

# LITERATURE CITED

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# APPENDIX A

Revised Action Plans and their relationship to previous actions

## CLIMATE CHANGE ACTION PLAN

Goal, Objective, Action	Rationale
Goal 1: Understand, project, mitigate, and adapt for climate change impacts to increase resiliency of estuaries and coastal communities in the Coastal Bend.	Proposed goal is intended to capture the need to address climate change impacts that affect the resiliency of Coastal Bend communities, as well as the need to help these communities better prepare for ongoing and future changes. This issue was not addressed in previous plan.
Objective 1: Integrate climate change science into strategic planning and adaptive management.	Proposed objective reflects the need to use climate change science in local planning and management efforts. This was not included in previous plan.
CC-1: Facilitate and support studies to better project and understand the biological, chemical, physical, and ecological effects of climate change.	Proposed action reflects need to support local climate change research projects. This was not addressed in previous plan.
CC-2: Assist in developing and implementing adaptive management plans that conserve and protect coastal resources and their ecosystem services by incorporating climate change.	Proposed action reflects need to incorporate climate change information and research into local planning and management efforts. This was not included in previous plan.
Objective 2: Improve climate change literacy in order to build capacity for adapting and mitigating to climate change.	Proposed objective reflects the need to improve understanding of local climate change impacts in order to be better prepared for future changes. This was not addressed in previous plan.
CC-3: Develop or use formal and informal climate change education materials that are locally relevant to enhance climate literacy.	Proposed action reflects the need to develop and distribute educational materials that highlight local climate change research and can be used with a variety of audiences. This was not included in the previous plan.

### LEGEND

No change from 1998 Bays Plan

Goal, objective, or action from 1998 Bays Plan was revised

Addition of new goal, objective, or action

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**TOURISM AND RECREATION ACTION PLAN**

Goal, Objective, Action	Rationale
Goal 1: Maintain, manage, and expand tourism and recreational opportunities in a way that enhances the local economy and protects the natural resources of the bays.	Efforts are ongoing. CBBEP continues to work with partners on ecotourism and recreation projects.
Objective 1: Enhance the reputation of the Coastal Bend as being a premier ecotourism destination for people to experience Texas' coastal natural resources.	Efforts are ongoing. There is an ongoing need to enhance local tourism by promoting Coastal Bend ecotourism opportunities.
TR 1: Collaborate with tourism organizations to adopt a theme of resource protection and stewardship in their promotion of tourism.	Efforts are ongoing to work with tourism organizations. Action was edited to emphasize collaboration between CBBEP and these partners.
Objective 2: Improve existing public access sites and develop additional, well-managed sites in order to protect coastal natural resources and provide the bay user with proper facilities.	Efforts are ongoing. Although there are numerous public access sites located within the Coastal Bend, there is a continued need to look for additional opportunities to improve access.
TR-2: Provide for the appropriate number of improved, well-managed public access sites.	Efforts are ongoing. CBBEP has completed several projects targeted at improving public access in the Coastal Bend and will continue to work with partners on promoting this objective.
Objective 3: Minimize adverse impacts to coastal natural resources caused by recreational uses of the bays and enhance resources for recreational use where appropriate.	Efforts are ongoing by CBBEP and partners to reduce impacts from recreational uses on habitats and living resources.
TR-3: Support the development and implementation of management strategies that reduce or avoid impacts from recreational uses.	Efforts are ongoing. Action edited to reflect CBBEP's supportive role in the development and management of projects targeted at reducing recreational impacts.
BTR-4: Enhance the recreational fishery through artificial reefs or restored natural reefs as appropriate.	The need to restore and create habitats, such as artificial reefs, is addressed within the Habitat and Living Resources Action Plan. Restoration efforts that are a result of these actions will also benefit human uses such as recreation.

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## SHORELINE MANAGEMENT ACTION PLAN

Goal, Objective, Action	Rationale
Goal 1: Minimize impacts to natural resources from shoreline activities occurring within the program boundary.	Goal was edited to improve wording and provide clarity.
Objective 1: Support environmentally sound shoreline management.	There is still a need to support local partners in shoreline management efforts, but the objective was edited to be more inclusive of broader efforts by CBBEP and partners to improve shoreline management. Specific references to planning and permitting were removed.
SM-1: Support efforts to promote enhanced management of riverine shorelines and riparian habitat.	Healthy rivers and streams are an important component of maintaining the quality of our bays. The proposed action was added to the Plan to show the importance of proper management of riverine shorelines and maintenance of riparian buffers for maintaining the quality of our bays.
SM-2: Advise and assist local partners with shoreline management issues.	Efforts are ongoing to work with local partners on shoreline management issues. Action was modified to show that working with partners may include both advising and assisting (i.e., providing resources).
SM-1: Conduct a shoreline inventory to gain site-specific understanding of shoreline management needs.	This action is considered to be complete. Partner organizations, such as GLO, UTBEG, and HRI have completed several projects related to inventorying shoreline management needs (e.g., Texas Shoreline Change Project, Texas Coasts, and Environmental Sensitivity Index).
SM-3: Establish a locally administered Land Trust Fund to augment public access, sensitive habitat protection, and open space preservation.	The Coastal Bend Land Trust was established and is overseen by CBBEP. The need to continue to support habitat protection and open space preservation is captured in the Habitat and Living Resources Action Plan.

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## BAY DEBRIS ACTION PLAN

Goal, Objective, Action	Rationale
Goal 1: Reduce bay debris in the Coastal Bend to ensure minimal impact to people, aquatic life, and natural resources.	Efforts are ongoing. CBBEP continues to work with partners to reduce bay debris.
Objective 1: Reduce the amount of debris in the bays and estuaries throughout the Coastal Bend.	Efforts are ongoing. Edited to reflect the need to reduce overall debris <u>in</u> the bay - intended to capture efforts to both reduce the amount of debris reaching the bay and reduce the amount of debris that is already in the bay.
BD-1: Support activities to reduce the amount of debris reaching the bays.	Efforts are ongoing to reduce the amount of debris entering the bays. Broadened scope of action by removing specific references to targeting trash disposal and solid waste management - specific targets will be outlined in implementation strategy.
BD-2: Support activities to remove existing debris in the bay.	Proposed action reflects the need for CBBEP and partners to broaden efforts to include removal of debris that already exists within the bay.

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**PUBLIC HEALTH ACTION PLAN**

Goal, Objective, Action	Rationale
Goal 1: Ensure public health associated with contact recreation and seafood consumption.	Efforts are ongoing. Goal still captures the continued desire by CBBEP and partners to ensure public health.
Objective 1: Minimize the threat of waterborne illness and disease.	Efforts are ongoing. Edited to make more clear and concise.
PH1: Support efforts to protect recreational water quality through studies on water borne health issues, including pathogens, chemicals, and Harmful Algal Blooms.	Efforts are ongoing. Edited to more clearly reflect the supportive role of CBBEP. Also broadened the types of studies conducted to include HABS.
Objective 2: Reduce the risk of illness and disease associated with consumption and handling of fish and shellfish caught in local waters.	Efforts are ongoing. Edited to include both consumption and handling.
PH-2: Support health risk assessments associated with consumption and handling of seafood.	Efforts are ongoing. Edited to more clearly reflect CBBEP's supportive role with partners. Also edited to include both consumption and handling.
Objective 3: Improve availability and data analysis of public health parameters through integration of water quality and epidemiological and injury information.	Both the objective and action were determined to not be feasible and high-priority items.
PH-3: Develop and implement a method to collect epidemiological and injury data from regional and local health care providers	Both the objective and action were determined to not be feasible and high-priority items.

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**MARITIME COMMERCE ACTION PLAN**

Goal, Objective, Action	Rationale
<p>Goal: Enhance maritime traffic safety while reducing the rate of maritime incidents from shipping, terminal operations, and marine pipelines.</p>	<p>It is still an extremely high priority to improve maritime traffic safety and reduce potential incidents. This is particularly important for the Port of Corpus Christi which has expanded export operations (e.g., black oil, LNG, and increased commodities). There has also been an increase in the diversity of the fleet.</p>
<p>Objective 1: Enhance commercial maritime traffic safety.</p>	<p>Efforts are ongoing to maintain maritime safety and reduce incidents – this is a high priority.</p>
<p>MC-1: Support efforts to implement the Corpus Christi Ship Channel Improvement Project and other improvements.</p>	<p>Several components of the Corpus Christi Ship Channel Improvement Project (CCSCIP) have been completed, but efforts to deepen/widen the ship channel and create barge shelves are ongoing and continue to need support. The Port has a permit to complete the project but funding still needs to be obtained. The CCSCIP has a defined boundary but additional improvement projects may be needed outside of this area - action allows for improvements in these other areas as well.</p>
<p>MC-2: Modify the height, size, position, and light intensity of existing navigation ranges and add new ranges where necessary.</p>	<p>Although navigation ranges are routinely updated by the USCG, there still remains a need for additional improvements and new ranges (e.g., La Quinta Channel).</p>
<p>MC-3: Support efforts to maintain and improve the Vessel Traffic Information System and any additional navigational aids, such as the Physical Oceanographic Real-Time System (PORTS).</p>	<p>The Port of Corpus Christi has installed and is already operating a Vessel Traffic Information System, but installation of monitoring equipment associated with other monitoring programs, such as the PORTS, would provide additional beneficial navigation aids.</p>
<p>MC-4: Continue to support vessel operator training regarding safe operating procedures, rules of the road, and local navigation hazards.</p>	<p>This is an ongoing activity - the USCG requires specific qualifications, training, and licensing of commercial vessel operators.</p>
<p>MC-5: Support the setback policies for the Gulf Intracoastal Waterway.</p>	<p>There are concerns about structures encroaching on the Gulf Intracoastal Waterway - needs to be continued support of setback policies to prevent collisions and potential damage.</p>
<p>Objective 2: Reduce impacts from maritime oil and hazardous material spills.</p>	<p>Oil and hazardous material spill prevention and response continue to be top priority issues for the Coastal Bend area.</p>
<p>MC-6: Continue to maintain and improve regional oil spill response capability.</p>	<p>Improvements have been made to the regional spill response capability, but there is a need to continue to support efforts such as spill drills, unified command drills, and acquisition of equipment/supplies.</p>
<p>MC-7: Continue to maintain and improve hazardous spill response planning and resources to ensure public protection.</p>	<p>There have been significant improvements to coordination of hazardous materials spill response planning and resources, but these efforts require continued support.</p>

**MARITIME COMMERCE ACTION PLAN**

Goal, Objective, Action	Rationale
Objective 3: Improve the response strategy to marine pipeline incidents.	There is a continued need to address spills from pipelines, especially older, unidentified structures.
MC-8: Support data management systems to locate existing pipelines and points of contact for current ownership.	Action was not feasible as previously written, and therefore, was edited to reflect the continued need to use available data sources to identify the location of pipelines, materials being carried, age of pipelines, and ownership. This will improve timing and effectiveness of response to incidents.
Objective 4: Reduce the potential for introductions of non-native species caused by maritime operations.	Improvements have been made in regulations of ballast water and invasive species, but there is a continued need to address introduction of non-native species.
MC-9: Continue to support the prevention of the introduction of non-native species through improved ballast water management.	Improvements have been made through the passage of a number of regulations designed to control the introduction of non-native species in ballast water. Continued support of the implementation of these regulations is needed.

