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Galveston Bay

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Spring 1994

Galveston Bay Management Conference

Galveston Bay Plan Set for Public Hearings

On April 18, 1994, the Policy Committee, Chaired by Senator Rodney Ellis, released The Galveston Bay Plan for public review. The Galveston Bay Plan is a comprehensive management plan drafted by a partnership of state and federal agencies, industry, businesses, local governments, stakeholders, interest groups and the public. Over a five-year period, bay problems were agreed upon, numerous scientific studies conducted, and 82 management initiatives were established to address 17 specific problems. Following the public comment deadline on July 1, 1994, The Plan will be submitted to Governor Ann Richards of Texas and EPA Administrator Carol Browner.

What problems does The Galveston Bay Plan address?

The destruction of coastal wetlands and underwater seagrass meadows has been a substantial problem, with more than 30,000 wetland acres lost during four decades. These are productive nursery areas for the bay's seafood species, and also serve valuable functions to stabilize shorelines, moderate flooding, and remove contaminants. The Galveston Bay Plan proposes nineteen specific actions for habitat and fish and wildlife production. Initiatives include direct acquisition of wetlands, economic incentives (such as tax breaks) for conservation by private landowners, and habitat creation (such as utilizing dredged sediment from navigation channels to create wetlands). Efforts aimed at fish and wildlife protection include reduction of commercial fishing bycatch (incidental catch of



Senator Rodney Ellis and Governor Ann Richards discuss the future of Galveston Bay.

non-target species in shrimp trawls), catch and release programs for recreational fisheries, and controlling harmful exotic species that displace Galveston Bay's native fish and wildlife.

A variety of bay problems result from the way various users of the bay compete for its scarce resources. For

(continued on page 2)

Galveston Bay Plan

continued from page 1

example, diversions of freshwater for use by the expanding population alter circulation and salinity patterns in the bay, in turn affecting the abundance and distribution of fisheries species and the condition of coastal habitats. *The Galveston Bay Plan* will help determine freshwater needs for Galveston Bay in order to sustain ecological productivity in balance with human uses. Promoting water conservation and more efficient water usage are some of the tools that can be used to achieve these goals.



The loss of wetlands affects species habitat, and increases damage from flooding and erosion.



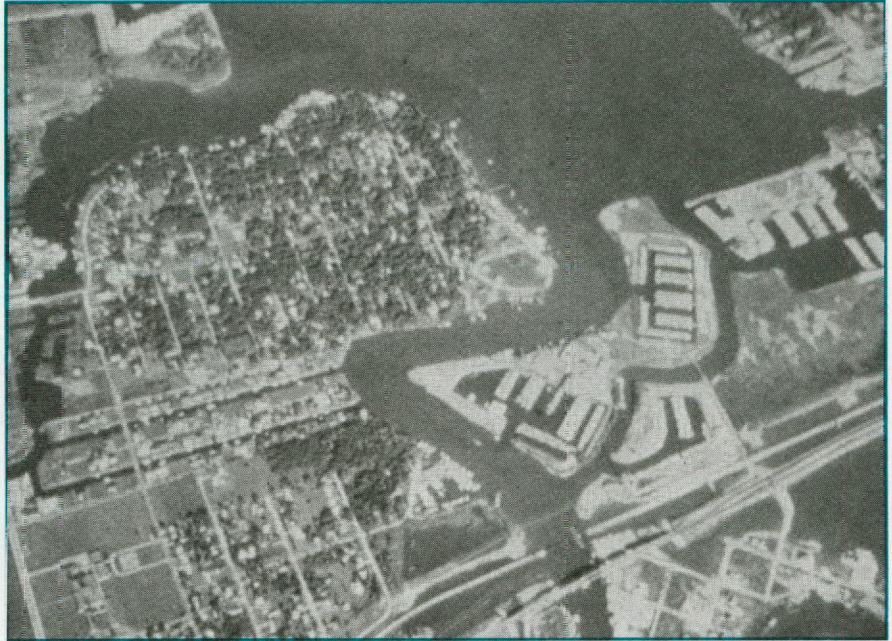
Wetlands provide vital habitats. Some heron species which use wetlands are in decline, an issue addressed by the Galveston Bay Plan.

