFWS
2. Sheldon Lake Wetland Restoration Phase IV	2013-2014	\$25,000	\$404K \$319 Grant secured
3. Greens Lake Shoreline Protection	2014-2015	\$30,000	Securing additional funding from NAWCA, USFWS
NRU TOTAL		\$135,000	
4. Cedar Bayou Watershed Protection Plan	2012-2015	\$82,000	\$1.2M \$319 Grant secured
WSQ TOTAL		\$82,000	
<i>No State-funded PPE Projects</i>	<i>N/A</i>	<i>\$0</i>	<i>N/A</i>
PPE TOTAL		\$0	
<i>No State-funded M&R Projects</i>	<i>N/A</i>	<i>\$0</i>	<i>N/A</i>
M&R TOTAL		\$0	
FY14 STATE TOTAL		\$247,000	

SECTION 5: FY 2014 STATE PROJECTS

SECTION 5.2: FY 2014 STATE PROJECT DESCRIPTIONS

5.2A - NRU Projects for FY 2014

1. Oyster Lake Shoreline Protection Project Phase II

CCMP Actions Implemented: HP-1, HP-5

Grantee/Contractor: Galveston Bay Foundation

FY14 Budget: \$80,000

Total Project Budget: TBD

Milestones: upon signature to 08/31/2015

Project period: 2014-2015



Status: New Project

Description: Oyster Lake is located at the western end of West Bay and is bounded on the northeast by the GIWW, the east by West Bay and by Bastrop Bay to the south. The property surrounding Oyster Lake is part of the Brazoria National Wildlife Refuge.

The shoreline that borders West Bay has experienced severe erosion and is close to breaching in some areas. Approximate shoreline losses on the West Bay border:

Since 1944, up to ~650' of loss on the West Bay side and ~150' from the Oyster Lake side.

Since 1995, up to ~175' of loss on the West Bay side and ~55' from the Oyster Lake side.

Currently, GBF, Brazoria National Wildlife Refuge, USFWS Coastal Program, and NOAA are working toward providing erosion protection on ~500 feet of the most severely eroded shoreline where there is immediate concern of a breach. Requested NRU funding would be used to provide erosion control measures along the remaining length of the shoreline (total shoreline length ~5,000').

Outputs/Products: Habitat acreage to be restored and/or protected is still being calculated as project details are refined.

2. Sheldon Lake Wetland Restoration Phase IV

CCMP Actions Implemented: HP-1, NPS-11, PPE-5

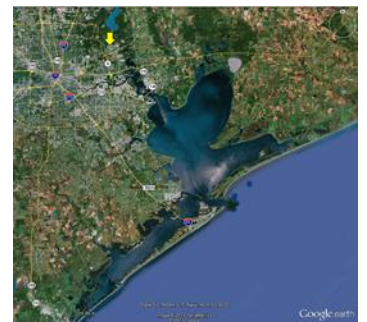
Grantee/Contractor: Texas AgriLife/Texas Coastal Watershed Program

FY14 Budget: \$25,000

Total Project Budget: \$833,453 (\$319)

Milestones: upon signature to 08/31/2015

Project period: 2014-2015



Status: Contract currently being initiated with available FY13 funding

Description: Sheldon Lake State Park & Environmental Learning Center is a 2,800 acre outdoor education and recreation facility located in northeast Harris County. The purpose of this grant is to support implementation of the Galveston Bay Plan by restoring approximately 57 acres of coastal prairie wetlands at Sheldon Lake State Park by utilizing innovative BMPs (restored ponds) to demonstrate cost-efficient water quality abatement through wetland restoration. The restoration of these wetlands will abate agricultural NPS

pollution while simultaneously engaging citizens in water resources management through direct involvement in wetland restoration.

Phase I of the Restoration project was an experiment to test the feasibility of re-excavating buried marsh topsoils. TCWP carefully removed fill material to expose the original wetland topsoil and restored hydrology to 10 acres of marsh within 100 acres of prairie, in 2004. The wetlands and surrounding uplands were planted with native vegetation. All excavated soils were used on-site or placed in upland areas within existing agricultural fields. Phase I of the restoration was successful and is now the template for regional wetland mitigation projects. As part of the on-going restoration and education effort, Phase 1 is visited by hundreds of Houston area students and citizens each year.

