

2020 ANNUAL REPORT



Fishing is a popular activity in the Coastal Bend - this young boy shows off his pinfish.

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RAY ALLEN

breetings.

The Coastal Bend Bays & Estuaries Program (or CBBEP) is proud to present you with our 2020 Annual Report. Although 2020 was certainly a challenging year, we have continued to maintain our focus on protecting the bays and estuaries of the Texas Coastal Bend, while adapting to the new conditions created by a global pandemic. We were forced to alter many aspects of our operations, including closing our offices and having staff work remotely, but we hope the updates and accomplishments listed throughout this Report show our continued commitment to working with partners to address the challenges faced by our bays and estuaries.

Restoring habitat, improving water quality, enhancing public access, and educating the public continued to be a major focus for CBBEP. Last year saw the completion of a major habitat restoration project in Nueces Bay with five rookery islands being protected and restored. Our Land Conservation Program acquired additional lands for conservation, and staff continued the ongoing task of managing the thousands of acres owned by CBBEP through prescribed fire, vegetation treatments, and debris removal. CBBEP's Coastal Bird Program also continued their efforts to conserve coastal birds and their habitats through on-the-ground management actions, research, and education and outreach.

The implementation of CBBEP's environmental education program, known as Delta Discovery, was perhaps the most impacted by the pandemic. In a typical year, Delta Discovery would provide hands-on field trips to thousands of students, host trainings for hundreds of teachers, and provide opportunities for families to get outdoors and experience nature. All of these hands-on, group programs were canceled for several months due to the pandemic. However, our staff have adapted our existing programs and developed entirely new strategies and programs that will allow us to continue to accomplish our education and outreach goals.

CBBEP is committed more than ever to continuing our efforts to protect the bays and estuaries of the Texas Coastal Bend, and we look forward to your continued partnership and support. Thank you for helping to protect our bays and estuaries!

Ray Allen
Coastal Bend Bays & Estuaries Program
Executive Director







WHO WE ARE

The Coastal Bend Bays & Estuaries Program is dedicated to protecting and restoring the health and productivity of the bays and estuaries in the Texas Coastal Bend, while supporting continued economic growth and public use of the bays.

Since 1999, CBBEP has been working with partners to create a Texas Coastal Bend with cleaner water and sediment, healthier habitats, greater public access, and a more aware and engaged public. With the help of partners, CBBEP has restored thousands of acres of marsh habitat, funded dozens of projects designed to improve water quality, and installed infrastructure to enhance public access opportunities. In addition to implementing projects that address priority issues like water quality, habitat restoration, and nature tourism, the Coastal Bend Bays & Estuaries Program has created organizational programs to conserve coastal birds and their habitats, conduct environmental education programs, and acquire coastal habitats for the purposes of conservation.

19 STAFF

75+
PARTNERS

150+ VOLUNTEERS



WHAT WE DO

HABITAT SO WILDLIFE

Healthy coastal habitats help maintain wildlife and plant populations, improve water quality, enhance local tourism, and reduce the impacts of flooding and storm surge. CBBEP seeks to preserve, restore, enhance, and create coastal habitats and ensure the long-term sustainability of native living resources.

WATER QUALITY PFRESHWATER INFLOWS

Water and sediment quality and freshwater inflows are important to coastal habitats, wildlife, and the economic vitality of the Coastal Bend. CBBEP works with partners to implement projects, programs, and planning efforts that respond to water quality and sediment problems that may pose a risk to people or the environment. We also seek to optimize freshwater inflows to meet the needs of both the environment and people.

NATURE TOURISM PRECREATION

The bays and estuaries of the Coastal Bend contain a wealth of resources for people to enjoy and appreciate, and they also support an enormous segment of the local economy. CBBEP works with partners to ensure that people continue to benefit from a safe, clean bay system and to promote stewardship of bay resources.