Shoreline development also can produce unintended problems such as habitat alteration and destruction, pollution, and loss of fish and wildlife abundance and diversity. Nearly 650,000 people live within two miles of the bay's shoreline, with steady population growth intensifying the need for better planning. *The Galveston Bay Plan* proposes five shoreline management actions to ensure compatibility of shoreline uses. These actions include the establishment of guidelines for shoreline development for residential, commercial, and industrial uses. Local governments along the bay's shoreline should have the opportunity to voluntarily coordinate with other shoreline communities in maintaining the shoreline values that draw people to the area and contribute to local economies. Other actions include minimizing negative effects of structures on publicly-owned lands and ensuring improved access to publicly-owned shorelines.

Regulation of point sources of pollution has resulted in substantial improvement of water quality in the upper Houston Ship Channel. But despite this ongoing success, there are still concerns over "hot spots"—limited areas with pollution or contamination problems. Nonpoint sources of pollution are of particular concern, with over 50% of Galveston Bay permanently closed to oyster harvest due to fecal coliform bacteria contamination. *The Galveston Bay Plan* proposes sixteen specific actions to reduce water quality problems caused by non-point runoff. These actions include the implementation of stormwater management programs which focus on residential neighborhoods, septic tanks, new development and road construction, and industrial and agricultural activities. Other actions

would require treatment of wastes from boating and marina activities.

Other actions address aging sewage collection systems which create bypasses to the bay's tributary waters, improved monitoring, regionalization of smaller, less effective wastewater treatment systems, and elimination of harm associated with brine discharges from petroleum extraction. Several actions are designed to refine methods used by the state to determine allowable pollutant loadings for Galveston Bay and to ensure that pollutant discharges are regulated more effectively. Together, these actions are designed to assure balanced but protective public policy for the benefit of future generations of Texans.



With nearly 640,000 people living within two miles of the shore, shoreline development needs proper planning to curtail habitat loss, pollution and erosion.

How Will The Galveston Bay Plan be Implemented?

The Galveston Bay National Estuary Program recommends implementation as a program of the Texas Natural Resource Conservation Commission (TNRCC), with a Galveston Bay Office of the agency to be located in the bay area. Under this recommendation, the TNRCC will be advised by a *Galveston Bay Council* (GPC) composed of the agencies, stakeholders, and citizens involved in implementation. The Galveston Bay Council will provide a continuing focus on Galveston Bay issues and coordination among the implementing organizations. One element of this coordination will be assuring consistency among state and federal agencies involved in bay actions. This coordination will be enhanced by adoption of *The Galveston Bay Plan* as a Special Area Management Plan (SAMP) in the developing coast-wide Texas Coastal Management Plan.

Funding needs for the Galveston Bay Program will be \$2 million per year, of which half is earmarked as seed money to match funds from outside the bay region for *Plan* implementation. Of the \$2 million base program funding, \$1.5 million will be state funds and \$0.5 million federal. Beyond the base program, overall implementation of *The Galveston Bay Plan* is expected to cost some \$33.9 million over a five-year period, with annual costs dependent upon the specific implementation schedule outlined in this document. Funds to carry out *Plan* initiatives would be pursued through federal grants, public foundations and other private sources. A five-year cycle of plan evaluation and re-direction will assure implementation continues to effectively address problems in Galveston Bay.

To facilitate public review on *The Galveston Bay Plan*, nine public meetings are scheduled. Please see meeting schedule in this issue or call the Program Office at (713) 332-9937.

**REPORT
POLLUTION**
1-800-3
OUR BAY

Brazoria, Chambers, Galveston, Harris, and Liberty Counties
Galveston Bay National Estuary Program

ATTENTION READERS

Your Comments and Suggestions are Requested

Galveston Bay Needs You!