Phase 2 and 3 of the Sheldon Lake Wetland restoration were funded in 2010 and 2011, and completed in 2012. Phase 4 is the final segment of restoration for the park's southern management units. The completion of all 4 phases of this project will have measurable impacts on the water quality of Carpenter's Bayou and the receiving water bodies. Very importantly, a significant piece of habitat critical to this region will have been restored.

Outputs/Products: Restoration of 57 acres of coastal prairie habitat.

3. Greens Lake Shoreline Protection Project

CCMP Actions Implemented: HP-1, HP-9, SP-1, NPS-1

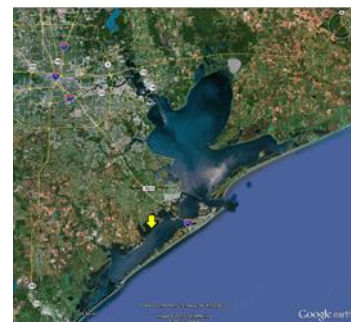
Grantee/Contractor: Ducks Unlimited

FY14 Budget: \$30,000

Total Project Budget: TBD

Milestones: upon signature to 08/31/2015

Project period: 2014-2015



Status: New Project

Description: The large, native marsh tract north of the Gulf Intracoastal Waterway (GIWW) between the outlets of Greens and Carancahua Lakes is more than 1,500 acres in size, and remains one of the largest and most intact marsh tracts in the western half of the Galveston Bay system. Prior to the 1960's, this marsh tract was primarily fresh to brackish in nature and had several large, open flats heavily used by wintering and breeding waterbirds. The intertidal habitats and the native mid-to-high marsh areas at the site continue to provide resources for waterfowl, shorebirds, wading birds, and other waterbirds. However, marsh loss and degradation due to erosion and saltwater intrusion is reducing the site's wildlife benefits.

Shoreline protection along the entire northern GIWW shoreline between the mouths of Greens and Carancahua Lakes is necessary to protect this important marsh tract from further loss and degradation. The location adjacent to the GIWW should make construction of such a linear bank protection project cost-effective. A permanent, breakwater structure similar to those along McFaddin National Wildlife Refuge and J.D. Murphree and Mad Island Wildlife Management Areas would be built to stop erosive wave forces, and reduce shoreline loss and marsh degradation. Under Phase 1 activities, Ducks Unlimited will provide engineering, permitting and cost estimation support to the West Galveston Bay Landowners Association for implementing the proposed project. A subsequent Phase for construction will begin once regulatory authorization and adequate funds are secured.

Outputs/Products: Habitat Acres to be restored and/or protected is still being calculated as project details are refined.

5.2B - WSQ Projects for FY 2014

4. Cedar Bayou Watershed Protection Plan

CCMP Actions Implemented: WSQ-1,2,6,7; NPS-1,2,3,4,5,6,10,11,12,13,14; PS-1,2,5

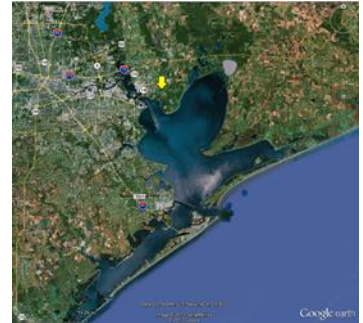
Grantee/Contractor: Houston-Galveston Area Council

FY14 Budget: \$82,000

Project Total: \$1,157,856

Milestones: upon signature to 05/31/2015

Project Period: 2012-2015



Status: GBEP provided \$90,000 in FY2012 to be used as match. Additional funding will complete the need match and the WPP.

Description: This project is developing a WPP for the entire 200 square mile Cedar Bayou Watershed in Harris, Liberty and Chambers Counties. This bayou is listed as impaired or has concerns for Bacteria, Dissolved Oxygen, Macrobenthic communities, polychlorinated biphenyls (PCB's) and Dioxins. \$130,000 is requested in FY 2014 as partial match for an existing \$319 grant from the TSSWCB, with H-GAC as the facilitating entity. The project initiated in October, 2010 and will run through September of 2014. H-GAC will leverage its regional contacts and resources to make efficient use of grant and match funding in facilitating a local stakeholders group to address these and other water quality issues. There is significant existing local interest among local community groups and governments.

Outputs/Products: Increase local stakeholder support and involvement; support core EPA Clean Water Act Programs; build capacity for areas to secure federal funding; identify conservation areas and priorities in support of future watershed based habitat conservation.

5.2C - PPE Projects for FY 2014

No State-funded PPE Projects.

5.2D - M&R Projects for FY 2014

No State-funded M&R Projects.