LAND CONSERVATION

CBBEP's Land Conservation Program is working with partners to conserve valuable habitats within the Coastal Bend. To date, CBBEP has conserved over 14,000 acres, and we manage these lands responsibly and sustainability for the long-term benefit of both wildlife and people.

COASTAL BIRD PROGRAM

CBBEP's Coastal Bird Program works to conserve coastal birds and their habitats, identifying and addressing conservation needs through on-the-ground management actions, research, and education and outreach. We bring innovative management, diversified partnerships, and science-based decision-making to bird conservation in the Coastal Bend.

DELTA DISCOVERY

CBBEP created the Delta Discovery Program to provide opportunities for classrooms and families to connect with nature, and to plant the seeds of stewardship in individuals whose decisions affect our estuaries. We provide field trips for thousands of students each year, train teachers on how to connect classrooms to outdoor experiences, and allow families to discover the estuary in their own backyard.

WHERE WE WORK

CBBEP's program area includes 75 miles of estuaries and adjacent watersheds along the south-central coastline of Texas.

This area, known as the Coastal Bend, encompasses 12 counties, 11,500 square miles of land, 515 square miles of bays, estuaries, and lagoons, and over 570,000 residents.

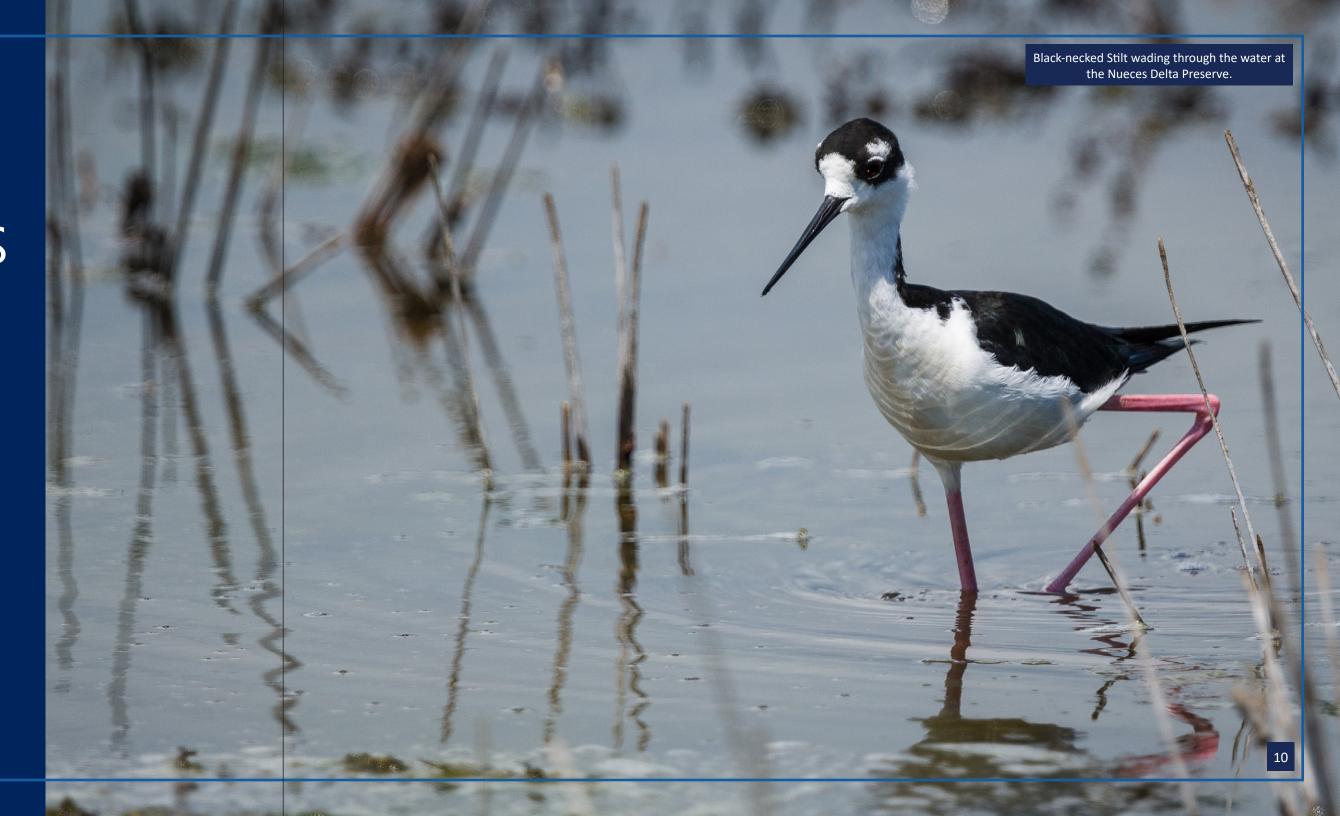
The blue dots on the map represent locations where CBBEP implemented projects in 2020.