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## DREDGING ACTION PLAN

Goal, Objective, Action	Rationale
Goal: Ensure that all dredging activities are planned and conducted in ways that consider the cost effectiveness of the operation, while minimizing ecological impacts and maximizing the beneficial uses of dredged material.	There is still a strong need to ensure that dredging activities are planned and conducted effectively. Focusing on the beneficial use of dredge material is particularly important.
Objective 1: Improve dredged material management practices.	Dredging techniques are considered standard, so removed reference to improving dredging techniques. Focus should be on improving dredged material management practices.
D-1: Support the activities of the Beneficial Uses Group (BUG) to maximize beneficial uses of dredged material as required.	Beneficial Use Plan Implementation Group was established as part of the Corpus Christi Ship Channel Improvement Project, but group is not actively meeting at this time. There is a need to re-establish this group, and use it as a model for a regional BUG that includes other interested partners throughout the Coastal Bend Region.
D-2: Support the approved (50 year) dredged material management plan and strategy for the Corpus Christi Ship Channel.	A long term (50 years) dredged material management plan for the Corpus Christi Ship Channel was developed as part of the Corpus Christi Ship Channel Improvement Project. Maintenance dredging has been evaluated for beneficial use feasibility and has identified and regularly places maintenance material to Pelican Island for rookery enhancement. Continued support is needed.
D-3: Develop a long-term (50 year) dredged material management plan and strategy for the Gulf Intracoastal Waterway, channel subdivisions, private marine terminals, and private and public marinas.	There still a need to develop this type of plan – action was expanded to also include private marine terminals.
D-4: Develop a long-term (50 year) Regional Habitat Management Plan that utilizes dredged material from private and public sources.	There is a need to develop a "Regional Habitat Management Plan" that considers the use of dredged material for erosion control, habitat creation/restoration, or conversion of one aquatic habitat type for another type deemed to be of higher ecological and social value in order to meet resource management and societal needs.

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## HABITAT AND LIVING RESOURCES ACTION PLAN

Goal, Objective, Action	Rationale
Goal 1: Increase and preserve the quantity, quality, and diversity of habitats and living resources.	Efforts are ongoing. The conservation of habitat and living resources continues to be a high priority in the Coastal Bend.
Objective 1: Preserve, restore, enhance, and create coastal habitats.	Efforts are ongoing. Added habitat enhancement and reworded objective to indicate the priority of conservation strategies (i.e., preserving habitat is top priority, followed by restoration, enhancement, and creation).
HLR-1: Preserve functional, natural habitats of all major types.	Efforts are ongoing. CBBEP has preserved coastal habitats through previous acquisitions and will continue to use fee simple acquisition and conservation easements for future habitat preservation
HLR-2: Restore and enhance degraded habitats and create new habitats where feasible.	Efforts are ongoing. Action was reworded to include enhancement and to reflect priority of conservation strategies.
HLR-3: Support efforts to identify and minimize adverse impacts of activities and operations on coastal habitats.	While seismic activity is still a concern for resource managers, there is a need to edit this action to include a broader suite of activities and operations that could impact coastal habitats (e.g., brine discharge, wind farms, LNG export).
Objective 2: Ensure long-term sustainability of native living resources.	Efforts are ongoing. Conservation of living resources continues to be a high priority for CBBEP and partners.
HLR-4: Develop and implement adaptive management plans to ensure sustainability for species of concern.	Efforts are ongoing. Action was expanded to include both development and implementation of plans. Action was also edited to reflect need to use adaptive management planning.
HLR-5: Support rescue and rehabilitation programs of native animal species.	Efforts are ongoing. Action was edited to reflect CBBEP's supportive role in these types of projects. Also edited to show focus on supporting projects that support native species.
HLR-6: Support effective commercial and recreational fisheries management.	Efforts are ongoing. Action was previously focused on management of commercial shrimping activities, but it was edited to include a broader range of commercial fisheries (e.g., oysters, black drum), as well as recreational fisheries.
HLR-7: Support efforts to identify and minimize adverse impacts of activities and operations on coastal living resources.	While impacts from cooling water intakes are still concerning for resource managers, there is a need to edit this action to include a broader suite of activities and operations that could impact coastal living resources (e.g., brine discharge, wind farms, LNG export).
HLR-8: Improve understanding of harmful algal blooms and their impact on living resources.	Efforts are ongoing but action was difficult to accomplish as previously written. Action was edited to more accurately reflect efforts that are underway regarding harmful algal blooms.

## HABITAT AND LIVING RESOURCES ACTION PLAN

Goal, Objective, Action	Rationale
HLR-9: Develop and support adaptive management plans to minimize introductions and impacts from invasive species.	Efforts are ongoing. Action was expanded to include development and implementation of management plans. Also edited to show need to use adaptive management planning. Finally, the term invasive species was used because it captured both native and non-native species that threaten ecosystems.
HLR-7: Reduce bycatch from bay shrimp trawling.	This action is no longer a priority issue with little to no bay and bait shrimping occurring within the bay systems of the Coastal Bend. Bycatch concerns will also be included in the modified HLR-6.

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COASTAL BIRDS	
Goal, Objective, Action	Rationale
Goal: Conserve coastal birds and the habitats they depend upon in the Coastal Bend of Texas.	The South Texas coast is one of the most unique areas in North America and is renowned for its exceptional bird life. Sustainability of bird species of concern has been a priority since the CBBEP was established and the number of activities and funding that have been dedicated to this effort have lead to the development of a new goal.
Objective 1: Reverse population declines in colonial nesting waterbirds in the Coastal Bend.	The populations of many colonial nesting waterbirds within the Coastal Bend are declining due to a variety of factor. CBBEP and partners are focused on managing these birds and their habitats to try and reverse these declines.
CB-1: Implement successful waterbird management actions to reverse declines in colonial nesting waterbirds in the Coastal Bend.	Efforts are ongiong by CBBEP and partners to implement effective management actions that will aid in the recovery of declining colonial nesting waterbird populations in the Coastal Bend.
Objective 2: Advance the conservation of migratory shorebirds through research, monitoring, and stewardship.	There is a need to better understand and conserve highly migratory shorebird species. CBBEP and partners are collaborating to gather critical information about these species so that conservation efforts may be improved.
CB-2: Conduct conservation-oriented monitoring and management actions to benefit shorebird species that utilize the Central Flyway and visit the Coastal Bend.	Efforts are ongoing by CBBEP and partners to conduct research projects that will help managers better understand the abundance, distribution, nest success, habitat usage, migratory connectivity, and other aspects of migratory shorebirds.

#### LEGEND

No change from 1998 Bays Plan

Goal, objective, or action from 1998 Bays Plan was revised

Addition of new goal, objective, or action

Deletion of a goal, objective, or action from 1998 Bays Plan

**LAND CONSERVATION AND STEWARDSHIP**

Goal, Objective, Action	Rationale
Goal: Ensure the survivability of species that depend on coastal habitats in the Coastal Bend.	Despite their value, coastal habitats are stressed and at risk. Efforts are needed to conserve these at-risk habitats and help ensure the survivability of the species that depend on them.
Objective 1: Use land acquisition and stewardship techniques to conserve and protect coastal habitats in the Coastal Bend.	The CBBEP Land Conservation & Stewardship Program was established for purposes of using acquisition and stewardship to accomplish this goal.
LCS-1: Promote the stewardship of coastal resources through the implementation of responsible and sustainable adaptive management techniques on both CBBEP properties and those of willing landowners.	The CBBEP Land Conservation and Stewardship Program has acquired and is responsible for managing properties in the following areas of the Coastal Bend: Nueces River, Nueces River Delta, Nueces Bay, Mustang Island, Lamar Peninsula, Aransas River Delta, and Mission River Delta. CBBEP promotes stewardship through the implementation of responsible and sustainable adaptive management techniques at all its properties. CBBEP also fosters stewardship by forming partnerships with willing landowners to either conserve or manage their property for priority species.
LCS-2: Collaborate with partners to identify and protect properties with high conservation value through donation, acquisition, or conservation easements.	Land acquisition for protection is one of the most economical methods of conservation. This can occur through the donation or purchase of land or conservation easements from willing sellers. Since starting on land acquisition efforts in 2002, CBBEP has worked to acquire either fee simple title or conservation easements for more than 12,000 acres of freshwater marsh, forested wetlands, mudflats, riparian corridors, and native upland habitat for conservation management.

**LEGEND**

No change from 1998 Bays Plan

Goal, objective, or action from 1998 Bays Plan was revised

Addition of new goal, objective, or action

Deletion of a goal, objective, or action from 1998 Bays Plan

## WATER AND SEDIMENT QUALITY ACTION PLAN

Goal, Objective, Action	Rationale
Goal 1: Maintain and/or enhance water and sediment quality.	Efforts are ongoing by CBBEP and partners to maintain and/or enhance water and sediment quality.
Goal 2: Understand total loadings, transport pathways, and biological and ecological effects of loadings to the bay system.	Efforts are ongoing. Goal was expanded to include understanding of both biological and ecological effects.
Objective 1: Improve the quality of ambient water and sediment in impaired or stressed segments to attain standards and criteria.	Efforts are ongoing. CBBEP and partners continue to support efforts to improve impaired and stressed water bodies.
WSQ-1: Support the implementation of plans and projects to improve water and sediment quality in identified segments.	Efforts are ongoing. Edited to reflect CBBEP's supportive role in implementation by partners. Expanded to include support of both plans and projects.
WSQ-2: Continue to support permitting rules for mariculture and aquaculture.	Efforts are ongoing. Edited to show that efforts are on-going. Removed specific reference to shrimp farms in order to show broader focus on all mariculture/aquaculture operations.
Objective 2: Assess total loadings, transport pathways, sources, and fates of constituents.	Efforts are ongoing. Expanded beyond just quantifying loadings and identifying transport pathways - now includes identification of sources and fates of constituents.
WSQ-3: Support efforts to quantify total constituent loadings and identify possible transport pathways, sources, and fates.	Efforts are ongoing. Expanded beyond just quantifying loadings and identifying transport pathways - now includes identification of sources and fates of constituents. Edited to reflect CBBEP's supportive role of partner efforts.
WSQ-4: Support analyses of the biological and ecological effects of constituents.	Efforts are ongoing. Changed to reflect CBBEP's supportive role of multiple partner assessments of biological and ecological effects of constituents.
Objective 3: Evaluate and assess segment-specific water and sediment quality standards.	Efforts are ongoing. Edited to show the continued need for CBBEP and partners to evaluate and assess water and sediment quality standards.
WSQ-5: Ensure that water and sediment quality standards and criteria are adequate and appropriate.	Edited to reflect proper terminology for water and sediment quality standards and criteria.

### LEGEND

No change from 1998 Bays Plan

Goal, objective, or action from 1998 Bays Plan was revised

Addition of new goal, objective, or action

Deletion of a goal, objective, or action from 1998 Bays Plan

**NONPOINT SOURCE MANAGEMENT ACTION PLAN**

Goal, Objective, Action	Rationale
Goal 1: Improve management of all loadings to the bay system.	Efforts are ongoing. CBBEP and partners continue to support efforts to improve management of loadings to the bay.
Objective 1: Assess and improve nonpoint source management throughout the region.	Edited to show that focus has changed from development of plans to assessment of existing nonpoint source management.
NPS-1: Assist local governments, small businesses, industries, and organizations in their efforts to reduce loadings.	Proposed action reflects CBBEP's efforts to work with a broad group of potential partners on multiple initiatives to reduce loadings.
NPS-2: Provide assistance to small businesses and industries in the region that are subject to the TPDES permit program or have point or nonpoint source control needs.	Efforts are ongoing. Modified to show change from NPDES permit to TPDES permit. Also broadened to include both point and nonpoint source control needs.
NPS-3: Assist local governments and organizations to implement On-Site Sewage Facility (OSSF) programs and projects.	Efforts are ongoing. Broadened to include assistance of both local governments and other organizations involved with implementing both OSSF programs and projects.
NPS-4: Support agricultural water quality management plans, programs, and projects.	Efforts are ongoing. Edited to reflect CBBEP supportive role in the development and implementation of plans, programs, and projects.
NPS-5: Support efforts to improve the quality of urban stormwater runoff.	Proposed action was added to specifically emphasize the need to address stormwater runoff issues in the Coastal Bend.
NPS-1: Develop a regional handbook of urban nonpoint source pollution Best Management Practices for voluntary use by local governments seeking to implement nonpoint source pollution prevention programs	This action item was completed. In order to build on previous accomplishments, a new NPS-1 is proposed above.

