COASTAL RESOURCES NEWSLETTER

MARCH 2025

Join Us for the 2025 Coastal Roundup!

By: Cara Stewart, Texas General Land Office

An exciting event is on the horizon! The GLO is hosting the 2025 Texas Coastal Roundup on April 26th at Isla Blanca Park in South Padre Island, Texas. The Roundup is a free, one-day, public event and it will take place from 10:00am to 4:00pm. This event will be held on the same day as the GLO's Adopt-A-Beach Spring Cleanup.

This family friendly event will feature educational booths and displays from a wide variety of coastal and environmental organizations that allow attendees to learn about all the efforts being made to keep the Texas coast strong! The Roundup will also have face painting, a fish printing station, food trucks and plenty of free swag!

▸ For more information, or if your organization would like to participate, please contact Cara Stewart at cara.stewart@glo.texas.gov.

The Roundup is a free, one-day, public event and it will take place from 10:00am to 4:00pm at Isla Blanca Park in South Padre Island, Texas.

This camel statue and historical marker describe 'The Great Camel Experiment', in which the US military used camels to carry military supplies and for surveying and reconnaissance.

Texas Sites and Coastal Sights

The Lost Port of Indianola

By: Kristin Hames, Texas General Land Office

In the spring of 1875, the thriving port town of Indianola was the second most economically important deepwater port in Texas, rivaling the bustling port of Galveston. Indianola was key to supplying military outposts and was the chief port for immigrants to Texas. Serving as the county seat for Calhoun County, the growing town had newspapers, hotels, stagecoach services, and was selected as the terminus for the Charles Morgan New York-based steamship line. Though Indianola was repeatedly occupied and looted during the American Civil war, the town endured and continued to grow. In 1869 it ushered in a new era of transportation by launching the world's first shipment of refrigerated beef.

On September 16, 1875, the city was consumed by a devastating hurricane. When the water subsided, fatalities were high and only eight buildings remained. The city attempted to revive, only to be obliterated by a second hurricane on August 19, 1886. By 1887, the town had been abandoned and in the following decades, Indianola ceased to exist. Today, the unincorporated communities of Port O'Connor and Magnolia Beach have grown around the Indianola ghost town and are well known local tourist destinations for anglers and birdwatchers. Beautiful bay beaches and marsh mosaic landscapes draw visitors to the natural beauty of the Texas coast. Yet, what might the town of Indianola have been, and how would the history of Texas economy have changed, had the legendary port escaped the hurricane landfalls?

When you drive through these sleepy communities, you see evidence of the area's fascinating history. A camel statue cut out and historical marker describes shiploads of camels delivered at Indianola as part of a US military experiment to use camels for supply transport. A towering pink granite monument to Rene Robert Cavelier Sieur de la Salle describes the famous explorer's landing in Matagorda Bay. Many other local historical markers can be found through the Historical Marker Database (https://www.hmdb.org/). Though the rural area offers little in terms of infrastructure, that is precisely the appeal to the anglers, ecotourists, history buffs, and intrepid explorers who roam Indianola's beaches.

The La Salle Monument, constructed in 1936, marks the approximate site where the French explorer landed in Texas in 1685.

Before the CEPRA-led beach nourishment project, the McFaddin National Refuge beach was nonexistent.

Deeper Dive

GLO's Coastal Resources Division Completes Texas' Largest Beach Nourishment Project

By Kelly Brooks, Texas General Land Office

The McFaddin National Wildlife Refuge is situated on the Upper Texas Coast Chenier Plain in Jefferson County, Texas and is home to the Salt Bayou ecosystem. The Salt Bayou ecosystem is the largest contiguous estuarine marsh complex in Texas, stretching across 139,000 acres. Continued erosion of the McFaddin Refuge's beach and dunes had increased saltwater intrusion, which transformed marsh into open water and threatened to weaken this important natural storm barrier. This project, called the McFaddin Beach Nourishment and Dune Restoration Project Phase II, is the largest and longest beach nourishment that GLO's Coastal Resources has undertaken to date, consisting of 14.5 miles of restored dune and beach and works to address the issues erosion has caused.

The project was implemented by the Coastal Erosion Planning and Response Act (CEPRA) Program within Coastal Resources. The CEPRA Program oversees various coastal restoration projects and studies including beach nourishment, habitat restoration, shoreline protection, and debris removal. The project involved multiple partners from various divisions within the GLO including Coastal Field Operations, Oil Spill, Surveying Services, Leasing Operations, Energy Resources, Construction Services, Contract Management, Financial Management, the Office of General Counsel, Communications, and the Office of the Commissioner.