The Galveston Bay National Estuary Program is seeking your comments on The Galveston Bay Plan. This comprehensive plan has been designed to assure Galveston Bay remains healthy and productive in the future. The Plan was drafted by a partnership of state and federal agencies, working with representatives from a wide variety of industry groups, local governments, environmental organizations, and other bay stakeholders. The Galveston Bay National Estuary Program will consider all written comments received on the draft plan prior to the deadline.

**The Deadline for Submission of Written Comments is
July 1, 1994**

All comments should be submitted to:

**The Galveston Bay National Estuary Program
Bay Plaza One
711 W. Bay Area Boulevard
Suite 210
Webster, Texas 77598**

GALVESTON BAY. IT'S MORE THAN WATER. IT'S A WAY OF LIFE.

Our bay is in trouble and we need to protect it. But first we need to chart a new course. The Galveston Bay Plan addresses habitat conditions, living resources and water quality. It is a plan to keep our bay clean and healthy and our coastal economy productive. If you live or work or play around this vital natural resource, you can have a say in its future. It's up to you to get involved before time runs out.

EXPRESS YOUR OPINION AT A PUBLIC MEETING

WEDNESDAY, MAY 18, ANAHUAC

7:00 P.M., American Legion Hall
Ft. Anahuac Park

THURSDAY, MAY 19, TEXAS CITY

7:00 P.M., College of the Mainland,
Room L131, Auditorium of Library
1200 Amburn Road

TUESDAY, MAY 24, HOUSTON

10:00 A.M., Houston Garden Center,
Auditorium, Hermann Park,
Next to Museum of Natural Science

WEDNESDAY, MAY 25, LAKE JACKSON

6:30 P.M., Brazosport Center for
Arts & Sciences, Art Gallery
400 College Drive

THURSDAY, MAY 26, GALVESTON

6:30 P.M., Rosenberg Library,
Auditorium, 2310 Sealy Avenue

TUESDAY, MAY 31, HOUSTON

6:30 P.M., Tracy Gee Center,
Meeting Rooms A, B, and C
3599 Westcenter Drive

WEDNESDAY, JUNE 1, LA PORTE

7:00 P.M., Sylvan Beach Park,
Pavilion, 1 Sylvan Beach Drive

THURSDAY, JUNE 2, NASSAU BAY

7:00 P.M., Nassau Bay Hilton
3000 Nasa Road 1

TUESDAY, JUNE 7, BAYTOWN

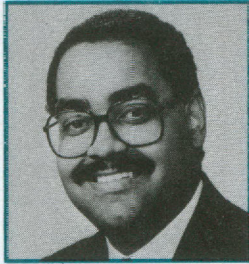
7:00 P.M., Baytown Community
Center, Meeting Room
2407 Market Street

**FOR MORE INFORMATION
AND TO RECEIVE YOUR COPY
OF THE GALVESTON BAY PLAN,
CALL (713) 332-9937.**



BE A PARTNER IN THE BAY'S FUTURE.

NOTES FROM THE CHAIRMAN



The Galveston Bay Plan: **The Public in Public Policy**

The Galveston Bay Plan reflects an unusually strong involvement of folks with a livelihood or interest in this part of the Texas coast. Since we began this important task citizens have been involved with the development of the Plan, assuring Galveston Bay remains healthy and productive.

Public meetings were first held in 1990 to set our agenda by identifying the bay's most pressing problems. These consensus issues then guided the most ambitious fact-finding program for any bay on the Texas coast. Several dozen

scientific investigations were guided by this public process, providing a firm factual foundation for *The Galveston Bay Plan*.

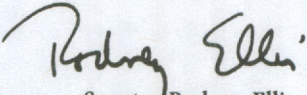
Then in 1992, as scientific findings were beginning to reveal the probable causes for many of the bay's problems, another series of public meetings was convened to consider "Issues and Alternatives" for *The Galveston Bay Plan*. Hundreds of folks attended, and many of them spoke out to voice their opinion on possible changes in *The Plan*. We listened and we learned. Thousands more read about the emerging issues in written summaries produced by the Galveston Bay National Estuary Program.