**LEGEND**

No change from 1998 Bays Plan

Goal, objective, or action from 1998 Bays Plan was revised

Addition of new goal, objective, or action

Deletion of a goal, objective, or action from 1998 Bays Plan

**FRESHWATER RESOURCES ACTION PLAN**

Goal, Objective, Action	Rationale
Goal 1: Optimize regional freshwater inflows to meet long-term human and environmental needs.	Efforts are ongoing. Modified to more accurately reflect efforts by CBBEP and partners to optimize inflows through broader efforts than just planning.
Objective 1: Support the development and implementation of regional and local water management strategies.	Efforts are ongoing. Changed to show the need for CBBEP and partners to support implementation of strategies and move beyond just planning.
FW-1: Improve scientific understanding of the freshwater, nutrient, and sediment supply needs of the estuaries.	Efforts are ongoing. Expanded to include freshwater, nutrient, and sediment needs of the estuary - not just freshwater.
FW-2: Assist the Coastal Bend Regional Water Planning Group and regional water managers to incorporate environmental needs in comprehensive planning.	Efforts are ongoing. Action still accurately reflects CBBEP's support of Coastal Bend Regional Water Planning and Group and other water planning groups/organizations.
FW-3: Support efforts that optimize environmental flows to the bays and estuaries of the Coastal Bend.	Efforts are ongoing. Edited to emphasize "optimal" environmental flows as the proper terminology since "increased" freshwater inflows may not be the standard throughout the entire year. Also, broadened to reflect multi-faceted efforts by CBBEP and partners to optimize environmental flows - not just focused on direct contributions of water.
FW-4: Effectively communicate the purpose and results of environmental flow efforts.	Efforts are ongoing. Changed to reflect the need to communicate about a broad scope of environmental flow efforts by CBBEP and partners - not just a need to communicate about plans and programs.

**LEGEND**

No change from 1998 Bays Plan

Goal, objective, or action from 1998 Bays Plan revised

Proposed addition of new goal, objective, or action

Proposed deletion of a goal, objective, or action from 1998 Bays Plan

**PUBLIC EDUCATION AND OUTREACH ACTION PLAN**

Goal, Objective, Action	Rationale
Goal 1: Increase public understanding and stewardship of bay resources.	Goal was edited to more concisely state the overall goal of the public education and outreach program.
Objective 1: Implement an innovative public education and outreach strategy to improve understanding and stewardship of bay resources.	Objective was edited slightly to capture the idea that CBBEP does not just "develop and distribute information." Other strategies are used to implement the public education and outreach strategy (e.g., public forums, stewardship activities).
PEO-1: Develop and distribute information and outreach materials for targeted audiences.	Efforts are ongoing by CBBEP to use a variety of techniques for distributing information about relevant topics to targeted audiences. The action was edited to better capture these broad range of efforts.
PEO-2: Support events that focus attention on bay resources and uses.	Action was broadened beyond just the scope of Earth Day - Bay Day to include other events that are supported by CBBEP and their partners.
PEO-3: Promote public participation in stewardship activities.	Proposed action will support CBBEP's efforts to conduct stewardship activities (e.g., planting days, clean-up events) that involve partners and the general public.
PEO-4: Support public meetings that improve understanding and stewardship of bay resources.	Action was broadened to include a larger range of public events that are supported by CBBEP and partners - public forums are still a component of this but other meetings are also supported.
PEO-5: Promote recognition of individuals and programs that protect our bays and estuaries.	Edited to reflect recognition programs for both individuals <u>and</u> programs. Also removed reference of promoting public participation since this is now captured more clearly in PEO-3.
Objective 2: Implement a regional approach to develop and distribute environmental education curricula for Coastal Bend school districts.	CBBEP has greatly expanded its K-12 educational programming since the 1998 Bays Plan was published. As a result, K-12 education will have a separate chapter in the revised Bays Plan. Curriculum development and updates will be covered in this chapter.
PEO-3: Provide curricula for all levels of environmental education and promote greater use of outdoor educational facilities as a means of reaching children, young people, and adults.	CBBEP has greatly expanded its K-12 educational programming since the 1998 Bays Plan was published. As a result, K-12 education will have a separate chapter in the revised Bays Plan. Curriculum development and updates will be covered in this chapter. In addition, CBBEP has acquired several properties, which have been the focus area for their educational programming.
Objective 3: Promote public participation in environmental stewardship programs to increase awareness and instill individual responsibility.	Objective 1 was expanded to incorporate stewardship programs as part of the broader public education and outreach strategy. There was no longer a need for Objective 3.

**LEGEND**

No change from 1998 Bays Plan

Goal, objective, or action from 1998 Bays Plan was revised

Addition of new goal, objective, or action

Deletion of a goal, objective, or action from 1998 Bays Plan

## DELTA DISCOVERY ACTION PLAN

Goal, Objective, Action	Rationale
Goal: Increase environmental literacy and stewardship of coastal watersheds through formal and informal education utilizing the Nueces Delta Preserve, other CBBEP properties, and partner sites.	CBBEP has greatly expanded its K-12 educational programming since the 1998 Bays Plan was published. Formal education programs are hosted at CBBEP facilities and at partner sites. This goal was developed to reflect the purpose of these programs.
Objective 1: Enhance the capacity of students to think critically about the environment and their role in watershed stewardship by connecting them to nature through guided discovery.	Through hands-on, guided discovery, the CBBEP formal education programs are designed to connect classroom learning to the real world, build critical thinking, and foster stewardship.
DD-1: Provide authentic field based experiences for PK-12 students and beyond that are aligned to cross curricular state/national standards.	Action was developed to reflect hands-on field experiences provided by CBBEP at the Nueces Delta, other CBBEP properties, and partner sites. Curriculum is field based and aligned with state/national standards, providing students a connection between classroom instruction and practical application through outdoor experiences.
DD-2: Provide professional development and resources for educators that allow them to connect instruction with real-world application.	Action was added to reflect the professional development workshops and resources provide by CBBEP to educators and interpreters. These tools are designed to allow participants to more readily incorporate the outdoor experiences into formal classroom instruction and connect instruction to real world application.
DD-3: Identify and promote partnership opportunities with like-minded organizations to develop and/or deliver programs that support the Delta Discovery mission of environmental education and coastal watershed protection.	Action was added to reflect collaborative programs that CBBEP educators will work on with partner organizations. Several of these partnership already exist and additional collaborative programs are likely to occur in the future.
Objective 2: Expand opportunities for children, adults, and families to participate in experiential outdoor learning programs.	CBBEP properties and partner sites provides ideal opportunities for informal education programs that are designed to connect children, adults, and families with nature and is looking to expand these programs.
DD-4: Provide outdoor learning opportunities that facilitate hands-on investigations of and experiences in the natural environment.	Action was added to reflect the informal education programs that CBBEP will offer that are geared towards children, adults, and families. These efforts are ongoing and will continue in the future.

### LEGEND

No change from 1998 Bays Plan

Goal, objective, or action from 1998 Bays Plan was revised

Addition of new goal, objective, or action

Deletion of a goal, objective, or action from 1998 Bays Plan

# APPENDIX B

## Threatened and Endangered Species

TABLE 7. LIST OF ENDANGERED AND THREATENED SPECIES FOUND WITHIN THE CBBEP 12-COUNTY PROGRAM AREA. (SOURCE: TEXAS PARKS AND WILDLIFE DEPARTMENT, WILDLIFE DIVISION, DIVERSITY AND HABITAT ASSESSMENT PROGRAMS, 2016).

COMMON NAME	SCIENTIFIC NAME	FEDERAL	STATE
<b>AMPHIBIANS</b>			
Black-spotted newt	<i>Notophthalmus meridionalis</i>		T
South Texas siren (large form)	<i>Siren</i> sp 1		T
Mexican treefrog	<i>Smilisca baudinii</i>		T
Sheep frog	<i>Hypopachus variolosus</i>		T
<b>BIRDS</b>			
Brown Pelican	<i>Pelecanus occidentalis</i>	DL	
Reddish Egret	<i>Egretta rufescens</i>		T
White-faced Ibis	<i>Plegadis chihi</i>		T
Wood Stork	<i>Mycteria americana</i>		T
Bald Eagle	<i>Haliaeetus leucocephalus</i>	DL	T
White-tailed Hawk	<i>Buteo albicaudatus</i>		T
Zone-tailed Hawk	<i>Buteo albonotatus</i>		T
Northern Aplomado Falcon	<i>Falco femoralis septentrionalis</i>	LE	E
Peregrine Falcon	<i>Falco peregrinus</i>	DL	T
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	DL	T
Arctic Peregrine Falcon	<i>Falco peregrinus tundrius</i>	DL	
Attwater's Greater Prairie-Chicken	<i>Tympanuchus cupido attwateri</i>	LE	E
Whooping Crane	<i>Grus americana</i>	LE	E
Piping Plover	<i>Charadrius melodus</i>	LT	T
Eskimo Curlew	<i>Numenius borealis</i>	LE	E
Red Knot	<i>Calidris canutus rufa</i>	T	
Interior Least Tern	<i>Sterna antillarum athalassos</i>	LE	E
Sooty Tern	<i>Sterna fuscata</i>		T
Cactus Ferruginous Pygmy-Owl	<i>Glaucidium brasilianum cactorum</i>		T
Northern Beardless-Tyrannulet	<i>Camptostoma imberbe</i>		T
Rose-throated Becard	<i>Pachyramphus aglaiae</i>		T
Tropical Parula	<i>Parula pitaiyumi</i>		T
Texas Botteri's Sparrow	<i>Aimophila botterii texana</i>		T
<b>FISHES</b>			
Opossum pipefish	<i>Microphis brachyurus</i>		T
Smalltooth sawfish	<i>Pristis pectinata</i>	LE	E
<b>MAMMALS</b>			
Southern yellow bat	<i>Lasiurus ega</i>		T
Coues' rice rat	<i>Oryzomys couesi</i>		T
Red wolf	<i>Canis rufus</i>	LE	E
Black bear	<i>Ursus americanus</i>		T
Louisiana black bear	<i>Ursus americanus luteolus</i>	DL	T
White-nosed coati	<i>Nasua narica</i>		T
Ocelot	<i>Leopardus pardalis</i>	LE	E
Jaguarundi	<i>Herpailurus yaguarondi</i>	LE	E

TABLE 7 (CONT'D.) LIST OF ENDANGERED AND THREATENED SPECIES FOUND WITHIN THE CBBEP 12-COUNTY PROGRAM AREA. (SOURCE: TEXAS PARKS AND WILDLIFE DEPARTMENT, WILDLIFE DIVISION, DIVERSITY AND HABITAT ASSESSMENT PROGRAMS, 2016).

COMMON NAME	SCIENTIFIC NAME	FEDERAL	STATE
Jaguar	<i>Panthera onca</i>	LE	E
West Indian manatee	<i>Trichechus manatus</i>	LE	E
<b>REPTILES</b>			
Loggerhead sea turtle	<i>Caretta caretta</i>	LT	T
Green sea turtle	<i>Chelonia mydas</i>	LT	T
Atlantic hawksbill sea turtle	<i>Eretmochelys imbricata</i>	LE	E
Kemp's Ridley sea turtle	<i>Lepidochelys kempii</i>	LE	E
Leatherback sea turtle	<i>Dermochelys coriacea</i>	LE	E
Texas tortoise	<i>Gopherus berlandieri</i>		T
Reticulate collared lizard	<i>Crotaphytus reticulatus</i>		T
Texas horned lizard	<i>Phrynosoma cornutum</i>		T
Texas scarlet snake	<i>Cemophora coccinea lineri</i>		T
Black-striped snake	<i>Coniophanes imperialis</i>		T
Texas indigo snake	<i>Drymarchon melanurus erebennus</i>		T
Northern cat-eyed snake	<i>Leptodeira septentrionalis septentrionalis</i>		T
Timber rattlesnake	<i>Crotalus horridus</i>		T
<b>MOLLUSKS</b>			
Golden orb	<i>Quadrula aurea</i>	C	T
<b>PLANTS</b>			
South Texas ambrosia	<i>Ambrosia cheiranthifolia</i>	LE	E
Black lace cactus	<i>Echinocereus reichenbachii var albertii</i>	LE	E
Walker's manioc	<i>Manihot walkerae</i>	LE	E
Slender rushpea	<i>Hoffmannseggia tenella</i>	LE	E
LE or LT = Federally Listed Endangered or Threatened; PE or PT = Federally Proposed Endangered or Threatened; C = Federal Candidate for Listing; DL or PDL = Federally Delisted or Proposed for Delisting; E or T = State Listed Endangered or Threatened; NT = Not tracked or no longer tracked by the State			

# APPENDIX C

## Species of Greatest Conservation Need

TABLE 8. LIST OF SPECIES OF GREATEST CONSERVATION NEED (SGCN) WITHIN THE CBBEP 12-COUNTY PROGRAM AREA. (SOURCE: TEXAS PARKS AND WILDLIFE DEPARTMENT, WILDLIFE DIVISION, DIVERSITY AND HABITAT ASSESSMENT PROGRAMS, 2016).

