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Spring 1996

A program of TNRCC/GLO

Bay Line Issue No. 23

Environmental Awards

Texas Governor Honors Winners



Cheers from the crowd greeted the arrival of wheelbarrows from Home Depot for Dee Owens (center of photo) and the "Bayou Posse" project.



Carole Baker of the Harris-Galveston Coastal Subsidence District give Dickinson fifth graders the latest word on water conservation.

Cheers for the winners resounded through the ball room of Austin's Hyatt Regency Hotel as the Governor's Awards for Environmental Excellence were presented this spring.

Governor George Bush named twelve small and large businesses, government agencies, farmers, and Texas school children as winners of the 1996 Governor's Awards for Environmental Excellence. Four of those twelve winning projects are in the Galveston Bay region, and two of those four have involved the staff of the Galveston Bay Estuary Program. Our region also produced 10 finalists.

More than 350 applicants sought recognition for environmental projects throughout the Lone Star State in this fourth year of the awards sponsored by Clean Texas 2000. Clean Texas is a program of the Texas Natural Resource Conservation Commission that promotes voluntary environmental action.

Governor Bush said, "The winners of the environmental excellence awards are great role models for Texas citizens, businesses, and local governments. They strive for a cleaner environment, not because of regulations coming from Washington or Austin, but because they care about Texas. The award winners have set an example of how to protect Texas' air, land, and water for our children and grandchildren."

TNRCC Chairman Barry McBee added praise for the winners. McBee said, "The winners have proved again this year that pollution prevention is good for the environment and makes economic sense for Texas."

(continued on page 2)

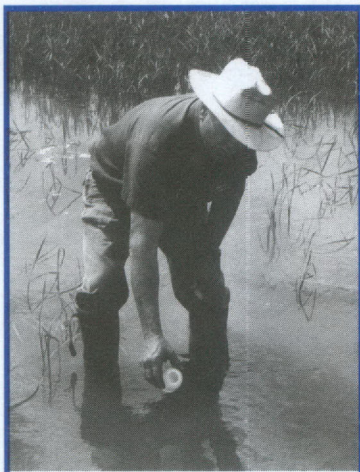
Environmental Projects Are Award Winners

(continued from page 1)

Winners from Region 12 of TNRCC are listed below:

Dee Owens, Houston, Individual. After a 1994 rain-storm turned Greens Bayou into a "floating garbage dump" behind her home, Owens made the cleanup of Houston's bayous her responsibility. She launched her effort by presenting a proposal to Harris County Commissioner Jim Fonteno and Senior Assistant County Attorney Terry O'Rourke. Taking an innovative approach, they trained county probationers as a cleanup team as part of court-ordered community service. The probationers dubbed themselves "The Bayou Posse," and a major project developed. The "Posse" has collected more than 9,000 bags of trash, 2,500 tires, and tons of other debris. Owens brought together more than 25 federal, state, and local agencies and organizations to make the cleanup a reality. The Galveston Bay Estuary Program has guided the education component of the "Posse" project for the 24 school districts in Harris County.

Harris-Galveston Coastal Subsidence District, Friendswood, Education. In 1993, the Subsidence District introduced a water conservation education project by working in partnership with public and private water suppliers and school districts. The District offers the "Learning to be Water Wise and Energy Efficient" program in 34 school districts around Galveston Bay. Along with an educational curriculum, each student receives a free kit with a low-flow showerhead, kitchen and bath aerators, and water conservation testing devices for installation at home. The district estimates the 40,000 fifth-graders who participated in 1995-1996 will save 62 million gallons of water and wastewater.



Billy Mann, Matagorda County rice farmer tests runoff for pesticides before it drains into area waterways.

Carole Baker, the subsidence district's public information officer, accepted the award. In 1995, the GBEP sponsored the



Amoco's "Responsible Care" program builds a partnership with the citizens of Texas City.

participation of 500 fifth-graders in the Dickinson ISD in this water conservation project.

Matagorda County Rice Committee, Bay City, Agriculture. In 1992, a committee of 15 Matagorda County rice farmers, agricultural professionals, and agribusinesses initiated a water quality testing program to determine interactions between agricultural chemicals and water management and their impact on the environment. From March to November every year, rice is planted on 300,000 acres of temporary wetlands along the Texas coast. Tail water from these fields flows into bays and estuaries. The committee works with local farmers to do voluntary testing of water entering and leaving the acreage. The Texas Agricultural Experiment Station at Beaumont analyzes their samples. The findings help protect the environment and cut fertilizer and pesticide costs to farmers. They share data at field days and rice clinics. The Matagorda County Rice Water Quality Project shows that we can protect the environment and improve the economy at the same time.