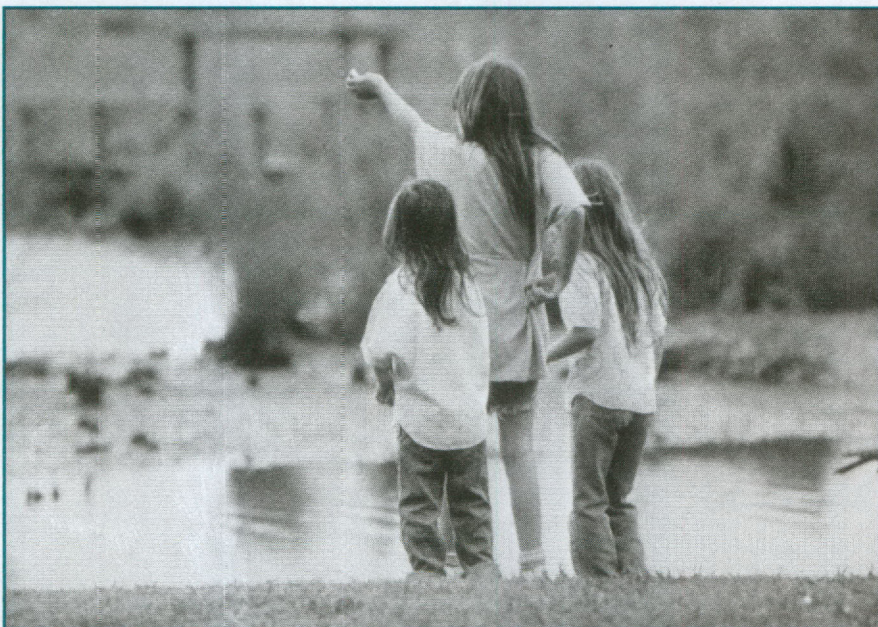
The actual drafting of *The Plan* then proceeded with the help of 16 task forces composed of several hundred bay experts and stakeholders, who met in more than a hundred workshop sessions to establish the basic framework. Their

work was submitted to the Management Conference itself—composed of about a hundred governor appointees from all walks of life. In public deliberation, the Management Conference identified about 90 key initiatives, and ranked them in importance.

The Galveston Bay Plan emerged in draft form and citizens once again contributed to the work. Over the last six months or so, we presented *The Plan* in more than 50 forums we call "focus groups." Commissioner's courts and city councils, industry groups and environmental organizations heard the specifics on "their turf" and had a chance to question staff and comment on their specific concerns. Results were more than just window-dressing: significant decisions were made by the Policy Committee as a result of the involvement of local leaders and citizens.

Now, after five years of development, I am delighted to present *The Galveston Bay Plan* for final public comment. Building policy within a democracy may not be the fastest way to govern public use of natural resources, but I am convinced it is the best and most enduring approach we can take. So once again we need your help. Please take time to attend one of the meetings or review *The Galveston Bay Plan* in your local library. Give us your comments by July first; I can assure you we will listen.


Senator Rodney Ellis



The Galveston Bay Plan is for our children's future.

NOTES FROM THE DIRECTOR

by Frank S. Shipley, Ph.D.
GBNEP Program Director

Why do we need a comprehensive plan for Galveston Bay?

Galveston Bay is Texas' most important coastal environment, providing benefits of huge value to the state and nation. Significantly, these benefits are self-sustaining as long as the bay remains healthy and productive.