12 COUNTIES

3 BAY SYSTEMS

515SQUARE MILES
OF WATER

CBBEP has expanded our bird conservation efforts into the Lower Laguna Madre using grant funds.



SPOTLIGHT

MISSION RIVER DELTA LAND ACQUISITION



CBBEP received funding from the National Fish and Wildlife Foundation, Gulf Environmental Benefit Fund to permanently protect 375 acres of critical coastal marsh habitat in the Mission River Delta, an estuary adjacent to Copano and Aransas Bays along the mid-coast of Texas. The proposed tract is composed of tidal marshes that provide critical habitat for migratory waterfowl, shorebirds, waterbirds, and other iconic coastal wildlife species. Acquisition of the proposed tract will expand and connect existing conservation areas to create a corridor for wildlife, including the endangered Whooping Crane and other coastal waterbirds.



LAND CONSERVATION

2 FULL-TIME STAFF

ACRES **14,000+**

ACRES

1,300 TREATED WITH PRESCRIBED FIRE

787
ACRES OF INVASIVE VEGETATION TREATED/REMOVED

COASTAL BIRD PROGRAM

4 FULL-TIME STAFF

NUMBER OF BAY SYSTEMS WHERE **5** WE WORK

100+ NESTING ISLANDS MANAGED

ACRES OF SHOREBIRD HABITAT MANAGED & MONITORED

16,000



WATERBIRD MANAGEMENT

Texas colonial waterbirds, like herons, egrets, pelicans, and skimmers typically nest in spring and summer months in dense groups on small islands in the bays. Today, threats such as development, habitat loss, and human disturbance are taking their toll. Long-term data shows that the majority of colonial waterbirds in Texas are declining, some as much as 60-70%. CBBEP's Coastal Bird Program continues working to halt these declines and restore colonial waterbird populations. The Coastal Bird Program manages hundreds of colonial waterbird islands on the Texas coast from San Antonio Bay to the Laguna Madre. Management efforts focus on improving vegetation available as nesting structure, reducing predator impacts, and reducing human disturbance of colonies. Consistent, annual efforts are vital in properly managing rookery islands - it often takes several seasons of intense management to restore or improve island habitat, which is why CBBEP continues to do this work year after year.





MIGRATORY SHOREBIRDS

CBBEP's Coastal Bird Program has expanded its conservation and research efforts to include migratory shorebirds which depend on the Texas coast for portions of their life cycles. With partners throughout the migratory flyway, the Coastal Bird Program is working to better understand migratory connectivity and annual movements, abundance and distribution, reproductive success, and critical habitats of several imperiled shorebirds.

Red Knots have been a focus of the Coastal Bird Program shorebird research efforts. While a great deal has been learned about the wintering and migration strategies of Red Knots in Texas over the past decade, the breeding areas of this previously mysterious population has remained unknown. GPS tags are now able to provide precise locations even in the Arctic summer. These tags were deployed in Spring 2020 in Texas on adult Red Knots headed to their Arctic breeding grounds.