AMPHIBIANS	REPTILES	PLANTS (cont.)
Southern Crawfish Frog ( <i>Lithobates areolatus areolatus</i> )	Texas diamondback terrapin ( <i>Malaclemys terrapin littoralis</i> )	Velvet spurge ( <i>Euphorbia innocua</i> )
BIRDS	Spot-tailed earless lizard ( <i>Holbrookia lacerata</i> )	Low spurge ( <i>Euphorbia peplidion</i> )
Snowy Plover ( <i>Charadrius alexandrinus</i> )	Keeled earless lizard ( <i>Holbrookia propinqua</i> )	Sand sheet leaf-flower ( <i>Phyllanthus abnormis</i> var. <i>riograndensis</i> )
Western Snowy Plover ( <i>Charadrius alexandrinus nivosus</i> )	Mexican blackhead snake ( <i>Tantilla atriceps</i> )	Texas milk vetch ( <i>Astragalus reflexus</i> )
Mountain Plover ( <i>Charadrius montanus</i> )	PLANTS	Drummond's rushpea ( <i>Caesalpinia drummondii</i> )
Western Burrowing Owl ( <i>Athene cunicularia hypugaea</i> )	Texas shrimp-plant ( <i>Yeatesia platystegia</i> )	South Texas rushpea ( <i>Caesalpinia phyllanthoides</i> )
Sprague's Pipit ( <i>Anthus spragueii</i> )	Roughseed sea-purslane ( <i>Sesuvium trianthemoides</i> )	Stinking rushpea ( <i>Pomaria austrotexana</i> )
Henslow's Sparrow ( <i>Ammodramus henslowii</i> )	Shortcrown milkvine ( <i>Matelea brevicoronata</i> )	Net-leaf bundleflower ( <i>Desmanthus reticulatus</i> )
Sennett's Hooded Oriole ( <i>Icterus cucullatus sennetti</i> )	Falfurrias milkvine ( <i>Matelea radiata</i> )	Sand Brazos mint ( <i>Brazoria arenaria</i> )
Audubon's Oriole ( <i>Icterus graduacauda audubonii</i> )	Arrowleaf milkvine ( <i>Matelea sagittifolia</i> )	Tharp's rhododon ( <i>Rhododon angulatus</i> )
FISHES	Plains gumweed ( <i>Grindelia oolepis</i> )	Amelia's abronia ( <i>Abronia ameliae</i> )
American eel ( <i>Anguilla rostrata</i> )	Coastal gay-feather ( <i>Liatris bracteata</i> )	South Texas gilia ( <i>Gilia ludens</i> )
Texas pipefish ( <i>Syngnathus affinis</i> )	Welder machaeranthera ( <i>Psilactis heterocarpa</i> )	Texas almond ( <i>Prunus minutiflora</i> )
MAMMALS	Burridge greenthread ( <i>Thelesperma burridgeanum</i> )	Texas peachbush ( <i>Prunus texana</i> )
Aransas short-tailed shrew ( <i>Blarina hylophaga plumbea</i> )	Wright's trichocoronis ( <i>Trichocoronis wrightii</i> var. <i>wrightii</i> )	Bailey's ballmoss ( <i>Tillandsia baileyi</i> )
Cave myotis bat ( <i>Myotis velifer</i> )	Threeflower broomweed ( <i>Thurovia triflora</i> )	Buckley's spiderwort ( <i>Tradescantia buckleyi</i> )
Maritime pocket gopher ( <i>Geomys personatus maritimus</i> )	Large selenia ( <i>Selenia grandis</i> )	South Texas spikesedge ( <i>Eleocharis austrotexana</i> )
Plains spotted skunk ( <i>Spilogale putorius interrupta</i> )	Yellow-flowered alicocha ( <i>Echinocereus papillosus</i> )	Indianola beakrush ( <i>Rhynchospora indianolensis</i> )
INSECTS	Jones' nailwort ( <i>Paronychia jonesii</i> )	Elmendorf's onion ( <i>Allium elmendorffii</i> )
Los Olmos tiger beetle ( <i>Cicindela nevadica olmosa</i> )	Bristle nailwort ( <i>Paronychia setacea</i> )	Refugio rain-lily ( <i>Zephyranthes refugiensis</i> )
Tibial scarab ( <i>Anomala tibialis</i> )	Kleberg saltbush ( <i>Atriplex klebergorum</i> )	Lila de los llanos ( <i>Echeandia chandleri</i> )
Texas asaphomyian tabanid fly ( <i>Asaphomyia texensis</i> )	Texas stonecrop ( <i>Lenophyllum texanum</i> )	Awnless bluestem ( <i>Bothriochloa exaristata</i> )
Manfreda giant-skipper ( <i>Stallingsia maculosus</i> )	Tree dodder ( <i>Cuscuta exaltata</i> )	Texas windmill-grass ( <i>Chloris texensis</i> )
Superb grasshopper ( <i>Eximacris superbum</i> )	Cory's croton ( <i>Croton coryi</i> )	Mexican mud-plantain ( <i>Heteranthera mexicana</i> )

# APPENDIX D

Stakeholders participating in Bays Plan revision process

Human Uses	
Jake Herring	Director Land Conservation and Stewardship
Art Morris	Citizen
Gary Moore	City of Portland
Jace Tunnell	Mission-Aransas National Estuarine Research Reserve
William Zagorski	San Patricio County
Jesse Solis	Texas General Land Office
Jennifer Lawrence	Texas General Land Office
Perry Trial	Texas Parks and Wildlife Department

Maritime Commerce and Dredging	
Rosario Martinez	Senior Project Manager
Colleen Johnson	360factors
Louis Adams	Aransas and Corpus Christi Pilots
Tom Salazar	Corpus Christi Area Oil Spill Control Association
Bob Paulison	Port Industries of Corpus Christi
Dan Koesema	Port of Corpus Christi Authority
Paul Carangelo	Port of Corpus Christi Authority
Howard Gillespie	Texas Department of Transportation - Ferry Operations
Jimmy Martinez	Texas General Land Office
Hans Miller	United States Army Corps of Engineers
Leslie Olson	United States Army Corps of Engineers
Steve Howard	United States Army Corps of Engineers
Joe Harrington	Valero

Habitat and Living Resources	
Rosario Martinez	Senior Project Manager
Jake Herring	Director of Land Conservation and Stewardship
David Newstead	Director of Coastal Bird Program
Owen Fitzsimmons	Senior Conservation Biologist
Barbara Gurtner	City of Rockport
Megan Robillard	Harte Research Institute for Gulf of Mexico Studies
Elizabeth Smith	International Crane Foundation
Katie Swanson	Mission-Aransas National Estuarine Research Reserve
Mary Kay Skoruppa	Naismith Engineering
Ryan Fikes	National Wildlife Federation
James Dodson	San Antonio Bay Partnership
Michael Womack	South Texas Botanical Gardens
Aaron Baxter	Texas A&M University - Corpus Christi
James Simons	Texas A&M University - Corpus Christi
Jennifer Lawrence	Texas General Land Office
Jesse Solis	Texas General Land Office
Jackie Robinson	Texas Parks and Wildlife Department
Paul Silva	Texas Parks and Wildlife Department

Habitat and Living Resources (cont'd)	
Chad Stinson	United States Fish and Wildlife Service
Beau Hardegree	United States Fish and Wildlife Service
Ken Dunton	University of Texas Marine Science Institute

Water and Sediment Quality / Freshwater Resources	
Rae Mooney	Project Manager
Sharon Bailey Lewis	City of Corpus Christi
Brittany Mouttet	City of Corpus Christi
Nikki Gordon	City of Corpus Christi
Philippe Tissot	Conrad Blucher Institute
Jace Tunnell	Mission-Aransas National Estuarine Research Reserve
Katie Swanson	Mission-Aransas National Estuarine Research Reserve
Alicia Walker	National Park Service
Rocky Freund	Nueces River Authority
Adriana Leiva	Texas Parks and Wildlife Department
Brandi Reese	Texas A&M University - Corpus Christi
Jeremy Conkle	Texas A&M University - Corpus Christi
Jeffrey Turner	Texas A&M University - Corpus Christi
Xinping Hu	Texas A&M University - Corpus Christi
Simon Geist	Texas A&M University - Corpus Christi
Terry Palmer	Texas A&M University - Corpus Christi
Lee Schroer	Texas General Land Office
Alex Nunez	Texas Parks and Wildlife Department
Brian Koch	Texas State Soil and Water Conservation Board
Ken Dunton	University of Texas Marine Science Institute

Environmental Education and Outreach	
Kathryn Tunnell	Communications Manager
Lari Jo Johnston	Director of Environmental Education
Leigh Perry	Environmental Education Coordinator
Josh Sendejar	Environmental Education Assistant
Manny Cantu	City of Corpus Christi - Oso Bay Wetlands Preserve
Amanda Rose	Corpus Christi Independent School District
Sarah Coles	Corpus Christi Museum of Science and History
Natalie Bernard	Gregory-Portland Independent School District
Carolyn Rose	Mission-Aransas National Estuarine Research Reserve
Kristin Evans	Texas State Aquarium
Sally Palmer	University of Texas Marine Science Institute
Crystal Mead	Wildlife in Focus

# APPENDIX E

Summary of public comments received and responses

# APPENDIX F

Research Needs Identified During "The Bays Plan, 2nd ed."

**CC-1: Facilitate and support studies to better project and understand the biological, chemical, physical, and ecological effects of climate change.**

- Research and monitoring of key abiotic parameters related to climate variability (e.g., temperature, precipitation, salinity, dissolved oxygen, pH, carbon dioxide, water level).
- Assessments of climate change impacts on ecosystem structure and function, including studies of the interaction between climate change and existing stressors (e.g., invasive species, urban development).
- Improved/refined modeling (e.g., SLAMM) of future climate change impacts on local resources.
- Improved/refined climate change vulnerability assessments.

**BD-1: Support activities to reduce the amount of debris reaching the bays.**

- Improve efforts to remove improperly disposed of solid waste from stormwater drainage systems.

**PH-1: Support efforts to protect recreational water quality through studies on waterborne health issues, including pathogens, chemicals, and Harmful Algal Blooms.**

- Water quality monitoring programs that provide notifications to recreational users (e.g., Texas Beach Watch, Harmful Algal Bloom hotline).
- Support efforts to better understand the impacts of waterborne pathogens (e.g., *Vibrio vulnificus*) and HABs (e.g., red tide) on recreational water quality.

**PH-2: Support health risk assessments associated with consumption and handling of seafood.**

- Support efforts to collect sufficient fish and shellfish data to be used in human consumption risk assessments from selected subsections of the project area.
- Determine sources of pollutants related to fish and shellfish consumption risk assessments.

**MC-3: Support efforts to maintain and improve the Vessel Traffic Information System and any additional navigational aids, such as the Physical Oceanographic Real-Time System (PORTS).**

- Installation, and modification of electronic monitors in Corpus Christi Bay and its approaches to provide real-time wind, tide, and current information to mariners via a phone, radio, or internet link.
- Assess the need for a Vessel Traffic System.

**MC-6: Continue to maintain and improve regional oil spill response capability.**

- Evaluate and prioritize high-risk areas based on environmental, social, and public health vulnerabilities. Incorporate this information into contingency planning documents.
- Evaluate alternative spill response equipment and technologies in conjunction with equipment deployment.

**MC-7: Continue to maintain and improve hazardous spill response planning and resources to ensure public protection.**

- Determine areas where the public is at greatest risk from accidental spills/releases of hazardous materials.