As an economic resource, Galveston Bay yields over eleven million pounds of fish and shellfish annually, with a statewide economic impact up to \$358 million. The bay supports much of the offshore fishery, too, since species like shrimp grow up in the bay and are harvested as adults in the Gulf. Nearly 300,000 licensed sport anglers spend two million hours fishing in the bay each year, providing more than \$350 million in impact, while 100,000 pleasure vessels are served by about 40 marinas. Tourism value approaches half a trillion dollars annually, with some 30 percent of the region's residents involved in bay-related activities. Ecotourism, the fastest-growing sector, has barely tapped its huge potential in the bay region.

Meanwhile, other human uses of the bay affect its valued resources. About 20 percent of the state's residents live in the bay region, where Houston's boom-town characteristics have resulted in a tripled regional population since 1950, with a 12 percent expansion in just three years in the early 1980s. Some 60 percent of all wastewater discharged in Texas flows to Galveston Bay, including output from about 45 percent of all U. S. municipal sewage treatment plants that discharge to the Gulf of Mexico. Shipping to the bay's ports more than doubled between 1970 and 1989, serving the nation's largest petrochemical complex along the bay's shoreline.

While these competing human uses of the bay create problems, these problems can be solved. End-of-the-pipe pollution, for example, has already been dramatically curtailed. Under the original water quality act, industries on the upper Houston Ship Channel have reduced their discharge of pollutants by up to 95 percent, resulting in the return of dozens of fish and shellfish species to the Ship Channel and a dramatic improvement in water quality.

The ongoing success in pollution reduction, however, does not address other serious problems afflicting Galveston Bay. Increasing resource uses and other bay-related human activities have created many complicated and pressing issues:

- 30,000 acres of wetlands have been lost, and only about five percent of the bay's important submerged seagrasses remain

- Some bay species have declined, including blue crabs and several bird species which depend on wetlands
- Oil totaling 40 percent of the Exxon Valdez spill annually washes into the bay from streets in rainfall runoff
- Sewage from pleasure craft has traditionally been dumped directly to the bay, often in marinas, resulting in water and sediment contamination
- Half the bay is closed to shellfish harvest as a result of risk of disease to seafood consumers

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The oyster harvest contributes to the millions of dollars of seafood taken from the bay, yet half the bay is closed to shellfish harvesting because of the risk of bacterial contamination.