EDUCATION & OUTREACH

One of the primary threats faced by coastal birds is the increasing amount of disturbance by humans at nesting sites. Most of the visitors are simply unaware of the fact that birds are nesting in these areas and that they need to remain undisturbed during the nesting season. The Coastal Bird Program provides presentations and outreach events to local conservation organizations and other community groups, trying to raise awareness of colonial waterbirds and the conservation actions citizens can take to support population recovery efforts. Volunteer engagement can also help build community understanding and support for coastal birds, and therefore, is an important outreach strategy for the Coastal Bird Program. Volunteers from the community have provided invaluable assistance in our labor-intensive pursuits, such as vegetation work on islands. Volunteers are also a vital part of our annual Rookery Island Cleanup events, removing hundreds of bags of trash from islands each year.

DELTA DISCOVERY

3 FULL-TIME STAFF

VOLUNTEER HOURS 456

2,953 STUDENTS ENGAGED

TEACHERS TRAINED

125

22 COMMUNITY PROGRAMS

In 2020, the pandemic had a profound impact on CBBEP's ability to host many of our traditional educational programs.

Our Delta Discovery staff continue to adapt and find new ways to connect students, teachers, and families with nature.







STUDENT FIELD TRIPS

Each year, the Delta Discovery Program provides opportunities for thousands of students to participate in field trips that are designed to take them out of the classroom and connect them to nature. We use a sense of discovery and the scientific method to teach about our bays and estuaries. Student field trips are aligned to state standards and are available for all grade levels. Field trips are designed to allow students to make connections to nature that a conventional classroom environment cannot provide. Most field trips are hosted at CBBEP's Nueces Delta Preserve, where students and teachers have the opportunity to view and explore a multitude of habitats and discover living examples of concepts they have learned in the classroom. In 2020, however, COVID-19 restrictions greatly limited the ability of students to participate in traditional on-site field trips. Our staff have adapted to this challenge and are now providing "virtual field trips" and online videos to continue engaging with students.

TEACHER WORKSHOPS

The Delta Discovery Program facilitates teacher workshops throughout the year. These workshops address local environmental science topics, are aligned to state standards, and focus on equipping teachers with the skills, curriculum, support, and materials they need to strengthen science teaching as it relates to the environmental resources of the Texas Coastal Bend. Teachers are able to learn from area experts on a variety of topics affecting our local area, and they can then bring that knowledge into the classroom to further their teaching of science and local issues. In-person trainings were paused for a short time in 2020, while staff worked to develop protocols and procedures for hosting teacher trainings in way that adhered to local, state, and federal guidelines for COVID-19. Despite the challenges associated with the pandemic, Delta Discovery was still able to host workshops that focused on Science and Civics, Freshwater Ecology, Nature Journaling, The Leopold Project, and Growing up WILD!

COMMUNITY PROGRAMS

In addition to providing educational programs for K-12 students and teachers, Delta Discovery also offers community programs for families and the public. These programs provide opportunities for the people in the local community to discover, connect, and learn about the estuary in their own back yard. Through Delta Discovery Days, Nature Story Times, and Home School Days, we work to create conservation-minded families that are connected to nature and have a desire to protect wildlife and habitats. As part of our Delta Discovery Days, we have started offering a "Star Party," which includes star gazing, night hikes, arts and crafts, and of course, s'mores. This event is extremely popular, with the January 2020 Star Party drawing hundreds of visitors from local communities to gaze at the stars! Delta Discovery has adapted our community programs to meet all local, state, and federal guidelines regarding COVID-19, and we are thrilled to continue offering a safe way for families to get outdoors and enjoy nature.