The project received funding from the Deepwater Horizon Oil Spill; NRDA, National Fish and Wildlife Foundation (NFWF) Gulf Environmental Benefit Fund, and the RESTORE Act Fund. The project was also funded by the United States Fish and Wildlife Service (USFWS) Refuge System, Jefferson County, GOMESA, CEPRA, and Surface Damage funds. The total project cost was a little over $114 million.

Beach nourishment began in 2022 and was completed in September 2024. The beach and dunes were nourished with sand from a paleochannel located approximately 1.5 miles offshore. To move the sand from offshore to the beach, the project used hydraulic dredging, which uses water as a mechanism to transport sediment in pipelines from Point A to Point B.

Now that the beach nourishment aspect of the project is complete, Texas citizens now have access to the McFaddin beach for the first time since Hurricane Ike made landfall in 2008, which demolished Highway 87 along this stretch of coastline.

Although erosion will continue to be an ongoing issue for this area, as it is along more than 80% of the Texas coastline, the additional sand will give the beach a much-needed boost to bounce back on its own. "This project is going to allow natural post storm equilibrium," said CEPRA Project Manager Kelly Brooks, "and it's going to hopefully reinvigorate the natural sand system that is onshore and offshore, to allow that natural rebound from storms."

For additional information on the McFaddin National Wildlife Refuge beach nourishment project, please contact Kelly Brooks (kelly.brooks@glo.texas.gov).

As of September 2024, the McFaddin Refuge beach has up to 14.5 miles of beaches and dunes that will enhance critical habitats and reinvigorate recreational access for beachgoers.

Beach and Dune Digest

Emergency Rules in Response to Tropical Storm Alberto and Hurricane Beryl

By: Mei Ling Valdes, Texas General Land Office

On July 10, 2024, the Texas General Land Office (GLO) adopted emergency rules in 31 Texas Administrative Code Chapter 15.18, which enabled coastal communities and municipalities affected by Tropical Storm Alberto and Hurricane Beryl to expedite the beachfront construction and dune protection permitting process for certain activities. The rules were adopted to assist property owners on the coast who experienced damages to dunes and habitable structures along the middle and upper Texas coast.

All jurisdictions in Nueces, Matagorda, Brazoria, and Galveston counties with the authority to issue beachfront construction certificates and dune protection permits were enabled to authorize certain specified activities related to the immediate stabilization and repair of habitable structures, repairs and shortening of dune walkovers, and emergency dune restoration projects.

The emergency rules were effective for 120 days and expired on November 7, 2024. Emergency authorizations issued prior to November 7, 2024, are valid for six months from the date of issuance. Any emergency activities proposed after the expiration date must adhere to the standard permitting process as outlined in the local Beach Access and Dune Protection Plan and state Beach/Dune rules.

The GLO is grateful for everyone's hard work during this difficult storm season and hope these rules allowed for rapid recovery and clean-up activities and provided coastal residents the opportunity to minimize further threat and protect their property from future storms.

If you have additional questions on the Beach Dune emergency rules, please contact Mei Ling Valdes (meiling.valdes@glo.texas.gov).

Post-Alberto (left) and post-Beryl (right) impacts to the dune system in Sunny Beach, Galveston. The GLO adopted emergency rules to allow landowners to recover rapidly from these damaging storms.

The Texas A&M University – Corpus Christi STAGES program team visits the GLO Archives and Records division on a break from discussing coastal water quality issues with Coastal Resources staff.

Clean Coast Texas Corner

Coastal Resources Hosts TAMUCC Graduate Student Researchers

By: Jason Pinchback, Texas General Land Office

Earlier this year, GLO Coastal Resources staff were excited to partner with Texas A&M University – Corpus Christi's (TAMUCC) STAGES program – Stakeholder-Guided Environmental Science. The STAGES program is a National Research Traineeship focused on harnessing machine learning and artificial intelligence (AI) to help understand complex water quality systems. This program aims to:

- Prepare diverse STEM leaders for interdisciplinary team-science in coastal systems and data science.
- Equip students with essential professional skills, including communication, teamwork, and ethics, for success across workforce sectors.
- Cultivate a network of partners committed to enhancing the resilience of the Gulf Coast to climatic change. This involves collaboratively formulating research questions aligned with regional needs, working together to address them, and increasing the utilization of public data sets.

The partnership tapped into Water Resources and Coastal Management Program staff expertise to explore emerging and perplexing issues related to coastal beach fecal indicator bacteria. The research was focused on Texas Beach Watch sites in the Galveston, Brazoria, and Matagorda County areas, where significant "hot spots" have been observed since 2019.