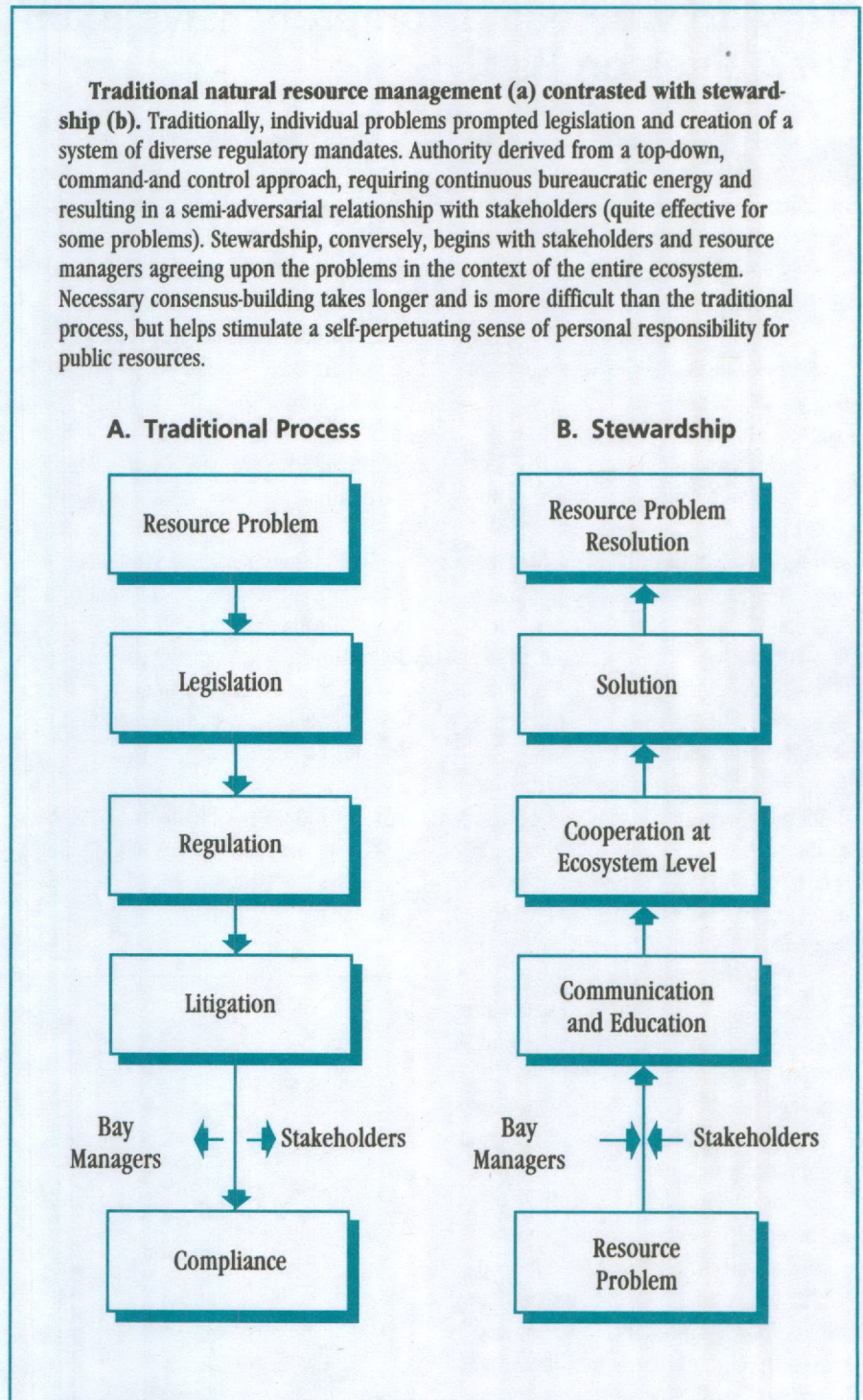
Notes from the Director

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- ❑ Some fish and shellfish from the upper bay system have unacceptably high toxic contamination levels (although commercially-caught seafood is generally safe)
- ❑ Fishing success of more than two fish per hour caught in the mid-1970s declined to about one fish per hour a decade later
- ❑ Human activities have increased the volume of Galveston Bay by about 30 percent this century, a result of subsidence from water well pumping, dredging, and erosion
- ❑ Freshwater use continues to expand, altering the amount and timing of critical freshwater reaching the bay, both now in the future

Fundamentally, these issues differ from bay problems in the past. These are *ecosystem* issues, not limited to individual natural resources, nor circumscribed by political or agency boundaries. They are complex and inter-related, involving the bay itself, its tributaries to some distance upstream, and the watersheds where humans carry on their daily activities.

How can we address these issues? Solving today's problems requires us to act more comprehensively than in the past. Taking care of Galveston Bay in the future will require a partnership of bay stakeholders, interest groups, and government agencies. *The Galveston Bay Plan* is that partnership—the next step in assuring a healthy and productive bay system. With help from all the partners, we can assure that Galveston Bay will continue to benefit future generations.



The State of the Bay New Book Available Soon

Galveston Bay is a resource of immense value to Texas and the nation. It is also an exceedingly interesting coastal ecosystem. These two themes are highlighted in a new book to be published by the Galveston Bay National Estuary Program, entitled *The State of the Bay: A Characterization of the Galveston Bay Ecosystem*. The new volume presents an overview of the ecosystem from an environmental management perspective.

This book is the principal product of the Scientific/Technical Advisory Committee and is the culmination of a five-year effort to reinforce future management of the bay by acquiring the most complete scientific and technical information possible. Through the publication of this book, the Scientific/Technical Advisory Committee has developed a factual basis for creation of *The Galveston Bay Plan*, now available for public review.