RESTORATION SPOTLIGHT

NUECES BAY ROOKERY ISLANDS RESTORATION

Texas colonial waterbirds, like herons, egrets, pelicans, and skimmers typically nest in spring and summer months in dense groups on small islands in the bays. Since the 1960's, nesting islands in Nueces Bay have been lost to persistent erosion, hard shell dredging, and storm events. Lack of nesting area and suitable vegetation have been major factors preventing the recovery of colonial waterbirds in Nueces Bay. In 2020, CBBEP completed a multi-year project to restore five rookery islands in Nueces Bay. Each island was protected by placing limestone rock around the perimeter and restored by filling the area with new sediment. Now that restoration of the islands is complete, CBBEP's Coastal Bird Program will focus on managing these islands to ensure the best conditions for nesting success.

Funding for this \$4.3 million project was provided by the National Fish and Wildlife Foundation - Gulf Environmental Benefit Fund, Texas General Land Office - Coastal Erosion Planning and Response Act Program, Coastal Conservation Association, and Port of Corpus Christi Authority.

ROOKERY ISLAND RESTORATION PROJECTS STARTING IN 2021

Causeway Island (Nueces Bay)
Triangle Tree Island (Upper Laguna Madre)
Tern Island (Upper Laguna Madre)
Long Reef & Deadman Islands (Aransas Bay)
Benny's Shack Island (Lower Laguna Madre)



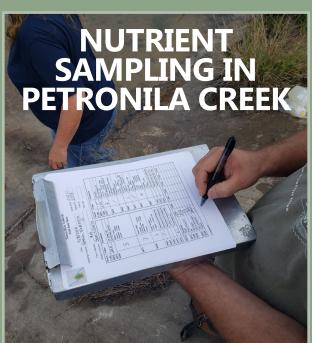




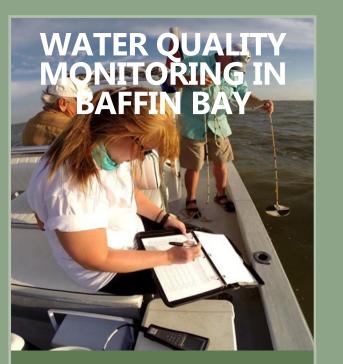
WATER QUALITY SPOTLIGHT

BAFFIN BAY WATER QUALITY ISSUES

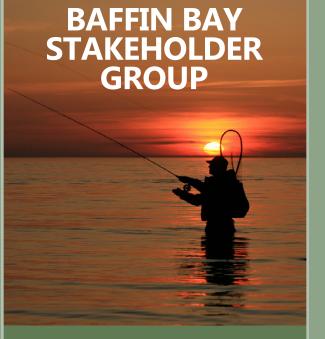
Baffin Bay is considered one of the jewels of the Texas coast because of its tremendous fishing and recreation potential, as well as its positive economic impact on the surrounding communities and the State of Texas. The system supports some of the highest recreational and commercial fishery landings in the State and contains critical habitat for birds and other wildlife. However, water quality degradation threatens the health of the Baffin Bay fishery. In 2020, CBBEP continued its efforts to work with partners and stakeholders to understand the water quality issues in Baffin Bay and develop solutions for addressing those challenges.



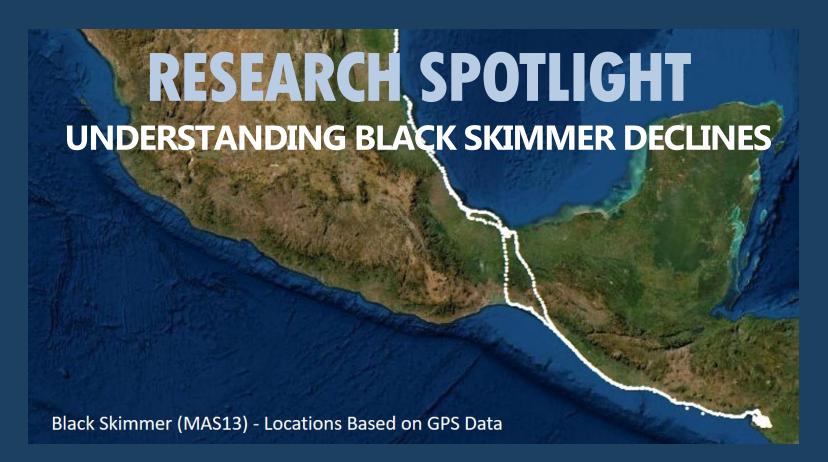
CBBEP partnered with the Nueces River Authority to conduct monthly water quality monitoring of nutrients in Petronila Creek and its tributaries to help identify sources of excess nutrient concentrations in Baffin Bay.