**MC-8: Support data management systems to locate existing pipelines and points of contact for current ownership.**

- For existing marine pipeline data management systems, identify data gaps and evaluate opportunities for potential improvements (e.g., digitization, web interface).

**HLR-1: Preserve functional, natural habitats of all major types.**

- Use publicly available mapping platforms to identify and inventory the current location and protection status of all natural habitat types within the project area.
- Prioritize habitat types and geographic areas based on needs, stressors, and threats, taking into account current and future impacts such as climate change and coastal development.

**HLR-2: Restore and enhance degraded habitats and create new habitats where feasible.**

- Identify habitat types and geographic areas for potential restoration, enhancement, and creation projects.
- Prioritize habitat types and geographic areas based on needs, stressors, and threats, taking into account current and future impacts such as climate change and coastal development.

**HLR-3: Support efforts to identify and minimize adverse impacts of activities and operations on coastal habitats.**

- Establish a baseline for determining habitat impacts from activities/operations by quantifying and characterizing the key components of coastal habitats.
- Identify stakeholders impacted by loss and/or degradation of habitat.

**HLR-4: Develop and implement adaptive management plans to ensure sustainability for species of concern.**

Develop management plans for species of concerns.

**HLR-6: Support effective commercial and recreational fisheries management.**

Examine TPWD fisheries monitoring data to better understand major fisheries management issues.

**HLR-7: Support efforts to identify and minimize adverse impacts of activities and operations on coastal living resources.**

Establish a baseline for determining impacts from activities and operations by quantifying species abundance.

Identify stakeholders impacted by loss and/or degradation of species.

**HLR-8: Improve understanding of harmful algal blooms and their impact on living resources.**

Monitor coastal waters to assess critical concentrations of HAB bloom activity.

Conduct experimental research to better understand the factors that trigger and sustain HAB bloom development. In addition, determine the effects of toxins and secondary impacts on living coastal resources.

**HLR-9: Develop and support adaptive management plans to minimize introductions and impacts from invasive species.**

Identify the distribution and ecological impacts associated with existing invasive and nuisance species.

Identify techniques for the treatment and control of current and potential invasive/nuisance species, and conduct demonstration projects to determine the effectiveness of these techniques.

**CB-1: Implement successful waterbird management actions to reverse declines in colonial nesting waterbirds in the Coastal Bend.**

Monitor population trends of nesting colonial waterbirds. If necessary, identify potential causes of declines and develop management strategies to address those causes.

Maintain an active role in the Texas Colonial Waterbird Society and participate annually in the Texas Colonial Waterbird Survey.

**CB-2: Advance the conservation of migratory shorebirds through research, monitoring, and stewardship. shorebird species that utilize the Central Flyway and visit the Coastal Bend.**

Conduct monitoring of sites of local importance to shorebirds, assess their threats, and work with willing landowners/managers to develop and implement appropriate management actions.

Conduct and facilitate projects that fill essential knowledge gaps related to migratory connectivity of species of conservation concern, through use of traditional methods, as well as innovative technologies.

**WSQ-1: Support the implementation of plans and projects to improve water and sediment quality in identified segments.**

Assessments and planning that address problematic levels of heavy metals, dissolved oxygen, bio-markers of fecal pollution, and other water quality issues identified by stakeholders for specific portions of the project area that are of concern (e.g., low dissolved oxygen in Corpus Christi Bay).

**WSQ-2: Continue to support permitting rules for mariculture and aquaculture.**

Research on water quality and invasive species issues associated with aquaculture and mariculture techniques and procedures.

**WSQ-3: Support efforts to quantify total constituent loadings and identify possible transport pathways, sources, and fates.**

Coordinate additional data acquisition, including citizen science programs, to determine relative contributions and loadings from point and non-point sources.

Coordinate additional data acquisition to determine transport pathways, sources, and fates of constituents.

Refinement of existing models and the development of new models related to constituent loadings, transport pathways, sources, and fates.

**WSQ-4: Support analyses of the biological and ecological effects of constituents.**

Studies and projects that determine the responses of flora/fauna (i.e., biological, chemical, and physiological changes) and ecological effects to varying levels of constituents entering the bays.

Studies and projects that examine the potential interactions among constituents, as well as the interaction between constituents and environmental parameters (e.g., temperature, dissolved oxygen, salinity).

**WSQ-5: Ensure that water and sediment quality standards and criteria are adequate and appropriate.**

Studies that examine water and sediment quality standards and criteria, as well as biological criteria, for various portions of the project area to coincide with the State's review process or as needed.

**NPS-5: Support efforts to improve the quality of urban stormwater runoff.**

Studies and assessments that improve the quality of urban stormwater runoff.

**FW-1: Improve scientific understanding of the freshwater, nutrient, and sediment supply needs of the estuaries.**

Continue use of current methods and assess new methods of monitoring salinity; productivity of bays; inflow quantity and quality; direct bay rainfall; and climate trends and forecasting.

Continue to develop and assess methods for linking environmental flows to the ecological health and productivity of Coastal Bend bays and estuaries.

Continue to coordinate and assess new data collection needs, identify new locations, and deploy new streamflow and rainfall gauges (e.g., tidal river flow index-velocity gauges) throughout the project area as needed.

**FW-3: Support efforts that optimize environmental flows to the bays and estuaries of the Coastal Bend.**

Continue to implement projects and assess the ecology and economics of beneficial reuses of wastewater.

Investigate the feasibility and environmental impacts of alternative freshwater supply sources such as desalinization and aquifer storage and recovery.

# APPENDIX G

CBBEP By-laws, MOUS, and Interlocal Agreements

September 30, 1999  
**BY-LAWS**  
**OF**  
**COASTAL BEND BAYS & ESTUARIES PROGRAM, INC.**

This **COASTAL BEND BAYS & ESTUARIES PROGRAM, INC.**, is being created based on six basic principles:

- Governance of the Coastal Bend Bays & Estuaries Program, Inc. ("Program") will include local governments, based on their financial participation, State and Federal resource agencies, and other diverse stakeholders.
- Local government participation is purely voluntary. A local government can withdraw at any time without penalty, subject only to meeting its obligation as to any financial commitments previously made.
- The Program will have no powers of taxation or regulation, nor formal permit review role.
- Program activities will only be conducted within the territorial jurisdiction of a local government with the consent of that government.
- The Program is authorized to accept funding from Federal, State, local, and private sources to carry out its activities.
- The Program will be housed and administratively supported by the Port of Corpus Christi Authority, with policy decisions made by the Program's Executive Council.

The Program is created pursuant to the Interlocal Agreement entered into by some of the participants to implement the Bays Plan, and is hereby adopted by reference.

The management conference of the Corpus Christi Bay National Estuary Program has developed and unanimously adopted the Coastal Bend Bays Plan (the "Bays Plan") for the program area, which was presented by Governor George W. Bush to the EPA for approval and approved by the EPA on February 26, 1999. The Bays Plan is specifically incorporated herein by reference and made a part of these by-laws. The Bays Plan defines the program area as lands and waters within Aransas, Bee, Brooks, Duval, Jim Wells, Kenedy, Kleberg, Live Oak, McMullen, Nueces, Refugio and San Patricio Counties, but focuses primarily upon the coastal counties -- Aransas, Kenedy, Kleberg, Nueces, Refugio, and San Patricio Counties.

The Bays Plan seeks to ensure that the Coastal Bend bays and estuaries remain a vibrant part of the region's environmental and economic landscape by preserving and enhancing their roles as a recreational resource, international seaport, and habitat for fish and wildlife.

The Bays Plan addresses the Coastal Bend Bays Priority Issues, including limited freshwater inflows into bays and estuaries, the condition of living resources, loss of wetlands and estuarine habitats, degradation of water and sediment quality, altered estuarine circulation, bay debris, and public health issues. The Bays Plan encompasses six Action Plans, including human uses, which includes actions related to bay tourism and recreation, bay debris, public health, and shoreline management; maritime commerce and dredging; habitat and living resources; water and sediment quality, which includes issues relating to point sources and nonpoint source runoff from both agriculture and urban sources; freshwater resources; and public education and outreach. In addition, the Bays Plan includes a detailed implementation strategy, governance structure, regional monitoring strategy, and Federal consistency review procedures. The Bays Plan emphasizes regional cooperation and flexibility that allows the Program to select the most cost-effective and environmentally beneficial bay improvement options for their communities to meet the specific goals of the Bays Plan. Promotion of viable and enhanced local economies was established as a key element of the Bays Plan.

The directors desire to adopt an organizational framework to ensure that the Bays Plan is properly and effectively implemented.

By the creation of the Coastal Bend Bays & Estuaries Program, Inc., the directors hope to create a consensus based organization that seeks mutually agreeable solutions to problems the participants hold in common. Absolutely nothing in these by-laws is to be construed to usurp any prerogative of any unit of local government, political subdivision of the State of Texas, or State agency, nor place any restriction on such a unit. When used herein, the term "local government" shall mean a unit of general local government that is a county governed by a commissioners court, or a city or town governed by a municipal body, under the Texas Open Meetings Act, Chapter 551 of the Texas Government Code.

#### ARTICLE I Organization

Section 1.           The name of this Program is **Coastal Bend Bays & Estuaries Program, Inc.**

Section 2.           The office of this Program is  
1305 N. Shoreline, Suite 205  
Corpus Christi, Texas 78401

Section 3.           The principal office of this Program shall be 1305 N. Shoreline, Suite 205, Corpus Christi, Texas 78401, but may be moved from time to time and from place to place by vote of the Executive Council.

Section 4. The Program may also have offices at such other places within the State of Texas as the Board of Directors may from time to time determine.

Section 5. The Program will maintain a registered office and registered agent. The Board of Directors may change the registered office and registered agent as permitted in the Texas Non-Profit Corporation Act.

Section 6. The specific and primary purpose for which this Program is formed is to implement the Bays Plan by whatever plans, projects and programs that shall be approved and adopted by the Program.

Section 7. This Program shall possess all the rights and powers granted by the laws of Texas to this Program or to any non-profit corporation, and may from time to time do any one or more of the acts and things which are necessary or expedient for the administration of the affairs and attainment of the purposes of the Program. The Program shall not pay dividends or otherwise accrue distributable profits or permit the realization of private gain.

Section 8. The Bays Plan shall be subject to review by the Executive Council five (5) years from the effective date, and every five (5) years thereafter.

Section 9. Limitations of Powers:

- a. The Program, the Executive Council, and the Bays Council shall have no powers of taxation or regulation, nor formal permit review role.
- b. The Program shall not authorize or undertake any project within the jurisdiction of a local government, including its extra-territorial jurisdiction, without the consent of that government. Consent will be assumed unless written objection is specifically issued by the local government to the Executive Council.
- c. Any participant in the Program, including any local government, can withdraw at any time without penalty, subject only to meeting its obligations as to any financial commitment previously made.

Article II  
Board of Directors

Section 1. The Board of Directors will manage corporate affairs, except as herein delegated to the Executive Council.

Section 2. The number of members of the Board of Directors which shall constitute the whole Board shall be seven (7). The number of members which shall constitute the whole Board may be changed by resolution approved by 100% of the Board of Directors present and voting at any meeting of the Board. Each member shall

hold office until his or her successor shall qualify. Initially, the Board of Directors of the Coastal Bend Bays & Estuaries Program, Inc. shall consist of seven (7) members, as follows:

- a. A representative of the Bays Council;
- b. A representative of Nueces County;
- c. On a rotating basis, a representative from Aransas, Kleberg, or San Patricio Counties (initially chosen by San Patricio, then Kleberg, then Aransas);
- d. A representative of the City of Corpus Christi;
- e. A representative of the Port of Corpus Christi;
- f. A representative of the Coastal Bend Bays Foundation; and
- g. A representative of the Port Industries of Corpus Christi.

Section 3. The property, business and fiscal affairs of the Program shall be managed by its Board of Directors which may exercise all such powers of the Program and do all such lawful acts and things as are authorized by statute, the Interlocal Agreement, the Coastal Bend Bays Plan and these by-laws, except as herein delegated to the Executive Council. The Board of Directors may establish any committees, task forces, or advisory groups as it deems necessary. The Board of Directors shall create an Audit Committee to ensure that audit findings are implemented, to assist in the audit process, and to provide fiscal monitoring, procurement procedures, travel guidelines, personnel policies, conflict of interest policies and policies regarding the role and responsibilities of individuals serving on the Board of Directors and the Management Conference.

