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# AROUND THE BEND

News of the Coastal Bend's Bays & Estuaries

Vol. 1, No. 2 - April 1995

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## Pass-Through Plan Approved for Freshwater Inflows to the Nueces Estuary

*New plan would protect estuary while improving reservoir system yield*

One of the most controversial issues concerning the management of the Coastal Bend's bays and estuaries has been the release of freshwater from the Choke Canyon/Lake Corpus Christi reservoir system. The releases, designed to maintain an adequate flow of freshwater to Nueces Bay, are required by the state water rights permit for Choke Canyon Reservoir and are implemented according to an Interim Order issued in 1992 by the Texas Water Commission.

The Interim Order set a monthly inflow requirement which has to be met, although in times of drought releases would be reduced or suspended. However, there has been widespread public perception and concern that water was being released from Choke Canyon and Lake Corpus Christi even during times when it would have no appreciable benefit to the estuary while severely impacting the region's water supply.

The Nueces Estuary Advisory Council (NEAC) has been meeting quarterly since June 1992 to review available scientific data and come up with an alternative. On February 27, 1995 they unanimously agreed to recommend a "Pass-Through Plan" for freshwater inflows to the Texas Natural Resources Conservation Commission (the Water Commission's successor) to take the place of the current Interim Order.

streamflows, not an arbitrary rule. The main difference between the Pass-Through Plan and the Interim Order is that the monthly target amount in the Pass-Through Plan is the upper limit of the amount of water that would have to be provided from the reservoirs. If the natural streamflow into the reservoir is less than the estuary inflow target in any month, then only the natural streamflow is provided to the estuary. Any inflows above the monthly target amounts would be captured and stored in the reservoirs. This approach more closely mimics the natural streamflows that would have made their way to the estuary if Choke Canyon Reservoir did not exist.

The Pass-Through Plan will allow for a continued dependable water supply for the area while at the same time protect the health and biological productivity of the estuary. Implementing this plan will buy the area more time (approximately seven years) before demand for water is projected to overcome supply.

The NEAC has approved the Pass-Through Plan and the City of Corpus Christi has submitted it to TNRCC for approval, which could happen as early as April. For more information, contact James Dodson, Regional Water Director for the City of Corpus Christi and chairman of the CCBNEP's Local Governments Advisory Committee, at 880-3868.



Under the Pass-Through Plan, estuarine inflows will be determined by the natural

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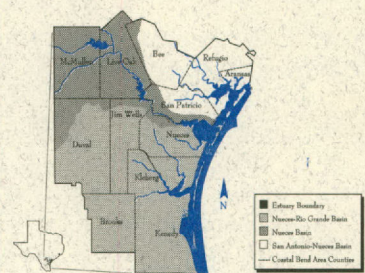
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Corpus Christi Bay National Estuary Program Study Area

“Never doubt that a small group of thoughtful, committed citizens can change the world; indeed it's the only thing that ever has.”

Margaret Mead  
Anthropologist





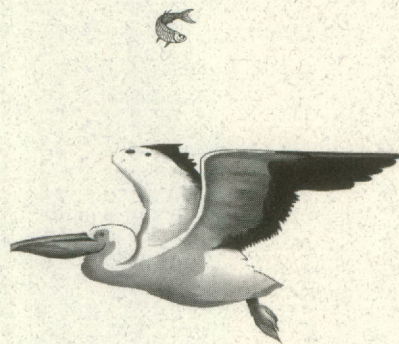
## All-Conference Workshop

The CCBNEP's first All-Conference Workshop was held February 2-4, 1995 at the Holiday Inn in downtown Corpus Christi. The workshop marked the first time that members of the CCBNEP's committees had a chance to meet and work together as a group. By all accounts, the workshop was a success. The over 100 participants left with a greater understanding of some of the pressing issues facing our bays and estuaries, and the interests of some of the many user groups that are concerned with the state of the ecosystem.

The workshop activities focused on two areas: education about the Coastal Bend ecosystem, and creation of a program vision statement (see below).

Presentations were given by local experts and representatives of the primary user groups, with key note addresses by local historian Bill Walraven and Professor of Marine Studies Robert W. Knecht from the University of Delaware.