CBBEP continued its partnership with the researchers at the Harte Research Institute to collect monthly data, and rain event data, to identify nutrient concentrations and loadings throughout Baffin Bay.



CBBEP continues to work with the Harte Research Institute to facilitate the Baffin Bay Stakeholder Group, which meets regularly to share information and develop collaborative solutions for addressing water quality issues in Baffin Bay.



The Black skimmer has long been an iconic species along the shores of Texas beaches and bays, a sight to see sweeping across shallow waters, lower beak skimming just below the surface for a meal. Despite their iconic status, very little was known about where Black Skimmers go and what other threats they may face. With populations at less than half of what they were 40 years ago, understanding their movements is a critical piece of the puzzle. That is why the Coastal Bird Program joined forces with U.S. Fish and Wildlife Service and other partners to outfit skimmers from our local population with satellite and GPS tracking devices. The Program has outfitted 45 skimmers over the last 3 years.

The tracking project seeks to understand the life cycle and range of skimmers and identify areas of high usage and potential causes for mortality or low survival. With these devices, valuable insight is gained into how these birds are moving and using habitats. This information is critical for pinpointing the causes of population decline and then deciding where future conservation efforts will be most effective. The data has shown that some birds migrate to nest in areas we would have guessed, ranging across Texas and even out to the Chandeleur Island chain off Louisiana. However, most revealing is that we discovered most of the birds spending the summer in Texas migrate to the Pacific coast of Central America during the winter!





PUBLIC ACCESS SPOTLIGHT

PORT ARANSAS NATURE PRESERVE TRAILS

CBBEP partnered with the City of Port Aransas Nature Preserve on a new trail at the Leonabelle Turnbull Birding Center. With funding from CBBEP, the Nature Preserve was able to construct a six-foot wide, 730 foot long concrete trail that leads you along beautiful salt marsh and will eventually connect to the Charlie's Pasture trails off of Highway 361 (once they are repaired from Hurricane Harvey damage). The area surrounding the trail is currently undergoing habitat restoration to remove invasive plant species and the Nature Preserve plans to plant native plants and trees in this area.