Amoco Chemical Company, Texas City, Large Business/Nontechnical. In 1991, Amoco adopted a "Responsible Care" program to reduce emissions and hazardous waste and become a leader in the community on environmental issues. To meet that goal, more than 3,000 Amoco employees work with seven school districts, 10 communities, five colleges and universities, and other industries and professional organizations. Amoco employees and 300 volunteers from other industries make door-to-door visits in the facility's neighborhood to pass out information telling citizens what to do in the event of a chemical emergency. During "Responsible Care Week" citizens visit the facility to get answers to their questions and to express their concerns. In 1995, Amoco employees served on the Texas Recycles Day Executive Steering Committee. For Earth Day '96, Amoco employees

NOTES FROM THE DIRECTOR

Implementation of Galveston Bay Plan To Be Based on Cooperative Action

There's an old saw: *How does one eat an elephant? (One bite at a time).*



*Marilyn D.
Browning*

Now we might ask: How does one tackle a Comprehensive Conservation and Management Plan? (The same way!). The important thing is to *do it*.

The Galveston Bay National Estuary Program (GBNEP) provided a strong history of energy and consensus to build upon. Representation and input from a wide array of bay stakeholders helped formulate *The Galveston Bay Plan*. Implementation of *The Plan* will follow that example. Once again

we have the opportunity to reap the benefits of coordination, cooperation and collective energy.

The first meeting of the Galveston Bay Estuary Program's advisory committee, the Galveston Bay Council, was held in November with subsequent meetings in April and May. Membership on the Council represents many facets of bay interest (See story, Page 8) and the public is invited to all sessions. They have now formed subcommittees structured to parallel the main components of *The Galveston Bay Plan*, put plans for the Third State of the Bay Symposium in the works, and begun the business of guidance on the actual projects to improve the condition of the bay system.

I am delighted to be a part of this ambitious process, and hope everyone will join us in making this phase of our estuarine journey a success (one bite at a time). ♦

Marilyn D. Browning

were among the more than 800 volunteers who cleaned up the 5-mile Texas City Dike. "We believe our greatest resource is our employees and that Amoco is personally responsible for preventing pollution," said Ben Hernandez, the facility's "Responsible Care" coordinator. Amoco/Texas City, is a Clean Industries 2000 member.

Finalists from the Bay Area

- ★ Big 8 Resource Conservation & Development Area/Chicken Manure & Wastepaper Feasibility Study, Bryan (Agriculture)
- ★ Galveston Bay Foundation/Clear Lake Marsh Restoration Project, Webster (Civic/Nonprofit Organization)
- ★ The Nature Conservancy/Texas Mid-Coast Habitat, Collegeport (Civic/Nonprofit Organization)
- ★ Harris County/Inmate Recycling Program, Houston (Government)
- ★ Ben Hernandez/Promoting Environmentalism, Texas City (Individual)
- ★ Houston Dow/Community Outreach Committee/Houston (Large Business/Nontechnical)
- ★ Amoco-Chocolate Bayou Plan/Air Emission & Hazardous Waste Reduction, Alvin (Large Business/Technical)
- ★ Ecogas Corp/Garbagas to ECOGAS Project Site, Rosenberg (Small Business)
- ★ Waste Reduction Systems, Inc./WRS/DOW Household Hazardous Waste Materials Day, Houston (Small Business)
- ★ HATS, Lisa Collins, Aloe Elementary HATS: Back Home on the Range, Victoria (Youth) ♦

MAKING WAVES: GBEP News Briefs

Browning Brings Wide-Ranging Experience to GBEP Management

Expertise in business management, environmental policy development and the legal ramifications of environmental law characterize the experience that Marilyn D. Browning brings to the Galveston Bay Estuary Program.

Browning, who became Director of the GBEP on February 1, came to the Program from the Greater Houston Partnership (GHP) where she held the position of Director of Environmental Affairs. In that capacity she served as an advocate on behalf of environmental committees and subcommittees on air, water, waste, wetlands, and cross-media issues for the GHP's Chamber of Commerce Division.

Randall Wilburn, Director of the Water Planning and Assessment Division of TNRCC, said, "I am pleased to have someone in this position who is familiar with the people of the area and the issues that concern them, and who can build the bridges between the partners in the business and environmental communities. Marilyn brings those strengths to this program."