Speakers at the workshop shared their knowledge of the bays and estuaries and perspectives from a variety of user groups. A group of trained facilitators helped Management Conference members translate their ideas and hopes for our estuary into a vision statement that will guide us in the development of a Comprehensive Conservation and Management Plan. Finally, Coastal Bend corporations and organizations helped to sponsor a variety of activities, including a reception at the Texas State Aquarium and a field trip to Reynolds Metals Company in Ingleside.



## All-Conference Workshop Sponsors

*The members and staff of the Corpus Christi Bay National Estuary Program would like to thank the following organizations and corporations who sponsored the All-Conference Workshop:*

Central Power & Light Co.  
 CITGO Corpus Christi Refinery  
 Coastal Bend Bays Foundation  
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 Goldston Engineering, Inc.  
 Koch Refining Co.  
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 Shiner Moseley & Associates, Inc.  
 TNRCC  
 Texas State Aquarium  
 U.S. Environmental Protection Agency

## CORPUS CHRISTI BAY NATIONAL ESTUARY PROGRAM VISION STATEMENT

### PROGRAM VISION STATEMENT

As the stewards of the bays and estuaries, we acknowledge that our values and actions must reflect our interdependence with the bay. We envision a Coastal Bend which supports a high quality of life for its inhabitants and a thriving bay system which is sustained throughout all generations. We hold ourselves responsible for the management of our precious resource, the bay system.

Our guiding principles:

- Promote healthy and diverse economic, social, and ecological systems.
- Facilitate enlightened public action through education and dialogue with all interested parties.
- Maintain a balance of people and nature.
- Achieve equity among competing uses.
- Seek and implement sustainable solutions.

To achieve this vision, we promise to work cooperatively with all interests to

forge lasting relationships, based on mutual respect, which provide for the needs of all inhabitants of the Coastal Bend.

### OPERATING PRINCIPLES

The members of the Management Conference understand that:

- Increasing regional population without supporting infrastructure may cause adverse impacts on bay resources.
- Future growth may cost more than necessary unless we use a coordinated ecosystem approach to bay management.
- We must accept our stewardship role in conserving bay resources.

We commit to work together cooperatively to identify the priority issues affecting our bay system and its contributing watersheds. We will take specific, quantifiable actions to reverse negative short- and long-term environmental impacts to the bay system.

Our operating principles:

- Incorporate into the comprehensive plan a balanced consideration of the interdependence of natural processes and human uses operating within upper watersheds, bays and estuaries, and the Gulf of Mexico.
- Obtain sound data from an adequately funded regional monitoring and applied research program.
- Maintain clear water, clean sediments, and a diversity of native living resources and habitat.
- Maintain essential freshwater inflows to the estuaries.
- Provide safe waters for swimming, clean beaches for recreation, and sustainable supplies of safe seafood for residents and visitors.
- Preserve open space, with free and easy public access to meet the needs of a growing population.
- Manage our bay system so that it can survive catastrophic events and adapt to changing conditions.





## Priority Problems List Expanded and Approved

**A**s reported in our previous newsletter, a series of 13 public workshops were conducted last fall to solicit public comment on the Program's six "Priority Problems." Gaining consensus on a list of Priority Problems is important as the first step in any planning process, because it defines the scope of issues to be investigated and included in the draft Comprehensive Plan. Public comments obtained during the workshops have helped to further develop the initial list, which now includes seven Priority Problems. These are outlined below:

### **Altered freshwater inflow to bays and estuaries**

— As the region's human population has grown, so has the demand for and use of freshwater. The construction of reservoirs to augment water supplies has altered the volume and timing of freshwater inflows to bays and estuaries. Studies of historical inflow patterns, coupled with data on the biological productivity of estuaries, have demonstrated the many beneficial uses of freshwater inflows, including the maintenance of low-salinity nursery habitats for commercially and recreationally important marine species. Future water policy must balance the needs of the region's growing population (projected to double by the year 2040, to more than one million people), with maintaining freshwater inflows for the health and productivity of our bays. The Program's goal is to assess what those future inflow needs will be, and seek ways to achieve them (along with the re-use of treated wastewater) in the face of growing human needs.