Section 4. Meetings of Board of Directors for any purpose may be held at such time and place within or without the State of Texas as shall be stated in the notice of the meeting. No action will be taken at a meeting held outside of the Program area. Members may attend a meeting by issuing a proxy to someone to attend or vote in their place. Any such proxy will be valid only if it is in writing. Facsimile copies of signatures shall be acceptable on all waivers, consents and proxies.

Section 5. All annual meetings of the Board of Directors shall be held on the fourth Monday of August, if not a legal holiday and if so, then on the first weekday thereafter, unless otherwise determined by the Board. Annually, the Board of Directors shall vote to impanel the seven (7) representatives, above.

Section 6. Written notice of the annual meeting shall be served upon or mailed to each member of the Board at such address as appears on the books of the Program with notice requirement in conformity with the Texas Open Meetings Act.

Section 7. Special meetings of the Board of Directors, for any purpose or purposes, unless otherwise prescribed by statute or

the Interlocal Agreement, may be called by the Chair, the President, the Executive Director of the Program or if requested in writing by any member of the Board of Directors entitled to vote. Such request shall state the purpose or purposes of the proposed meeting.

Section 8. Written notice of a special meeting of the Board of Directors stating the time and place and purpose or purposes thereof, shall be served upon or mailed to each member entitled to vote to such address as appears on the books of the Program with notice requirement in conformity with the Texas Open Meetings Act.

Section 9. A majority of no less than four (4) of the members present in person, or by proxy, shall be requisite and shall constitute a quorum at all meetings of the Board of Directors for the transaction of business, except as otherwise provided by statute, the Interlocal Agreement or these by-laws.

Section 10. When a quorum is present at any meeting, if required, the vote of 83% of the members present in person, or by proxy, and voting for a motion shall decide any question brought before such meeting, unless the question is one upon which by express provisions of the statutes, the Interlocal Agreement, or these by-laws, a different vote is required in which case such express provisions shall govern and control the decision of such question.

Section 11. Whenever under the provisions of the statutes, the Interlocal Agreement, or these by-laws, notice is required to be given to any member, it shall not be construed to mean personal notice, but such notice may be given in writing, by mail postage prepaid, addressed to such member at such address as appears on the books of the Program, and such notice shall be deemed to be given at the time when the same shall be thus mailed.

### Article III Executive Council

Section 1. The number of members of the Executive Council which shall constitute the whole Executive Council shall be eleven (11). The number of members which shall constitute the whole Executive Council may be changed by resolution approved by 100% of the Executive Council present and voting at any meeting of the Executive Council. Each member shall hold office until his or her successor shall qualify. Initially, the Executive Council of the Coastal Bend Bays & Estuaries Program, Inc. shall consist of eleven (11) members, as follows:

- a. A representative of the Bays Council;
- b. A representative of Nueces County;

- c. On a rotating basis, a representative from Aransas, Kleberg, or San Patricio Counties (initially chosen by San Patricio, then Kleberg, then Aransas);
- d. A representative of the City of Corpus Christi;
- e. A representative of the Port of Corpus Christi;
- f. A member of the Texas Legislature chosen by a caucus of the state legislators representing the Coastal Bend Bays & Estuaries program area;
- g. A representative of the Environmental Protection Agency;
- h. A representative of the Texas General Land Office;
- i. A representative of the Texas Natural Resource Conservation Commission;
- j. A representative of the Coastal Bend Bays Foundation; and
- k. A representative of the Port Industries of Corpus Christi.

Section 2. The Executive Council shall manage the implementation of the Coastal Bend Bays Plan and fulfill such other duties as are delegated to it by the Board of Directors. This delegation by the Board of Directors shall not include any power to authorize contracts with a Federal, state or local government or agency. Upon completion of the review, correction and comment of the proposed work plan by the Executive Council, the Executive Director shall submit the work plan to the TNRCC for approval.

Section 3. Meetings of Executive Council for any purpose may be held at such time and place within or without the State of Texas as shall be stated in the notice of the meeting. No action will be taken at a meeting held outside of the Program area. Members may attend a meeting by issuing a proxy to someone to attend or vote in their place. Any such proxy will be valid only if it is in writing. Facsimile copies of signatures shall be acceptable on all waivers, consents and proxies.

Section 4. All annual meetings of the Executive Council shall be held on the fourth Monday of August, if not a legal holiday and if so, then on the first weekday thereafter, unless otherwise determined by the Executive Council. Periodically, the Executive Council shall vote to impanel the eleven (11) representatives above.

Section 5. Written notice of the annual meeting shall be served upon or mailed to each member of the Executive Council at such address as appears on the books of the Program with notice requirement in conformity with the Texas Open Meetings Act.

Section 6. Special meetings of the Executive Council, for any purpose or purposes, unless otherwise prescribed by statute or the Interlocal Agreement, may be called by the Chair, the President, the Executive Director of the Program or if requested in writing by any three (3) members of the Executive Council entitled

to vote. Such request shall state the purpose or purposes of the proposed meeting.

Section 7. Written notice of a special meeting of the Executive Council stating the time and place and purpose or purposes thereof, shall be served upon or mailed to each member entitled to vote to such address as appears on the books of the Program with notice requirement in conformity with the Texas Open Meetings Act.

Section 8. A majority of no less than six (6) of the members present in person, or by proxy, shall be requisite and shall constitute a quorum at all meetings of the Executive Council for the transaction of business, except as otherwise provided by statute, the Interlocal Agreement or these by-laws.

Section 9. When a quorum is present at any meeting, if required, the vote of more than 83% of the members present in person, or by proxy, and voting for a motion shall decide any question brought before such meeting, unless the question is one upon which by express provisions of the statutes, the Interlocal Agreement, or these by-laws, a different vote is required in which case such express provisions shall govern and control the decision of such question.

Section 10. Whenever under the provisions of the statutes, the Interlocal Agreement, or these by-laws, notice is required to be given to any member, it shall not be construed to mean personal notice, but such notice may be given in writing, by mail postage prepaid, addressed to such member at such address as appears on the books of the Program, and such notice shall be deemed to be given at the time when the same shall be thus mailed.

Section 11. Any member of the Executive Council may cause an item to be referred to the Board of Directors.

#### Article IV Bays Council

Section 1. The Bays Council shall be initially comprised of one designated representative of each of the participants in the Program, and such additional persons designated by the Executive Council from time to time. The Bays Council shall oversee the programs, projects and research of the Program, with final approval of the Executive Council or, in certain cases, the Board of Directors. The Bays Council and Executive Council are jointly referred to herein and in the Bays Plan as the Estuary Council.

Section 2. Meetings of Bays Council for any purpose may be held at such time and place within the Program twelve county area as shall be stated in the notice of the meeting. Members may attend a meeting by issuing a proxy to someone to attend or vote in their

place. Any such proxy will be valid only if it is in writing. Facsimile copies of signatures shall be acceptable on all waivers, consents and proxies.

Section 3. Meetings of the Bays Council, for any purpose or purposes, unless otherwise prescribed by statute or the Interlocal Agreement, may be called by the Chair or a Co-Chair of the Bays Council, the Executive Director of the Program or if requested in writing by any three (3) members of the Bays Council entitled to vote. Such request shall state the purpose or purposes of the proposed meeting.

Section 4. Written notice of a meeting of the Bays Council stating the time and place and purpose or purposes thereof, shall be served upon or mailed to each member entitled to vote to such address as appears on the books of the Program with notice requirement in conformity with the Texas Open Meetings Act.

Section 5. A majority of the members present in person, or by proxy, shall be requisite and shall constitute a quorum at all meetings of the Bays Council for the transaction of business, except as otherwise provided by statute, the Interlocal Agreement, or these by-laws.

Section 6. When a quorum is present at any meeting, if required, the vote of more than 50% of the members present in person shall decide any question brought before such meeting, unless the question is one upon which by express provisions of the statutes, the Interlocal Agreement, or these by-laws, a different vote is required in which case such express provisions shall govern and control the decision of such question.

Section 7. Whenever under the provisions of the statutes, the Interlocal Agreement, or these by-laws, notice is required to be given to any member, it shall not be construed to mean personal notice, but such notice may be given in writing, by mail postage prepaid, addressed to such member at such address as appears on the books of the Program, and such notice shall be deemed to be given at the time when the same shall be thus mailed.

Section 8. Any member of the Bays Council may cause an item to be referred to the Executive Council.

#### Article V Management Conference

Section 1. The Executive Council shall oversee and guide a Management Conference consisting of the Executive Council, Bays Council, Scientific-Technical Advisory Committee ("STAC"), and Citizen's Advisory Committee ("CAC"). The Executive Council may establish any additional committees, task forces, or advisory

groups within the Management Conference as it deems necessary for the execution of its responsibilities.

### Bays Council

Section 2. The Executive Council shall appoint an interim Chair of the Bays Council for a period not to exceed 180 days. Within 180 days of convening its first meeting, the Bays Council will elect a permanent Chair or Co-Chairs. The Chair will serve on the Executive Council. The Bays Council shall be specifically responsible for identification of the problems associated with the Program area; compilation of scientific and technical information on the status, trends, and cause of these problems; drafting of proposed amendments to the Coastal Bend Bays Plan ("Bays Plan") to address these problems at the ecosystem level; and determination of the means to implement the Bays Plan. The Bays Council shall work under the authority of the Executive Council to receive and act on advice and project findings from the Scientific/Technical Advisory Committee, Citizen's Advisory Committee, and other sub-committees, task forces, ad hoc advisory groups, etc. created by the Program. In all roles, the Bays Council shall strive to receive the concerns from, and to build consensus among, the user groups, local, state and federal agencies, private industries, environmental groups, the scientific community, and general public, concerning management planning and implementation for the Program area.

### Scientific-Technical Advisory Committee

Section 3. Members shall be appointed by the Executive Council which shall also appoint an interim Chair and Vice-Chair for a period not to exceed 180 days. Within 180 days of convening its first meeting, the STAC will elect a permanent Chair and Vice-Chair. The Chair will serve on the Bays Council. The STAC shall be composed of scientists and other technical experts from academic and research institutions, local governmental entities, industry, bay user and interest groups, and state and federal agencies. The STAC will advise the Bays Council on matters of characterization; research, data management; and modeling, sampling, and monitoring efforts. This committee will review the development of any characterization requests for proposals and the submitted proposals, work plans and work products in addition to any other duties assigned by the Bays Council.

### Citizen's Advisory Committee

Section 4. Members shall be appointed by the Executive Council, which shall also appoint an interim Chair and Vice-Chair for a period not to exceed 180 days. Within 180 days of convening its first meeting, the CAC will elect a permanent Chair and Vice-Chair. The Chair will serve on the Bays Council. The CAC shall be composed of the broadest possible spectrum of affected user groups and other interested parties. The CAC will advise the

Management Committee on matters pertaining to possible effects that different issues to be addressed by the Bays Plan may have on various user groups, private citizens, and other interest individuals/organizations. The CAC will solicit public interest and support public participation in the Program, and educate user groups about the bay systems and the purposes and benefits of proposed programs. The CAC shall provide input on program goals and objectives, assist with public participation activities, comment on funding levels and research priorities, recommend strategies for generating solutions, and assist and advise the Bays Council in its duties.

#### Removal

Section 5. For committees other than the Board of Directors or the Executive Council, if a member of any committee fails to personally attend three (3) consecutive regular meetings without the written approval of the Chair or a Co-Chair, or if for any reason resigns his/her appointment, a replacement shall be appointed by the Executive Council. If a member of any committee leaves the agency or organization or interest group or jurisdiction he/she represented at the time of appointment, or if for any reason resigns his/her appointment, a new representative may be nominated by the agency or organization or interest group or jurisdiction he/she represented. The appointment shall then be approved by the Board of Directors or the Executive Council, as the case may be.