For the past four years, Browning's role with the Partnership involved shaping consensus positions on environmental policy and influencing

public opinion, regulation and legislation toward those policy positions. During that time she worked on environmental issues with the TNRCC and its predecessor agencies, the Texas Water Commission and the Texas Air Control Board.

Her previous involvement with TNRCC also includes serving on Task Force 21 and as a Clean Texas 2000

★ Washington D.C. was the site of a "Working for Wetlands" Conference attended by Cynthia Jennings and Judy Fox-Barrett in April. This national meeting served as a celebration of the 25th anniversary of the signing of the Ramsar Conventions on wetlands of international importance and to launch American Wetlands Month '96 being celebrated in May. The meeting was hosted by eleven public/private sector agencies and organizations.

★ GBEP staff members Helen Drummond, Cynthia Jennings and M.A. Bengtson attended the recent Renew American's Environmentally Sustainable Communities National Town Meeting hosted in Houston by Tenneco and Shell Oil. This meeting was also attended by Jim Kachtick, chair of the Galveston Bay Council.

★ The Program's Outreach staff, Judy Fox-Barrett and M.A. Bengtson, joined TNRCC's Region 12 in participating in local 1996 Earth Day celebrations. GBEP Outreach took part in three events: the Water Festival held at Jesse Jones County Park in Northeast Harris County, a NASA employee event at Johnson Space Center in Clear Lake, and joint-ventured science classes on nonpoint source pollution for 500 students at McAdams Junior High School in Dickinson with Dickinson Beautiful's annual Earth Week celebration.

sponsor. In addition, she has been active in the Galveston Bay Foundation, the annual Bay Day Festival, Regional Air Quality Planning Committee, Employer Trip Reduction Advisory, Vehicle Inspection and Maintenance Outreach Advisory, Mickey Leland Urban Air Toxics Center (Board Secretary), and the Houston Corporate Recycling Council (Advisory Board).

Prior to her association with the Greater Houston Partnership, Browning was Assistant General Counsel for the Chemical Manufacturer's Association in Washington, D.C.

Browning is a graduate of the University of Illinois and the International Law Program, Paris, France. She received her Juris Doctorate from IIT Chicago Kent College of Law. ❖

Interior Secretary Babbitt Lauds Galveston Bay Plan For Estuary

Excerpts from *Houston Chronicle* article of Thursday, February 8, 1996, by Bill Dawson.

Interior Secretary Bruce Babbitt said here Wednesday a cooperative plan to protect Galveston Bay is a national model.

At a windy bayside ceremony in La Porte's Sylvan Beach Park, Babbitt said the Galveston Bay Plan – a consensus document embraced by industry and environmentalists alike – is a strong argument against “defeatists” . . . who say environmental protection and economic development are not compatible.

At the park ceremony, Babbitt participated in what he calls a “show-and-tell” session about Galveston Bay's environmental progress.

He met with La Porte High School students involved in a volunteer program of the private Galveston Bay Foundation to monitor water quality, and heard brief speeches by U.S. Rep. Ken Bentsen, D-Houston, a scientist, an environmentalist, an industry official and others.

Robert McFarland, a biologist, said Buffalo Bayou, which flows into Galveston Bay, was described as “just plain sewer water” in the late 1960s but there has been “tremendous progress” since then in clean-