### **Condition of living resources**

— The cumulative effects of increased pollution, habitat destruction, and over-harvesting can have serious consequences on the ability of aquatic and wildlife populations to survive and adapt to changing circumstances. These effects, coupled with altered freshwater inflows, changes to bay circulation, and degradation of water quality due to spills and both point and nonpoint source discharges, can result in significant and irreversible declines for certain species. The Program's goal is to assess which species have been or are most likely to be affected by such environmental changes, and to seek the most appropriate management strategies to ensure that the health and productivity of all aquatic and wildlife species are protected in the future.

### **Loss of wetlands and estuarine habitats**

— Aquatic and wildlife populations can survive and remain productive only to the extent that sufficient healthy habitats remain. Although habitats can change as a result of natural factors, poorly planned and executed human developments may also cause profound effects. Contributing to habitat losses are dredging and the placement of dredge material, disturbance of bay bottom habitats from shrimp trawling and recreational boating, and the degradation of water quality from a combination of point and nonpoint sources of pollutants, and other factors. The Program's goal is to assess which habitats have suffered significant decline or which may be impacted by future human use of bay resources, and provide for successful habitat management so that important ecological functions and the communities they support are maintained in the future.

### **Degradation of water quality**

— Water quality is fundamental to overall human and ecological health. Water is the medium by which pollutants are transported and taken up by estuarine species. Sediments, chemicals, and nutrients, when provided to receiving waters in excess, can have deleterious effects on habitats and the communities they support. Such pollutants enter bay waters from both point and nonpoint source discharges, including those from surface water, ground water, and aerial deposition. Accidental spills and the resuspension of pollutants as a result of dredging also contribute to the degradation of water quality. At times, water quality degradation is the result of a phytoplankton bloom — such as the brown tide. The Program's goal is to assess trends in changes to water quality, and to design management strategies that will maintain the "designated uses" of water segments to the benefit of both human and ecological health.

### **Altered estuarine circulation**

— The maintenance of both good water quality and natural circulation patterns within our bays and estuaries will provide for optimum conditions for aquatic and wildlife species and the habitat on which they depend. When natural bay circulation patterns are altered due to man-made factors, bay bottom habitats may not receive the optimal water exchange needed to restore nutrients, sediments, or salinity range. Localized concentrations of pollutants can also result, and the "recruitment" of new stocks of organisms to the bays may be hindered by such events. Of course, natural processes work to alter bay circulation, but the Program's goal is to identify all contributing factors and separate those in which people play a significant role, so that we may make better future decisions on such needs as channels and other navigation improvements.

### **Bay debris**

— Both unsightly and a risk to human and animal health, bay debris comes from many different sources. Debris washes into our bays from land, especially in and around urban centers, or it is deposited by boaters who may not realize its life-threatening potential to such animals as turtles, fish, and birds. The Program's goal is to assess the geographic extent of the problem, and to design a comprehensive management approach to eliminate or minimize this source of pollutants.

### **Selected public health issues**

— The health of all those who utilize bay resources is closely linked with the ecological health of our bays and estuaries. As pollutants enter our bays, they may be taken up by fish and other organisms consumed by humans.


Priority....cont'd on page 4





Priority...cont'd from page 3

Or they may directly affect those who use the bays for swimming, windsurfing, or other recreational pursuits. While it is acknowledged that waters of the Coastal Bend bays are of generally high quality, the Program's goal is to assess *potential* public health effects in a comprehensive manner, so that *if* public health risks are identified, they become a priority focus for management action.


Through additional public input and continuing work by CCBNEP committee members, this list of Priority Problems will evolve and be prioritized during the next three-and-a-half years. If you would like to receive a copy of the official list (as approved by the Management Committee on January 12, 1995), or if you have any particular questions or comments, please contact the Program Office. 

## Issues Committee on Dredging Formed

Knowing all of the key issues and concerns is a preliminary step to any planning process. For that reason, the CCBNEP has formed several issues committees which will focus on the more complex resource management problems of our study area. One of our issues committees will work to identify the range of environmental, technological, economic, social, and regulatory issues related to dredging.