2020 COLLABORATORS

American Bird Conservancy

American Conservation Experience

Aransas County

Aransas County Indpendent School District

Aransas National Wildlife Refuge

Audubon Texas

Baffin Bay Stakeholder Group

Barataria-Terrebonne National Estuary Program

Calallen Independent School District

City of Bayside

City of Corpus Christi

City of Ingleside

City of Port Aransas

City of Portland

City of Rockport

Coastal Bend Bays Foundation

Coastal Conservation Association

Conrad Blucher Institute

Corpus Christi Astronomical Society

Corpus Christi Independent School District

Delta Land Services

Ducks Unlimited

Flour Bluff Independent School District

Friends of Red Head Pond

Gregory-Portland Independent School District

Harte Research Institute for Gulf of Mexico Studies

International Crane Foundation

Kleberg County

Keep Aransas County Beautiful

Mission-Aransas National Estuarine Research Reserve

Natural Resource Conservation Service

Nueces County

Nueces River Authority

Odem Independent School District

Padre Island National Seashore

Port of Corpus Christi

Project Learning Tree Texas

Refugio County

San Antonio Bay Partnership

San Patricio County

Smithsonian Migratory Bird Center

South Texas Botanical Gardens Taft Indpendent School District

Texas A&M AgriLife Extension

Texas A&M University Corpus Christi

Texas A&M University Kingsville

Texas Children in Nature

Texas Commission on Environmental Quality

Texas General Land Office

Texas Marine Mammal Stranding Network

Texas Master Naturalists

Texas Parks & Wildlife Department

Texas Sea Grant

Texas State Soil & Water Conservation Board

Texas Water Development Board

Texas Water Resource Institute

The Nature Conservancy

University of Texas Marine Science Institute

US Environmental Protection Agency

US Fish & Wildlife Service

US Geological Survey

Virginia Tech

Wetlands AmericaTrust



2020 SUPPORTERS

GOVERNMENT

City of Corpus Christi

City of Port Aransas City of Portland

City of Ingleside

National Oceanic & Atmospheric Administration

Nueces County

Port of Corpus Christi

San Patricio County

Texas Commission on Environmental Quality

Texas General Land Office

Texas Parks & Wildlife Department

US Environmental Protection Agency

US Fish & Wildlife Service

CORPORATIONS

Celanese

Cheniere Energy

CITGO

Conoco Phillips

Flint Hills Resources

LyondellBasell

Phillips 66 / BWTX

Polk Production Technologies

Port Industries of Corpus Christi

Talen Energy

Valero

Voestalpine

Wells Fargo

FOUNDATIONS AND NONPROFITS

American Bird Conservancy

Coastal Bend Community Foundation

Coastal Conservation Association

Ed Rachal Foundation

George and Mary Josephine Hamman Foundation

National Fish & Wildlife Foundation

Robert J. Kleberg and Helen C. Kleberg Foundation

Rotary Club of Corpus Christi

Trull Foundation

INDIVIDUALS

Mary Jo O'Rear

Pam Morgan (In Memory of Michael R. Morgan)

Richard Stagg

Sara Fuentes (In Honor of Randy Fuentes)

Scott Swearingen

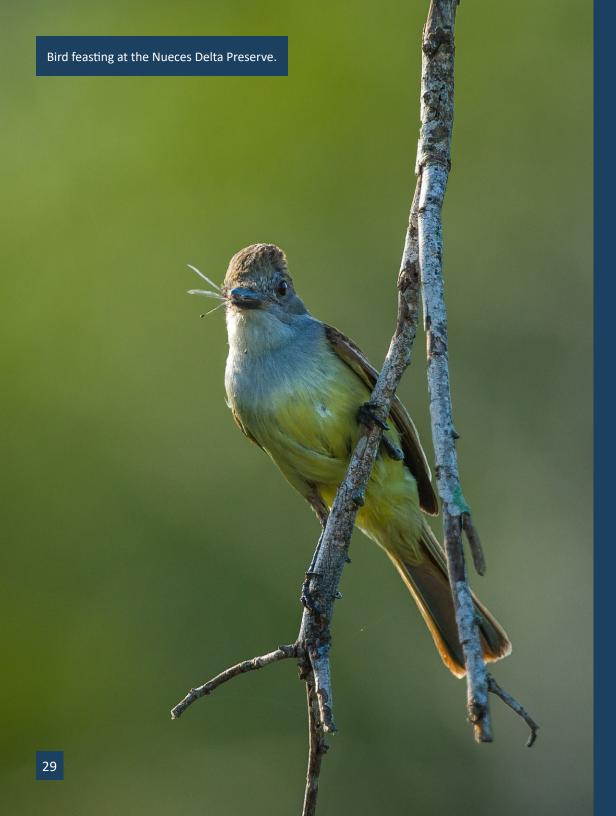
Elise Bright

Ted and Shirley Madden

THANK YOU!

Thank you to all of the friends, partners, and supporters who made our work possible in 2020! We are more committed than ever to protecting our bays and estuaries, and with your continued support, we are hopeful for the future and know that we will be equipped to tackle both existing and new challenges.