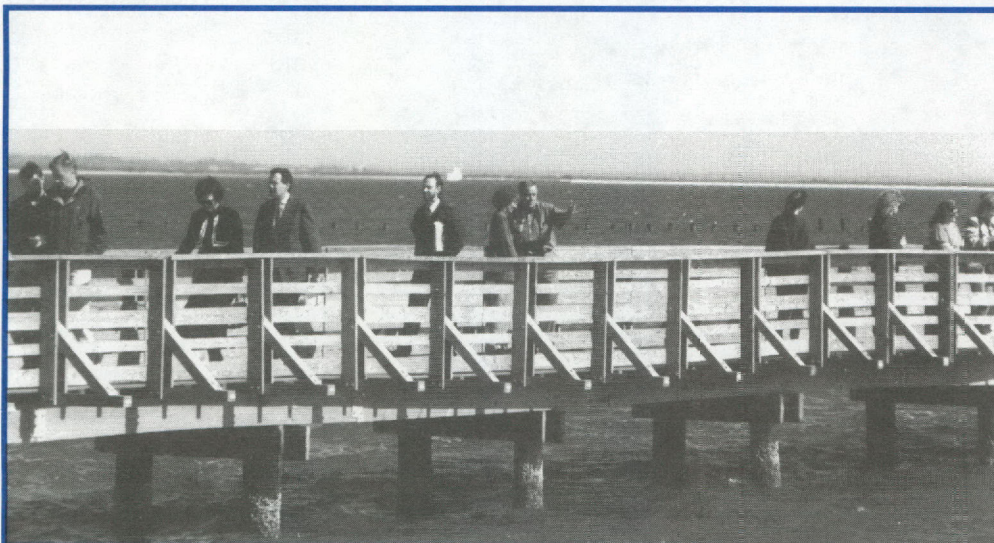


Galveston Bay Estuary Program Director Marilyn Browning and Galveston Bay Foundation Executive Director Linda Shead meet Secretary of the Interior Bruce Babbitt at the Sylvan Beach County Park event touting The Galveston Bay Plan.

ing up the bayou and the bay – “all because of the Clean Water Act.”

McFarland headed the science committee of the state-federal program [the Galveston Bay National Estuary Program] that developed the Galveston Bay Plan over five years. ♦

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Secretary Babbitt was joined by U.S. Rep. Ken Bentsen of Houston and local citizens for a tour of the new fishing pier at Sylvan Beach and a meeting with La Porte High School students who participate in the TNRCC's Texas Watch Program as volunteer water monitors under the direction of the Galveston Bay Foundation.

A 220-Acre Marsh Atkinson Island By



AmeriCorps members based at Cedar Bayou at the Bayport Demonstration Marsh Project site at Atkinson Island



Plants raised at HL&P's Cedar Bayou location are transported to the BUG's demonstration marsh for planting

What is AmeriCorps?

AmeriCorps is a national service program that engages more than 20,000 Americans of diverse background in performing service that meets critical community needs in return for an educational award. This award may be used to pay for college tuition, job training or to pay back existing student loans. Most AmeriCorps projects depend upon cooperative relationships with states, local governments and private organizations. The AmeriCorps-Galveston Project received financial support from the Port of Houston Authority and use of the physical facilities at Cedar Bayou were provided by Houston Lighting & Power Company.

The USDA/AmeriCorps-Galveston Project's focus is on restoring wetland habitats. The restoration of wetlands in the Galveston Bay system has been identified as a priority by the Galveston Bay Estuary Program. Apart from the BUG island, wetland restoration project sites in the Galveston Bay system include: Anahuac National Wildlife Refuge, Wallisville Corps of Engineers Site, Coastal Preserves-Christmas Bay, Morgan's Point, Clear Creek, Taylor Bayou, Armand Bayou and Trinity Bay.

An island paradise is being built in Galveston Bay, but it is not being designed with lavish hotels, four-star restaurants or posh gambling casinos in mind. What this isolated island paradise will include is: hundreds of feet of wide sandy beaches, yards of oozing mud flats, acres of smooth cordgrass, large shallow ponds and long meandering tidal streams.

This island might not be your idea of the perfect place to spend a cold winter, or to build a home and raise your children, but it is just that to a wide variety of wildlife that makes Galveston Bay their home.

This island is being built on the east side of Atkinson Island as a marsh demonstration project using large scale cutter head dredging equipment similar to the equipment likely to be utilized for the proposed Houston-Galveston Navigation Channels (HGNC), Texas Project. The Port of Houston Authority engaged the services of The Joint Venture of Turner, Collie and Braden, Inc., and Gahagan & Bryant Associates, Inc., to implement this demonstration project. In the past, dredged material was disposed of at upland sites or by an open-bay disposal method. Using dredged material as a resource instead of waste to create, restore or renourish wetlands is revolutionizing the entire dredging process in the Galveston Bay system.

In order to address environmental concerns associated with a deepening and widening of the HGNC, the innovative Interagency Coordination Team (ICT) was established by the U.S. Army Corps of Engineers (Corps). The Beneficial Uses Group (BUG) was created in early 1990 as a subcommittee of the ICT with the specific task of evaluating possible beneficial uses of dredged material and incorporating them into a dredged material placement plan for the HGNC. In cooperation with the Port of Houston Authority, a local pioneer in marsh restoration and a member of the BUG, Eddie Seidensticker, agreed to supervise the establishment of vegetation on the newly-created 220 acres. Seidensticker is a Resource Conservationist with USDA/Natural Resources Conservation Service.