Based on an assessment of existing data, as well as concerns expressed by the various stakeholders and the community at large, the dredging issues committee will provide recommendations to the CCBNEP's Management Committee on the most appropriate characterization and research projects. The dredging committee will also look at any early actions that

may be called for, such as enhanced inter-agency coordination or perhaps new methods for the placement of dredged materials.

The dredging issues committee is chaired by Captain Tom Rodino, Commanding Officer of the U.S. Coast Guard Marine Safety Office in Corpus Christi. If you would like to contribute ideas or concerns on the issue of dredging, please contact either Captain Rodino at (512) 888-3162 or the CCBNEP office at (512) 985-6767. 



## Public Workshops


*Over 300 People Attend Workshops*

*Suggestions lead to addition of Public Health as a Priority Problem*

The CCBNEP's first round of public workshops were attended by 330 people in September and October 1994. They came to ask questions about the Program's purpose, and to offer suggestions on the preliminary list of Priority Problems that relate to the state of the Coastal Bend's bays and estuaries. The input received from the public at the workshops led to the addition of *selected Public Health* issues to the Priority Problems list (see article on page 3-4).

Participants at each workshop brought up environmental issues that affect their community. Several people wondered how we can both protect our estuarine resources and develop a strong economy. People throughout the Coastal Bend — in both inland and coastal communities — are interested in achieving a balance between protection of the environment and continued growth of the local and regional economy.

Many residents and business owners understand that the Coastal Bend's econo-

my cannot expand unless the environment remains a healthy place to work and live. Others worry that we will face a situation where we will have to choose between a healthy environment or a healthy economy. One of the CCBNEP's largest challenges will be to help residents of the Coastal Bend understand the interdependence of the environment and the economy and to promote a harmonious balance between the two. 



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Contributors to this issue include Mari Brennan Barrera, Hudson DeYoe, James Dodson, Gail Ketchum, Brien Nicolau and Richard Volk.

News items, photographs, and letters are welcome, and may be submitted to:

**CCBNEP**  
TAMU-CC Campus Box 290  
6300 Ocean Drive  
Corpus Christi, Texas 78412  
The deadline for submission for the next newsletter is May 20, 1995.

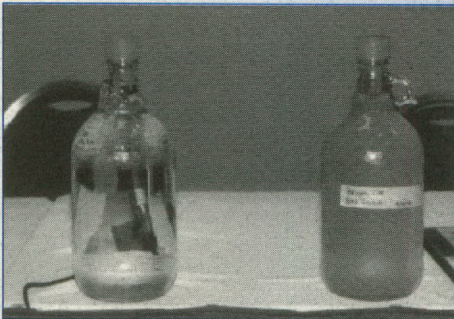
This project has been funded in part by the United States Environmental Protection Agency (EPA) under assistance agreement #CE-996363-01 to the Texas Natural Resource Conservation Commission (TNRCC). The contents of this document do not necessarily represent the views of the EPA or the TNRCC. The mention of trade names or commercial products does not in any way constitute an endorsement or recommendation for use.





## Update on Brown Tide

As we reported in our last newsletter, research on the persistent algal bloom known as "brown tide" was summarized and a list of management options and research needs was developed at a workshop in August 1994. Since then, scientists and resource managers have been working together on several projects designed to increase our knowledge about the brown tide. This information should help us to clarify the viable options for dealing with the problem.



The jar on the left is a water sample taken from the Gulf of Mexico, while the one on the right was taken from Bird Island Basin, an area with a high concentration of brown tide.


In January, a small group of scientists met to evaluate one potential brown tide management tool — the manipulation of nutrient ratios. This approach is thought to have promise because nutrient manipulation in large lakes has produced significant changes in their algal communities. A proposal for a demonstration project is being developed, and funding will be sought once the proposal is complete. The brown tide steering committee, established at the August meeting, will take up this and other projects at their next meeting.

The CCBNEP project on the status and trends of brown and red tides is in progress, with the draft report due May 31, 1995. This project will summarize most of the data collected on brown and red tides in this area, and will attempt to identify causes of these events and areas of future study.