#### Public Attendance

Section 6. All regular Board of Directors, Executive Committee and Bays Council meetings are open to the public. Executive sessions of the Board of Directors closed to the public may be scheduled for the consideration of matters authorized under the Texas Open Meetings Act or other applicable state laws, and are subject to all applicable state laws concerning disclosure. To encourage open communication among the members of the Management Conference, members of other committees of the Program are encouraged to attend Board of Directors, Executive Council and Bays Council meetings.

#### Staff Participation

Section 7. Each member of a committee may bring staff members(s) or other participants to meetings. Such staff members or participants shall not vote, but may participate fully in meeting discussions following recognition by the Chair, with recognition solely within the discretion of the Chair.

#### Parliamentary Procedures

Section 8. All meetings of any committee shall utilize parliamentary procedures. To the extent that disputes arise, Robert's Rules of Order, Revised, shall be consulted.

#### Agenda Development/Approval

Section 9. Each meeting agenda shall be developed by the Executive Director in consultation with the respective committee and approved by the Chair and shall include all items timely proposed by a member of the Board of Directors or the Executive Council. Items for potential inclusion on the agenda may be proposed by members of the committee, the Chair, and the Executive Director. Items for inclusion on the agenda shall be submitted to the Executive Director at least five days in advance of the meeting. The agenda and supporting materials for committee action shall be distributed to committee members and appropriate staff at least five days prior to the schedule date of the meeting. Other program information and Program products may be distributed by the Executive Director with the agenda, by separate mail, or at meetings.

#### Minutes

Section 10. Minutes of all meetings of the Board of Directors and the Executive Council shall be taken by the Secretary with the help of the staff and shall be distributed to members prior to or with the next subsequent meeting agenda. Certified agenda minutes from executive sessions shall be taken and filed in a confidential file at the Program office in accordance with Texas law.

#### Open Meetings Act

Section 11. All meetings of the Board of Directors, Executive Council, Bays Council and Estuary Council will comply with the requirements of the Texas Open Meetings Act, Chapter 551 of the Texas Government Code, as amended. These by-laws allow voting by electronic means, when allowed by the Texas Open Meetings Act.

#### Open Records Act

Section 12. The Program shall comply with the Texas Open Records Act, as amended.

#### Article VI Officers

Section 1. The officers of the of the Program shall be the Chair and Vice-Chair chosen by the Executive Council, the Chair and Vice-Chair of the Bays Council chosen by the Bays Council and the

President, Secretary, Treasurer and such additional officers chosen by the Board of Directors.

Section 2. At the respective first meeting and at each respective annual meeting, the Board of Directors, the Executive Council and the Bays Council shall choose officers as above indicated.

Section 3. The Board of Directors may appoint such other officers and agents as it shall deem necessary, who shall hold their offices for such terms and shall exercise such power and perform such duties as shall be determined from time to time by the Board of Directors.

Section 4. No salaries shall be paid to officers and agents of the Program unless the Board of Directors determines reasonable compensation is necessary for services rendered to or for the Program, other than for services rendered as an officer or member of the Board of Directors, the Executive Council or the Bays Council.

Section 5. The officers of the Program shall hold office until their successors are chosen and qualify in their stead. Any officers elected or appointed by the Board of Directors, the Executive Council, or the Bays Council, may be removed at any time by the affirmative vote of 100% of the members present and voting at a duly called meeting called for that purpose. If the office of any officer becomes vacant for any reason, the vacancy shall be filled by the Board of Directors, the Executive Council or the Bays Council as the case may be.

#### Executive Director

Section 6. The Executive Director shall be the administrative officer of the Program; he or she shall be an ex-officio member of all standing committees, shall have a part in the active management of the business of the Program, and shall see that all orders and resolutions of the Board of Directors and the Executive Council are carried into effect.

#### Chair/Vice Chair

Section 7. The Chair shall preside at all meetings of the the Executive Council or the Estuary Council, and shall perform such other duties as the Executive Council shall prescribe. In the absence of the Chair, the Vice-Chair shall perform the duties of the Chair.

#### President

Section 8. The President of the Program is the chief executive officer of the Program. The President shall preside at

all meetings of the Board of Directors. In the absence of the President, the Secretary shall preside over meetings of the Board of Directors. The President may execute any deeds, mortgages, bonds, contracts, or other instruments that the Board authorizes to be executed. However, the President may not execute instruments on the Program's behalf if this power is expressly delegated to another officer or agent of the Program by the Board of Directors, the Executive Council, these By-Laws or statute. The President will perform other duties prescribed by the Board of Directors and all duties incident to the office of President. There shall be no restriction on the President serving as either the Chair or Vice-Chair of the Program, but the President shall not serve as the Secretary or Treasurer of the Program.

#### Chair of the Bays Council

Section 9. The Chair of the Bays Council shall preside at all meetings of the Bays Council, and shall perform such other duties as the Bays Council shall prescribe. In the absence of the Chair of the Bays Council, the Vice-Chair of the Bays Council shall perform the duties of the Chair.

#### Secretary

Section 10. The Secretary shall be a member of the Board of Directors, shall record all votes and the minutes of the proceedings in a book to be kept for that purpose, and may attest to the signature of the Executive Director, the President or Chair or Vice-Chair of the Executive Council, when requested.

#### Treasurer

Section 11. The Treasurer shall monitor the funds and securities and shall keep full and accurate records of receipts and disbursements in books belonging to the Program and shall deposit all monies and other valuable effects in the name and to the credit of the Program in such depositories as may be designated by the Board of Directors. Such powers to prepare documents and to deposit may be delegated to the staff or Port of Corpus Christi Authority where appropriate.

### Article VII

#### Functions of Coastal Bend Bays & Estuaries Program

##### Purpose

Section 1. On behalf of, and only with the concurrence of, the Estuary Council, the Program will coordinate and develop plans and programs that will protect and enhance the local environment to facilitate achievement of the Goals of the Bays Plan, produce net environmental benefits, promote efficiency, and lower costs of implementation.

## Duties

### Section 2. The Program shall:

- a. Develop and administer research and projects to carry out the Bays Plan.
- b. Develop and administer a cost-sharing monitoring program. Special emphasis should be placed on developing a cost effective method of developing data that can serve the largest possible range of program needs. Where testing or monitoring activities are contractually undertaken by the Program for a State agency or a local government, the Program's employees and contractors will be working on behalf of the State agency or local government requesting the services.
- c. Develop and administer programs to protect, conserve, and restore the rich and diverse habitats in the program area, so local residents and visitors can appreciate the natural wonders of the region.
- d. Develop funding mechanisms to achieve the Goals of the Bays Plan.
- e. Receive and administer funds received from local governments, political subdivisions and State and Federal agencies, and grants from non-government entities and individuals.
- f. Develop recommendations on how local governments can exercise their powers, under the existing laws and constitution of the State of Texas and the United States, in a manner that promotes the enhancement of the local environment and the development of the local economy, within real world constraints on funding.
- g. Ensure its activities are consistent with the Texas Coastal Management Program.

## Elements

Section 3. In addition to the elements normally involved in weighing environmental issues, while fulfilling its purpose and performing its duties, the Program shall consider as elements in the decision making process the following elements of concern to local governments and citizens:

- a. Assisting local governments in their efforts to improve the health, safety, and general welfare of the local residents and visitors and improve the regional transportation infrastructure; drainage systems; sanitary sewers and treatment systems, including on-site treatment systems; recreational facilities; growth and development of local industries and agriculture; standard of living of local residents; and local economies.
- b. The development of practical, cost-effective solutions to allowing continued residential, commercial, industrial, and agricultural development in the region, while

limiting the adverse impacts of such development on the local environment.

- c. The needs of the participating State agencies and local governments, including assisting them achieve their required monitoring and testing through contract assistance and administration.

#### Permitted Activities

Section 4. The Program may:

- a. When approved by the Executive Council, the Program may comment on proposed permits and consistency determinations. Comments on Federal consistency shall be consistent with the Bays Plan's Federal project review procedure and strategy, as provided in the Federal Project Review Report submitted by the CCBNEP.
- b. Coordinate its activities with the Coastal Coordination Council, and take actions to ensure that the Texas Coastal Management Program advances the implementation of the Bays Plan.

#### Article VIII Responsibilities of the Parties

##### Interpretation of Agreement and Bays Plan

Section 1. These by-laws are intended to make the Bays Plan a guide by which regulatory actions may be taken within the framework of existing rules and regulations. Thus, if a Goal of the Bays Plan is being furthered by an Action Plan, the local governments and State agencies will attempt to allow such suggested actions to occur so long as they are within the parameters of existing rules and regulations. By participation in this Program, the local governments, State agencies and political subdivisions of State of Texas do not subordinate or relinquish any of their regulatory authority or the power to act independent and apart from this Program.

##### Responsibilities of all Parties

Section 2. The intent of the participants is to assure effective and timely implementation of recommended actions and to adjust strategies as needed in the future to protect the Coastal Bend bays and estuaries. To that end, each of the participants hereby agrees to:

- a. Determine how they will contribute toward the attainment of the Goals, including their individual goals and time frames for achieving those goals;
- b. Where they deem appropriate, submit their conceptual action plans outlining the projects, initiatives, and strategies that it will undertake to achieve the Goals for the Coastal Bend bays and estuaries; and

- c. Each participant shall appoint an individual, and alternate, to serve as its liaison with the Program on tracking and coordination the Bays Plan implementation and submit their name(s) in writing to the Program.

#### Additional Responsibilities of Agencies

#### Section 3. Additional Responsibilities of the Agencies Where They Deem Appropriate:

- a. The State and Federal agencies that are participants herein (an "Agency" or "Agencies") endorse the goals of regulatory flexibility incorporated in the Bays Plan. The flexibility contemplated is sometimes referred to as regulatory reinvention and is intended to facilitate achievement of the Goals of the Bays Plan to produce a net environmental benefit. The regulatory flexibility contemplated herein is an expression of intention to cooperate and to seek innovative solutions for the implementation of the Bays Plan.
- b. The Agencies agree that, to the extent that they deem appropriate and at their sole discretion, they may extend as much flexibility as is legally permissible to further the implementation of the Bays Plan.
- c. The responsibilities and roles of the implementing partners reflected in the Bays Plan are adopted herein.
- d. Each Agency shall appoint a representative to any Project Action Committee created under the Bays Plan that may fall within the scope of the Agency's regulatory authority, for the purpose of assisting the Program with the implementation of the proposed project.
- e. The Agencies will consider any comments received from the Estuary Council during that Agency's regulatory review process that would facilitate the implementation of the Bays Plan.
- f. The provisions of this Section 3 are the expressions of the intention of the Agencies to facilitate actions contemplated by the Bays Plan, and in no manner shall it provide any right of action by any of the participants claiming that the provisions of this Section 3 have been breached.

#### Additional Responsibilities of Local Governments

#### Section 4. Additional Responsibilities of the Local Governments Where They Deem Appropriate:

- a. Include the goals contained in its applicable Action Plans (as they may be amended from time to time) into its comprehensive plan and needed actions in its capital improvement plans as such are further amended from time to time.
- b. Identify regulatory flexibility to be exercised by local governments in attaining Goals of the Bays Plan.

- c. The provisions of this Section 4 are the expressions of the intention of the local governments to facilitate actions contemplated by the Bays Plan, and in no manner shall it provide any right of action by any of the Parties claiming that the provisions of this Section 4 have been breached.

#### Responsibilities of the Program

Section 5. The Program shall:

- a. Serve as the coordinating body for the Action Plans and assist the Parties in gathering information necessary for the development of Action Plans and the subsequent implementation thereof;
- b. Report annually to the Executive Council on the status of the implementation of Action Plans;
- c. Prepare, every two (2) years, an environmental monitoring report on conditions and trends in the Program area;
- d. Assist the participants in locating grants and other funds to aid in implementation of the projects set forth in the individual Action Plans;
- e. Coordinate outreach programs to promote public participation and facilitate restoration activities that support the Goals of the Bays Plan;
- f. Coordinate the re-examination and updating of the Bays Plan every five (5) years;
- g. Promote cooperation and build consensus among the Parties;
- h. Track research projects;
- i. Develop proposed action plans to address goals not being addressed through other Action Plans; and
- j. Participate through the Coastal Coordination Council in the Texas Coastal Management Program (CMP) Federal consistency review process to ensure that relevant Federally funded or permitted projects are consistent with the Goals of the Bays Plan.