Photos Courtesy of USDA/AmeriCorps

Is Created At

Nancy L. Webb , AmeriCorps Project

In the past, the majority of marsh restoration/creation projects in the Galveston Bay system have been small and relied on transplanting plants from native stands. A 220-acre site required more inventive measures. With the assistance of a USDA/AmeriCorps Team-Galveston Bay, the necessary plants were cultivated from seed at Houston Lighting & Power's Natural Resource Center located at the Cedar Bayou Generating Plant. The use of different nursery techniques and planting densities is also being explored for future marsh creation projects generated by the expansion of the HGNC.

(Ms. Webb, a biologist, was the Assistant Project Director for the AmeriCorps Project based at the Houston Lighting & Power Plant at Cedar Bayou.)

Before construction of the marsh began, the sediments were tested for contamination. The material in the Bayport Channel Flare was tested and approved through the Corps testing process (chemical, bioassay and bioaccumulation) for use in beneficial uses such as marsh creation. Monitoring and management of this project is scheduled to continue into the future.

The BUG Marsh Demonstration began with the construction of the containment levees in April and May 1993. The levee material was previously undredged Pleistocene sediments which were laid down at the end of the last Ice Age. The interior of the island was filled in June of 1993. For sixteen days, material dredged from a scheduled routine maintenance dredge of the Bayport Channel Flare was pumped into the retaining levee. The material went through a required desiccation period and was consolidated by early Fall 1994. Two tide gates were added to ensure the necessary ingress and egress of the bay waters across the marsh.

The marsh was primarily planted during the Spring and Summer of 1995 by the 20 AmeriCorps members using smooth cordgrass (*Spartina alterniflora*) and marsh hay (*Spartina patens*). The plants rapidly established themselves in the nourishing substrate. In fact, in areas planted with single sprigs in the Spring, there are now solid stands reaching heights of more than seven feet.

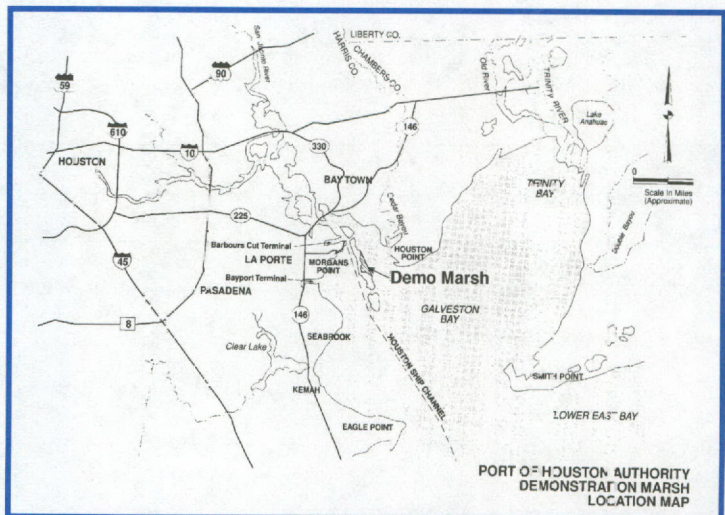
(continued on page 12)



A helicopter view after completion of the BUG island planting shows each one-acre square was planted with a variety of planting densities and cultivation types

Members of the BUG (Beneficial Uses Group):

- Dick Gorini, Chairman Port of Houston Authority
- Mike Jansky Environmental Protection Agency
- Phil Glass U.S. Fish and Wildlife Service
- Rusty Swafford National Marine Fisheries Service
- Andrew Sipocz Texas Parks & Wildlife Department
- Eddie Seidersticker Natural Resources Conservation Service
- Bill Grimes Texas General Land Office
- Martin Howland U.S. Army Corps of Engineers



Galveston Bay Council Charts Course

REQUEST: Consideration of a Resolution to establish and appoint the Galveston Bay Council as an advisory committee to the Galveston Bay Estuary Program of the Texas Natural Resource Conservation Commission

On November 16, 1995, the above resolution was approved unanimously by the commissioners of the Texas Natural Resource Conservation Commission (TNRCC) and the Galveston Bay Council (Council) officially came into being with 35 of the initial members being appointed.

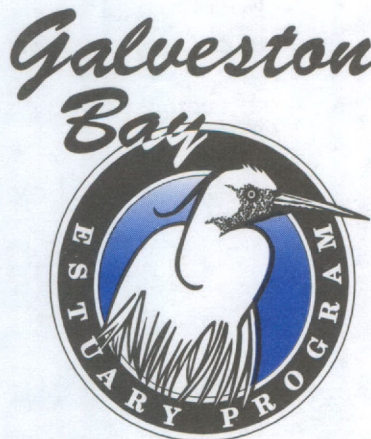
An organizational meeting was held November 30 to elect a chair and vice-chair and to begin the process of establishing an operational structure for the long-term guidance of the Galveston Bay Estuary Program (GBEP). Jim Kachtick, who represents the Greater Houston Partnership on the Council, was named Chairman, and Glenda Callaway, who represents the Galveston Bay Foundation, was elected to serve as Vice-Chair-

person. Both Kachtick and Callaway were members of the former GBNEP Management Committee.