Much of the work summarized in this book was accomplished during several dozen projects carried out from 1989 through 1993, representing by far the most ambitious fact-finding program yet attempted for any bay in Texas. The research undertaken by the Scientific/Technical Advisory Committee (and reported on in *The State of the Bay*) was designed to address estuarine problems agreed upon by the entire Management Conference—reflecting a consensus among all the varied participants with interests in the bay.

The State of the Bay attempts to simplify and summarize this wealth of new understanding. You will find conclusions which differ from “conventional wisdom” and prior opinions. The effects of early human interventions, some more than a century old, clearly emerge. Such projects as the Texas City Dike, the navigation channels, and petroleum and groundwater extraction, have fundamentally altered the ecosystem. Throughout the book, readers are referred to publications that can amplify what is presented.

The State of the Bay reveals that the most compelling problems afflicting Galveston Bay are truly ecosystem problems, not limited to individual natural resources nor circumscribed by political boundaries. In solving these problems, decades of traditional, narrowly focused management practices will be difficult to overcome—the governance of the bay remains a tangled mosaic of narrow and fragmented jurisdictions and public policies. Now, however, our appreciation of the myriad connections between human activities and bay components is greatly enhanced.

Copies of *The State of the Bay* will soon be available for purchase by the general public. Printing and distribution is being accomplished as a cooperative effort of the Galveston Bay National Estuary Program, the Galveston Bay Foundation and the Greater Houston Partnership.

—Robert W. McFarlane
and Frank S. Shipley

Publication List

of the Galveston Bay National Estuary 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 National Estuary Program

Bay Plaza One
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 | 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 | Feb. | 1993 | GBNEP-23 |
| Environmental Management Inventory of Gal. Bay | Oct. | 1992 | GBNEP-24 |
| Recreational Fishery By-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 |
| DRAFT-The Galveston Bay Plan; A Comprehensive Conservation & Management Plan | Apl. | 1994 | |

VIDEOS

| | | |
|--|------|------|
| <i>Balancing Act</i> (Armand Bayou and Christmas Bay) | Oct. | 1990 |
| <i>Oyster Harvesting and Conservation in Galveston Bay</i> | Oct. | 1991 |
| <i>Conflicting Uses of Galveston Bay</i> | Oct. | 1991 |
| <i>The Galveston Bay Ecosystem</i> | May | 1992 |
| <i>Will Galveston Bay Go Down the Drain</i> | Feb. | 1994 |

SPECIAL PUBLICATIONS

Galveston Bay Area Residents' Handbook

a guide to responsible lawn care, household cleaning, automobile and boat care, and proper maintenance of septic systems and other issues to be considered by residents living in the 5 county area.

Hazardous Waste Wheels

an easy to use "wheel" with helpful information about less toxic alternatives to some of the products you may use around the house or in the garage, that may be hazardous to the environment.

Home Inventory

a guide to responsible care of hazardous household products as you take an inventory of the products you use and properly label and manage these products for a safer home.

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

- Moody Medical Library
University of Texas Medical Branch, Galveston
- 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
- Jack K. Williams Library
Texas A&M University, Galveston, Texas

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

GET INVOLVED

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

Please put me on the mailing list for the Galveston Bay National Estuary Program Information Letter "Bay Line" and other Galveston Bay information

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: _____



What's Inside Issue #18:

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Bay Line is a quarterly publication of the Galveston Bay National Estuary Program (GBNEP).

Special Thanks to the Houston Galveston Area Council and Lily Hale for their help with this edition of Bay Line.

Design and Printing-TNRCC

For information on how to receive Bay Line, or for additional copies, call 713/332-9937.

This project has been funded wholly or in part by the United States Environmental Protection Agency under assistance agreement (CE-006550-01) to the TNRCC. The contents of this document do not necessarily represent the views of the US EPA, nor does the mention of any products constitute an endorsement or recommendation for use.

Articles appearing in *Bay Line* do not necessarily represent the view of the Management Conference.

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