2021 AND BEYOND

In 2021, CBBEP will continue implementing important projects that are focused on water quality, habitats and wildlife, public access and nature tourism, land conservation, and education. Here is a small sample of some new projects that will be taking place in 2021.





UP2U LITTER CAMPAIGN

In the fall of 2020, CBBEP kicked off a fiveyear project that will expand the Up2U Litter Prevention Campaign to the six coastal counties in the Coastal Bend. The project seeks to cultivate a behavior-changing litter prevention program and includes distribution of litter bags, education and outreach, and community cleanups. The cornerstone of the program is a yellow mesh bag emblazoned with the empowering Up2U message, which will be distributed throughout the fiveyear project. Currently in the Coastal Bend, these litter bags are made available by a few municipalities at certain beach and bay public access points. This project is looking to fill in the gaps and expand the distribution so that every recreationist within the coastal counties of the Coastal Bend has access to the litter bags. Funding for the project is provided by the U. S. Environmental Protection Agency.

NUECES DELTA SHORELINE PROTECTION

Studies show that the Nueces Delta shoreline is eroding at a rapid rate, and significant amounts of marsh habitat are being lost. CBBEP has long recognized the ecological value provided by the Nueces River Delta coastal marshes and has been working to protect this rapidly eroding shoreline for many years. In 2021, CBBEP will work with a contractor to begin construction on 3,900 feet of breakwater along the Nueces Delta shoreline. Construction of the breakwater will enhance the bay and estuarine habitat and contribute to the protection of a large contiguous area of salt marsh which will benefit numerous estuarine species. Funding for this project is being provided by the National Fish and Wildlife Foundation, Gulf Environmental Benefit Fund.

CAUSEWAY ROOKERY ISLAND RESTORATION

Erosion of the Causeway Island shoreline is causing the on-going loss of critical nesting island habitat for colonial waterbirds such as herons, egrets, terns, skimmers, and pelicans. CBBEP has been working for years to address erosion issues at Causeway Island, and in 2021, we will begin working with a contractor on the construction of a segmented rock breakwater around the perimeter of the island. The breakwater will be approximately 3,400 linear feet and will include nine breakwater segments. Once completed the structure will protect the island from future erosion, preserving important colonial nesting waterbird habitat. Funding for this project is being provided by the Texas General Land Office, Coastal Erosion Planning and Response Act Program.



STAFF

Ray Allen Leo Trevino **Alice Sanchez Melissa Barnes Michelle Cortinas Kiersten Stanzel Kathryn Tunnell** Rosario Martinez **Adrien Hilmy Leigh Perry** Jake Herring **Travis Muckleroy David Newstead Brooke Hill Stephanie Bilodeau Justin LeClaire** Lari Jo Edwards **Matthew Hendrix** Kimberly Ogden

Executive Director Deputy Executive Director Director of Business Affairs Accounting Technician Administrative Assistant Director of Partnerships Communications Manager Senior Project Manager Project Manager Project Manager Director of Land Conservation Land Conservation Specialist Director of Coastal Bird Program Avian Conservation Ecologist Avian Conservation Biologist Avian Conservation Biologist Director of Environmental Education Education Coordinator Education Coordinator

2020 BOARD OF DIRECTORS

Robert Wallace Robert Corrigan Judge Barbara Canales Judge David Krebs Commissioner Bryan Gulley Alicia Matus

Mayor Joe McComb

Coastal Bend Bays Foundation **CBBEP Bays Council** Nueces County San Patricio County Port of Corpus Christi Port Industries of Corpus Christi City of Corpus Christi



IN MEMORY OF ROBERT "JAY" REINING

Robert "Jay" Reining, a long-time Coastal Bend Bays & Estuaries Program Board Member, passed away from COVID pneumonia on November 23, 2020. Jay was instrumental in developing the Coastal Bend Bays & Estuaries Program, and he was a great friend and supporter over the last 20 years. His guidance, leadership, and friendship will be deeply missed.





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