The Council established subcommittees to begin drafting council by-laws and to nominate stakeholders to fill the remaining positions. TNRCC Commissioners on April 24, 1996 filled the remaining six vacancies on the Council.

The Council, now 41 members strong, continues the precedent set by the Galveston Bay National Estuary Program (GBNEP) of broad stakeholder representation. (See listing on next page). The mission of the Council is to function as an advisory body to the GBEP in its implementation of *The Galveston Bay Plan*, also known as the Comprehensive Conservation and Management Plan for Galveston Bay (CCMP).

Meetings of the Council were held in February, April and May and will be held quarterly hereafter. At these meetings they discussed the organizational processes and determined future agendas. All meetings are open to the public.



A program of TNRCC/GLO

GET INVOLVED

Yes! I would like to be involved in the Galveston Bay Estuary Program.

- Please put me on the mailing list for the Galveston Bay Estuary Program Information Letter "Bay Line" and other Galveston Bay information (Send to 711 W. Bay Area Blvd., Suite 210, Webster, TX 77598).

Name _____

Address _____

City _____ Zip _____

Daytime Phone Number _____ Evening Phone Number _____

I would like to help with special projects: _____

I am currently a member of these environmental, civic, or business organizations: _____

According to *The Galveston Bay Plan* the Council is to do the following:

- ✓ provide a forum for technical and stakeholder review and input during plan implementation,
- ✓ maintain agency commitments to implement *The Galveston Bay Plan*,
- ✓ advise TNRCC staff during preparation of progress reports, evaluations, and Plan updates
- ✓ authorize and make appointments to advisory committees as necessary,
- ✓ assess the success of the action plans and initiate revisions,
- ✓ address legislative issues and make recommendations to the legislature, and
- ✓ set annual priorities for the implementation of the action plan by advising the TNRCC.

The Council will also report its recommendations for implementation to the Texas General Land Office which provides funding and co-management of the Galveston Bay Estuary Program. The Council will provide a continuing focus on Galveston Bay issues and coordination among the implementing organizations. ❖

Bay Stakeholders Named to GBC

Federal Agencies:

U.S. Coast Guard	Lt. C. David Weimer
U.S. Army Corps of Engineers	Rick Medina
Environmental Protection Agency	William Hathaway
U.S. Fish and Wildlife Service	David L. Hankla
U.S. Geological Survey	Joseph D. Broadus
National Marine Fisheries Service	William B. Jackson
Natural Resources Conservation Service	Edward Seidensticker

State Agencies:

Texas Department of Agriculture	William Peacock III
Texas General Land Office	Sally S. Davenport
Texas Railroad Commission	Windle J. Taylor
Texas Department of Health	William W. Rosser, D.V.M.
Texas Department of Transportation	James G. Darden, P.E.
Texas Natural Resource Conservation Commission	Randall B. Wilburn
Texas Parks and Wildlife Department	Larry D. McKinney, Ph.D.
Texas Soil and Water Conservation Board	James M. Moore
Texas Water Development Board	Gary L. Powell

Regional/Local Governments:

Gulf Coast Waste Disposal Authority	Richard L. Brown
Houston-Galveston Area Council	Jack Steele
Port of Houston Authority	Richard Gorini
City of Houston	Teresa Battenfield, P.E.
Large Local Governments (populations >500,000)	Michael D. Talbot, P.E.
Medium Local Governments (populations 25,000-500,000)	Jackie Cole, D.V.M.
Small Local Governments (populations <25,000)	Honorable Mark Huddleston
Trinity River Authority	Richard M. Browning, Ph.D.
San Jacinto River Authority	William J. Moore

Environmental/Citizen's Groups:

Galveston Bay Foundation	Glenda L. Callaway
Gulf Coast Conservation Association	N. DeGraaf Adams III
Citizens-at-Large	Sharron L. Stewart

League of Women Voters	Mary Gillette
Low-Income Community Representative	Carol Alvarado
Minority Representative	Remi Adeogba Moore
Other Conservation Organizations	Sandra Hoover

Private Sector:

Greater Houston Partnership	James Kachtick, P.E.
Utilities	Edward A. Feith
Galveston County Council of Chambers	Cathy L.P. Palmer
Industry/Tourism	Mary Lee Huffman
East Harris County Manufacturer's Association	Malcolm L. Payne
Marinas	Kathy Machac
Commercial Fisheries	Don Reynolds

Research/Academics

Major Universities	Frank M. Fisher Jr., Ph.D.
Sea Grant Program	Julie Massey

GBEP STAFF

Marilyn Browning, Program Director
M.A. Bengtson, Assistant Program Director Team Leader, Outreach/Information
Judy Fox-Barrett, Outreach/Executive Assistant
Cynthia Jennings, Team Leader, Natural Resources Uses
Steven M. Anderson, Natural Resources Uses
Helen E. Drummond, Team Leader, Water/Sediment Quality
Thomas J. Byrom, Water/Sediment Quality
Carter Miska/Monitoring
Jeanette Belk, Administrative Support

Publication List of the Galveston Bay Program

The following publications are available to the public at no charge. You may obtain these at one of the offices listed below.

Galveston Bay Estuary Program

711 West Bay Area Boulevard
Suite 210
Webster, Texas 77598
Phone: 713-332-9937

Galveston Bay Information Center

Texas A&M University, Galveston
Jack K. Williams Library
P.O. Box 1675
Galveston, Texas 77553
Phone: 409-740-4703

Report Publication Series

Proceedings: Galveston Bay Characterization Workshop	Feb. 1991	GBNEP-6
Christmas Bay Environmental Inventory	Mar. 1991	GBNEP-7
Armand Bayou Environmental Inventory	Mar. 1991	GBNEP-8
Christmas Bay Regulatory Survey (out of print)	Mar. 1991	GBNEP-9
Armand Bayou Regulatory Survey (out of print)	Mar. 1991	GBNEP-10
Fiscal Year 1992 Work Plan	Aug. 1991	GBNEP-11
Shoreline Survey Unpermitted Discharges to Gal. Bay (out of print)	Aug. 1991	GBNEP-12
Armand Bayou Regulatory Effectiveness Study	Dec. 1991	GBNEP-13
Christmas Bay Regulatory Effectiveness Study	Dec. 1991	GBNEP-14
Characterization of Nonpoint Sources and Loadings (out of print)	Jun. 1992	GBNEP-15
Wetland Plant Communities, Gal. Bay System	Mar. 1992	GBNEP-16
Fiscal Year 1993 Work Plan	Aug. 1992	GBNEP-17
Segmentation Development for Gal. Bay	May 1992	GBNEP-18
Characterization of Selected Living Resources in Gal. Bay	Jun. 1992	GBNEP-19
Toxic Contaminant Characterization of Aquatic Organisms in Gal. Bay	Jul. 1992	GBNEP-20
Characterization of Selected Public Health Issues in Gal. Bay	Aug. 1992	GBNEP-21
Ambient Water and Sediment Quality of Gal. Bay	Aug. 1992	GBNEP-22
Proceedings: The Second State of the Bay Symposium - Feb. 4-6, 1993 (out of print)	Feb. 1993	GBNEP-23
Environmental Management Inventory of Gal. Bay	Oct. 1992	GBNEP-24
Recreational Fishery Ey-Catch in the Gal. Bay System	Nov. 1992	GBNEP-25
Galveston Bay Bibliography	Apr. 1993	GBNEP-26
Framework for Action: Galveston Bay Management Evaluation	Jan. 1993	GBNEP-27
Dredge and Fill Activities in Galveston Bay	Apr. 1993	GBNEP-28
Non-Fishing Human Induced Mortality of Fisheries Resources in Gal. Bay	May 1993	GBNEP-29
Sediment Quality Assessment Survey of Galveston Bay	May 1993	GBNEP-30
Trends and Status of Wetland and Aquatic Habitats in the Gal. Bay System	Apr. 1993	GBNEP-31
Fiscal Year 1994 Work Plan	Aug. 1993	GBNEP-32
Probable Causes of Trends in Selected Living Resources	Sept. 1993	GBNEP-33
Trawling Bycatch in the Galveston Bay System	Aug. 1993	GBNEP-34
Sources & Distribution of Bay Debris in the Galveston Bay Estuary	Aug. 1993	GBNEP-35
Point Source Loading Characterization of Galveston Bay	Sept. 1993	GBNEP-36
The Economic Value of Improving The Environmental Quality of Galveston Bay	Jun. 1994	GBNEP-38
The History of Galveston Bay Resource Utilization	Jan. 1993	GBNEP-39
Galveston Bay Data Inventory, Volumes I & II	Dec. 1991	GBNEP-40
Estimated Loadings of Partially Treated Domestic Wastewater on Galveston Bay	Oct. 1994	GBNEP-41
A Conceptual Model of the Galveston Bay Ecosystem	Oct. 1993	GBNEP-42
<i>The Galveston Bay Plan; A Comprehensive Conservation & Management Plan</i>	Oct. 1994	GBNEP-43
The State of the Bay: A Characterization of the Galveston Bay Ecosystem, is available at cost through the Greater Houston Partnership. (See page 11)	Mar. 1994	GBNEP-44
Regional Monitoring Program For <i>The Galveston Bay Plan</i>	Nov. 1994	GBNEP-45
Implementation Strategy For <i>The Galveston Bay Plan</i>	Nov. 1994	GBNEP-46
Funding Strategy For <i>The Galveston Bay Plan</i>	Nov. 1994	GBNEP-47
Federal Consistency Report For <i>The Galveston Bay Plan</i>	Nov. 1994	GBNEP-48