Specific action to accomplish such goals must be approved by the Executive Council.

#### Article IX Budgeting and Funding

##### Program Budget

Section 1. The Executive Council is responsible for preparing the proposed budgets of the Program, and shall annually prepare and submit the budget to the Board of Directors for approval.

##### Fiscal Year

Section 2. The fiscal year of the Program shall be chosen by the Board of Directors from time to time. The Program's first fiscal year will begin January 1, 1999, and end on December 31, 1999.

#### Current Funding

Section 3. The Program is currently funded by the EPA and the TNRCC, with some funding assistance from local governments. The TNRCC funding of the Program shall remain unchanged through August 31, 1999, at which time the participants will be responsible for the funding as set forth in the Interlocal Agreement. The EPA has agreed to continue its funding through September 30, 1999. It is anticipated that annual funding will continue from the EPA and the State of Texas. It is understood that during calendar year 1999 there will be overlaps in funding and efforts that will be provided in parallel between the CCBNEP and the Program.

#### Initial Budget

Section 4. For the period commencing on January 1, 1999, and continuing through December 31, 1999, the initial budget is attached to this agreement as Exhibit A. Each participant agrees to the annual payment as specified in Section 5, payable in equal monthly payments due on or before the 10th day of each month of each year. Accelerated annual or quarterly payments are requested.

#### Annual Funding

Section 5. In order to remain a participant, each participant shall make its annual cash payment, subject to appropriation by the participant, in the amount specified on the line for that participant on Exhibit B. Failure to make such payment shall automatically terminate such participant's rights and obligations under this Agreement, unless the Board of Directors votes to the contrary. The term "participants" shall mean local governments, State and Federal resource agencies and other diverse stakeholders who enter into a memorandum of understanding or contract with the Program to implement the Bays Plan.

#### Financial Obligations of Parties

Section 6. Each participant's financial obligations under this Agreement are limited to appropriations made by each participant in its sole discretion.

#### Budgets

##### Section 7.

- a. During the month of June, following preparation of a tentative budget, the Executive Council shall publish a notice of its intention to prepare a proposed budget.

Following an appropriate hearing, the Executive Council shall prepare a proposed budget during the month of June of each year for the Program covering its proposed operation and requirements for the next ensuing fiscal year.

- b. The Board of Directors shall give consideration to objections filed against the budget and in its discretion, may amend, modify or change the proposed budget. The Board of Directors, before the first day of each fiscal year, following appropriate notice and hearing, shall adopt the final budget for the Program, which shall thereupon be the operating and fiscal budget for the Program for the ensuing fiscal year.
- c. The Executive Council shall provide copies of the proposed budget to the participants, and such proposed budget shall be accompanied by the estimated annual contribution of each of the participants.

#### Contract for Support Services

Section 8. The Board of Directors may enter into a contract, or contracts, with the Port of Corpus Christi Authority, or other political subdivision, local government, individuals or private business, to serve as the Program's fiscal agent and to provide administrative support, including providing necessary office space and utilities.

#### Article X Miscellaneous

##### Default

Section 1. In the event any participant fails to make its annual cash payment pursuant to Article VIII, Section 5, such participant's rights shall be terminated, unless the Board of Directors votes to the contrary, and the Board of Directors shall remove such non-complying participant from the Program. Prior to any such vote by the Board of Directors, the non-complying participant shall be given a notice of its non-compliance and an opportunity to remedy the problem within a reasonable period or to have a public hearing before the Board of Directors, if there is a dispute whether a default exists. If any participant is discharged under this Section 1, then: a. all monies previously paid hereunder shall be conclusively deemed earned and not subject to return to such participant; b. any future funding responsibility of such participant shall terminate; and c. the agreement shall continue as to the remaining participants. Provided, however, any funds paid before termination but not expended shall only be used by the Program in accordance with the approved budget for which such contribution was made.

##### Notices

Section 2. Any and all notices required or permitted to be given hereunder shall be in writing, and shall be provided if either personally delivered to the participant, transmitted by electronic mail to the address listed, or sent by U.S. certified or registered mail, postage prepaid, return receipt requested, to the mailing address listed, all such notices being effective upon delivery to and receipt by the participants, unless the respective participant or participants notify all other participants in writing in accordance herewith of a change of address and/or representative at such address authorized to receive any and all such notices, in which case any and all such notices shall be delivered and/or mailed as aforesaid to said participant or participants at such new address with respect to such participant.

#### Withdrawal of a Party

Section 3. Notwithstanding anything contained in this Agreement to the contrary, any participant hereto shall have the right to withdraw as a participant by providing thirty (30) days prior written notice to the Executive Director and the Chair of the Executive Council as set forth in Article IX, Section 2, above. On the day following the end of such thirty (30) day period, the withdrawing participant shall no longer be considered a participant and its representatives will no longer be members of any council under these by-laws. If a participant withdraws under this Section 3: (a) all monies previously paid hereunder shall be conclusively deemed earned and not subject to return to such participant; (b) any future funding responsibility of such participant for the longer of the period of such thirty (30) days or until the next fiscal year shall be required; (c) this Program shall continue as to the remaining participants; and (d) the withdrawing participants is no longer entitled to the benefits of being a participant to this Program, except to the extent Article I, Section 9, paragraph b, as amended from time to time, provides all local governments with certain benefits.

#### Article XI General Provisions

##### Annual Statement

Section 1. The Executive Director shall present at each annual meeting and when called for by vote at any special meeting, a full and clear statement of the business and conditions of the Program.

##### Checks

Section 2. All checks or demands for money and notes of the Program shall be signed by such officer of officers or such other person or persons as the Board of Directors may from time to time designate and authorize.

## Audit

Section 3. The books and records shall be audited annually by an independent certified public accountant chosen by the Board of Directors from time to time.

## Article XII Indemnification

Section 1. Any person made a part to, or involved in, any civil, criminal or administrative action, suit or proceeding by reason of the fact that he, his testator or intestate, is or was a director, officer or employee of the Program, or of any Program which he, his testator or intestate, served as such at the request of the Program, shall be indemnified by the Program against reasonable expenses incurred by him or imposed on him in connection with, or resulting from, the defense of such action, suit or proceeding, or in connection with, or resulting from, any appeal therein, except with respect to matters as to which it was adjudged in such action, suit or proceeding that such officer, director or employee is liable to the Program or to such other corporation for negligence or misconduct in the performance of his duties. As used herein the term "expenses" shall include all obligations incurred by such person for the payment of money, including without limitation, attorney's fees, judgments, awards, fines, penalties and amounts paid in satisfaction of judgment or in settlement of any such action, suit or proceeding, except amounts paid to the Program or such other Program by him. A judgment or conviction (whether based on a plea of guilty or nolo contendere or its equivalent, or after trial) shall not of itself be deemed an adjudication that such Director, officer or employee is liable to the Program or such other corporation for negligence or misconduct in the performance of his duties. Determination of the right to such indemnification and the amount thereof may be made, at the option of the person to be indemnified, pursuant to procedure set forth from time to time in the by-laws or by any of the following procedures: (a) order of the court or administrative body or agency having jurisdiction of the action, suit or proceeding, (b) resolution adopted by 100% of a quorum of the Board of Directors of the Program without counting in such majority or quorum any directors who have incurred expenses in connection with such action, suit or proceeding, (c) if there is no quorum of directors who have not incurred expenses in connection with such action, suit or proceeding, then by resolution adopted by a majority of directors who have not incurred such expenses, (d) resolution adopted by 100% of a quorum of the directors entitled to vote at any meeting, or (e) order of any court having jurisdiction over the Program. Any such determination that a payment by way of indemnity should be made shall be binding upon the Program. Such right of indemnification shall not be exclusive of any other right which such directors, officers and employees of the Program, and the other persons above mentioned, may have or hereafter acquire and,

without limiting the generality of such statement, they shall be entitled to their respective rights of indemnification under any by-law, agreement, vote of Board of Directors, provision of law or otherwise, as well as their rights under this article. The provisions of this article shall apply to any member of any committee appointed by the Board of Directors, as fully as though such person had been a director, officer or employee of the Program.

Section 2. To the extent permitted by the law of the State of Texas and by federal regulation, neither the Board of Directors nor any of its members individually, shall be liable for the negligent acts or omissions of any employee, agent or representative selected with reasonable care, nor for anything the Board may do or refrain from doing in good faith, including the following: errors in judgment, acts done or committed on advise of counsel, or mistakes of fact or law.

#### Article XIII Conflicts of Interest

Section 1. No employee, officer, agent, member of the Board of Directors, the Executive Council, the Bays Council, or other committee (or staff representative or proxy) shall participate in any decision or vote which would constitute a conflict of interest under federal or state law. Any potential conflicts of interest shall be clearly stated by the member (or staff representative or proxy) prior to any discussion on the agenda item with which the member (or staff representative or proxy) is in conflict. Any member (or staff representative or proxy) in potential conflict of interest shall abstain from discussing or voting on the agenda item. However, any such member (or staff representative or proxy) may supply information at the request of the Chair during discussion on the issue. No member shall: (1) case a vote on the provision of services by that person (or any organization which that person directly represents), or (2) vote on any matter which would provide direct financial benefit to that person, or (3) participate in the selection, award or administration of a subgrant, procurement or contract supported by public funds subject to this section where, to the person's knowledge, a conflict of interest, real or apparent, would be involved. Such a conflict would arise when any of the following has a direct financial or other substantive interest in any organization which may be considered for award: (a) the officer, employee, or agent, (b) any member of his or her immediate family, (c) his or her partner, or (d) a person or organization which employs, or is about to employ, any of the above.

Section 2. In the event of any such conflict, such person shall disclose the material facts as to his or her interest or benefit from the proposed action, and in the event the measure requires approval by the Board of Directors, Executive Council, or

Bay Council, the proposed action may be approved upon the affirmative vote of the requisite majority of the disinterested members, even though the disinterested members be less than a quorum. Such interested members may be counted in determining the presence of a quorum at the meeting at which such issue is considered. For the purposes of this section "direct financial benefit" does not include any situation in which a member (or any organization which that member directly represents) may from time to time employ persons participating in a program administered by an independent contractor not controlled by or related to the member.

Section 3. No member shall: (1) solicit or accept gratuities, favors, or anything of monetary value from contractors or supplier, potential contractors or suppliers, parties to sub-agreements, or (2) solicit, accept or agree to accept any benefits for exercising official authority and performing their duties.

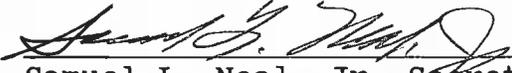
Section 4. For the purpose of this provision, the term "immediate family" shall be defined in Chapter 171 of the Texas Local Government Code to include persons related in the first degree by either affinity or consanguinity.

Section 5. No employee, officer or agent of the Program shall participate in selection, or in the award of administration of a subgrant or subcontract supported by public funds if a conflict of interest, real or apparent, would be involved. Such a conflict arises when the employee, officer or agent, any member of his immediate family, his or her partner, or an organization which employs, or is about to employ any of the above, has financial or other interest in the subcontractor selected. The officers, employees or agents will neither solicit nor accept gratuities, favors or anything of monetary value from contractors, potential contractors, or parties to subcontracts. To the extent permitted by State or local law or regulations, such standards of conduct will provide for penalties, sanctions, or other disciplinary actions for violations of such standards by the Program's officers, employees, or agents, or by contractors or their agents. See UGMS, Part III, Subpart C, Sec. \_\_\_\_ .36 (3).

#### Article XIV Amendments

Section 1. These by-laws and the articles of incorporation may be altered, amended or repealed at any regular meeting or any special meeting of the Board of Directors at which a quorum is present or represented by proxy, provided notice of the proposed alteration, amendment or repeal is contained in the notice of such special meeting, by the affirmative vote of 100% of the members of the Board of Directors present in person, or by proxy, and voting for such motion entitled to vote at such meeting.

Executed this the \_\_\_\_\_ day of September, 1999.

  
Samuel L. Neal, Jr., Secretary