A study entitled "A Preliminary Evaluation of Water Quality of Brown Tide Blooms in the Laguna Madre-Baffin Bay

Systems" has just begun. This two year project is being conducted by Dr. Roy Lehman and Dr. David McKee of Texas A&M University-Corpus Christi and is funded by the Gulf Coast Conservation Association. The study will investigate the possible link between terrestrial runoff and persistence of the brown tide.

Six brown tide proposals were considered for funding by the Texas A&M University Sea Grant Program. These proposals formed a comprehensive multi-disciplinary research approach to determine the origin of the brown tide and the factors that sustain it. Unfortunately, this group of proposals was not funded, but other sources of funding are now being sought to continue research into brown tide.

In summary, it seems that funding and research on the brown tide is slowly picking up. If you would like more information on the brown tide, please call Hudson DeYoe at the Program office (512-985-6767). 

## "Best Management Practices" in Agriculture to be studied as part of Characterization Efforts


The CCBNEP has selected a project entitled "Best Management Practices for Sediment, Nutrients, and Chemicals from Agricultural Croplands" as its first Action Plan Demonstration Project. The project, which was chosen from a number of proposals that were submitted for funding, will evaluate current Best Management Practices (BMPs) that are utilized in the CCBNEP's 12 county study area and will recommend actions to reduce nonpoint source pollution entering the bay.

The CCBNEP study area includes the fourth largest agricultural area in the nation's estuaries. In addition, the CCBNEP Management Conference has identified nonpoint source pollution as a priority issue for study and action. This project, coupled with information gathered under

the nonpoint source characterization project, will provide valuable information for the development of management and action plans for agricultural nonpoint source pollution in the Texas Coastal Bend.

Specifically, this project will involve monitoring runoff from a confined sub-watershed for sediment, nutrient and chemical contributions to Nueces Bay over 10 rainfall events. The results of the monitoring program will be analyzed in order to assess local agricultural practices and their contribution to the nonpoint source problems in the area. Based on the results of the study, a set of recommendations for improved BMPs will be developed that will reduce the amount of nonpoint source pollution into the bays, which could result in eco-

nomie savings to farmers as well. Area farmers will be informed about the recommendations through outreach materials and workshops.

If you have any questions or would like additional information regarding this project, please call Richard Volk or Hudson DeYoe at the CCBNEP office. 







## Calendar of Upcoming Events

April 6	Scientific-Technical Advisory Committee meeting	May 11	Management Committee meeting
April 12	JFK Causeway Issues Forum Blucher Institute, TAMU-CC Campus. FMI 993-7520	May 18-19	Watershed Management Workshop for Local Governments
April 13	Management Committee meeting	June 1	Scientific-Technical Advisory Committee meeting
April 22	"March for Parks" at Goose Island State Park Walk & Barbecue lunch FMI 512/286-3532	June 8	Management Committee meeting
April 22-23	Earth Day activities, Corpus Christi Museum of Science and History	<b>Other meetings:</b>	
May 5	Scientific-Technical Advisory Committee meeting	June 8-9	The Third Annual Clean Water Act Conference Seattle Washington FMI 206/407-7329
May 8	Citizens and Local Governments Advisory Committees meeting	June 26-27	Constructed Wetlands Handbook Workshop Frederick, Maryland FMI 814/865-8301

For More Information Call: 512/985-6767

## Speakers Bureau

Do you want to learn more about the Coastal Bend bays and estuaries?

Do you have questions about the CCBNEP?

Do you have suggestions or comments on what we're doing?

**Call our Speakers Bureau at 512/985-6767** — someone from the Program staff or one of the Management Conference committees will come and speak to your civic organization, class, Chamber of Commerce, or any other kind of meeting.

**We want to hear from you! Please call us today.**

## NEXT NEWSLETTER

- Results from local government workshop on watershed management
- Highlights of the Program's work plan for 1995-96
- Preliminary findings from selected study area assessments

### CCBNEP

TAMU-CC Campus Box 290  
6300 Ocean Drive  
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