Videos

<i>Balancing Act (Armand Bayou and Christmas Bay)</i>	Oct. 1990
<i>Oyster Harvesting and Conservation in Galveston Bay</i>	Oct. 1991
<i>Conflicting Uses of Galveston Bay</i>	Oct. 1991
<i>Will Galveston Bay Go Down the Drain?</i>	Feb. 1994

Special Publications

Composting Wheels—an easy to use "wheel" with helpful information about home composting projects to enrich your lawn and garden without using chemicals that are hazardous to the environment.

GBP Publication Series Distribution

These libraries should have complete sets on file:

Bureau of Economic Geology Library,
The University of Texas at Austin

College of the Mainland Library
Texas City, Texas

The Fondren Library
Rice University, Houston, Texas

Texas & Local History Department
Houston Public Library

Life Sciences Library
The University of Texas at Austin

Marine Science Institute Library
The University of Texas at Austin

M.D. Anderson Library
The University of Houston Libraries

Medical Sciences Library
NASA-Johnson Space Center

Neumann Library
University of Houston—Clear Lake

Pasadena Public Library, Pasadena, Texas

Rosenberg Library, Galveston, Texas

Sterling C. Evans Library
Texas A&M University, College Station, Texas

Sterling Municipal Library, Baytown, Texas

School of Public Health Library
University of Texas Health Science Center, Houston

The following libraries began receiving GBNEP publications in January, 1993, and may not have complete sets. They will receive all future publications.

Brazoria County Library System libraries:
Main Library, Angleton, Texas
Alvin, Texas Branch Library
Pearland Branch Library

Brazosport College Library
Lake Jackson, Texas

Chambers County Library System, Main Library
Anahuac, Texas

Juanita Hargraves Memorial Branch Library
Winnie, Texas

West Chambers County Branch Library
Mont Belvieu, Texas

The State of the Bay: A Characterization of the Galveston Bay Ecosystem

Please send _____ copies to:

Name _____

Address _____

City State Zip Code _____

To order: Mail to Publication Sales at the Greater Houston Partnership,
2 Allen Center, 1200 Smith, Suite 700, Houston, Texas, 77002.

Mail order cost: \$23.82 (tax, postage and handling). Copies may also be
picked up at the GHP office main desk for \$18.94 (with tax).



**Phone number:
713/651-2104**

Creating A Marsh

(continued from Page 7)

It did not take long for the local wildlife to find the much needed habitat. The levees were built just in time for least terns and black skimmers to nest on the isolated stretches of bare sand. The dredged material pumped into the levee facilitated the growth of thousands of red polycheate worms, commonly known as blood worms. The worms were quickly discovered and then devoured by flocks of birds such as American avocets and Roseate spoonbills. The ingress and egress of bay waters brought in juvenile shrimp, crabs and fish that flourished in the hand-planted marsh. With their success came hordes of hungry herons, ibis and pelicans.

After seeing the diversity of wildlife attracted to the island, it is reassuring to know that dredged material, formerly considered a waste, can now be used to create wetlands in Galveston Bay. Ecosystems and the economics of our bay system depend on these estuarine emergent wetlands and their stands of smooth cordgrass for bird and fisheries habitat, water quality and erosion reduction and storm protection. ❖



Smooth cordgrass seeds harvested last fall were planted and grown at Cedar Bayou for trans-planting to new marsh projects.

Galveston Bay



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