The TAMUCC team consists of: Dr. Dorina Murgulet (PI), Dr. Audrey Douglas (Director), Dr. J. David Felix (nutrients expert), and their graduate students (Mr. Quincy Walker, Ms. Laura Button, and Mr. Ifeanyi Anyanwu). In addition to the TAMUCC team working with Coastal Resources, the STAGES program has three other cohort groups working with different agencies on various research topics.

The TAMUCC team visited the GLO Austin headquarters on November 18, 2024, and presented a preview of their findings to several different GLO program areas. Many fascinating insights were shared about major influencing factors, hydraulic connectivity, and new ways to find rainfall in areas where gauge stations are not available. GLO staff are excited to receive the final report, findings, and conclusions in early 2025.

During their visit, the group toured the GLO Archives and Records, which was hosted by Kevin Klaus and Krista Schreiber. The graduate students also received job interviewing and application submittal "tips and trick for success" with GLO Human Resources, which was hosted by Lauren DeAnda and Kaitlin Campbell. The project team spent the remainder of the day discussing project details and digging into the complex world of coastal water quality.

Thank you TAMUCC for your partnership!

To learn more about Clean Coast Texas, visit:
www.cleancoast.texas.gov

AgriLife completed bacterial source tracking and a quantitative microbial risk assessment on water samples collected from Tule Creek, Little Bay, and Aransas Bay (pictured).

CMP Success Story

Researchers Evaluate Health Risks Based on Recreation Activity in Little Bay

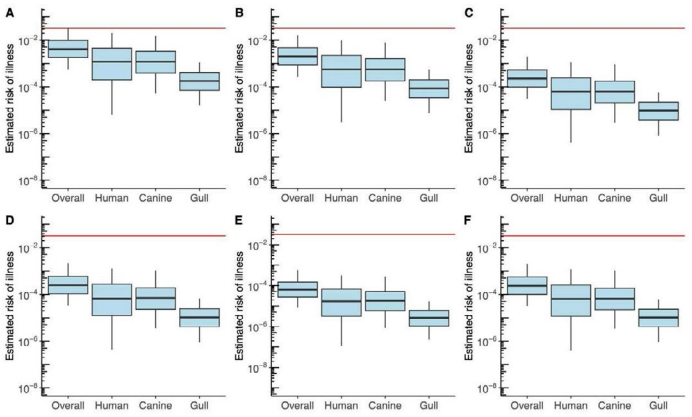
By: Jessica Chappell, Texas General Land Office

Fecal pollution is a leading cause of water quality impairments in coastal Texas. The amount of fecal pollution in marine environments is currently assessed through the measurement of enterococci, which is a bacteria found in the fecal waste of a variety of animals, including humans. However, when researchers report enterococci levels found in water samples, these results do not specify the fecal waste source, or the health risks associated with it. Using CMP Cycle 27 funds, Texas A&M AgriLife (AgriLife) completed bacterial source tracking and a quantitative microbial risk assessment on water samples collected from Tule Creek, Little Bay, and Aransas Bay. AgriLife focused on identifying the enterococci of humans, canines (dogs), and seagulls. The risk assessment was completed for the following recreational activities: children swimming, adults swimming, adults fishing, adults jet-skiing, adults boating, and adults kayaking.

The project's results show that the median estimated health risks in the sampled area were not high when compared to the US Environmental Protection Agency's (EPA) gastrointestinal illness risk benchmark of 32 illnesses per 1,000 recreation events. AgriLife arrived at this result looking at the bacteria source tracking data, which provides a more accurate representation of potential pathogens. Interestingly, AgriLife found that enterococci from humans was the most common in the project study area, followed by enterococci from dogs. The study also found that the highest health risk was for children and adults swimming, followed by fishing, jet-skiing, and kayaking. Although the level of water contamination across all locations was considered acceptable according to EPA's standards, AgriLife found the health risks were highest in Little Bay, followed closely by Aransas Bay and then Tule Creek.

Little Bay is a popular spot for outdoor recreation, but the local community has voiced concerns regarding the safety and effectiveness of Tule Creek as a manmade wastewater treatment plant buffer. As part of this project, AgriLife held two community stakeholder meetings that were attended by Rockport, Fulton, and Aransas County community leaders, small business owners, educators, and other interested citizens. AgriLife shared the project's results at these meetings and listened to stakeholder concerns, including tourism impacts due to poor water quality and potential fecal pollution sources. AgriLife hopes these results will help improve recreational water quality management by allowing managers to prioritize management strategies that target the fecal waste of the greatest health concern.

To learn more about this project, visit: https://www.glo.texas.gov/coastal/coastal-projects/evaluating-health-risks-little-bay



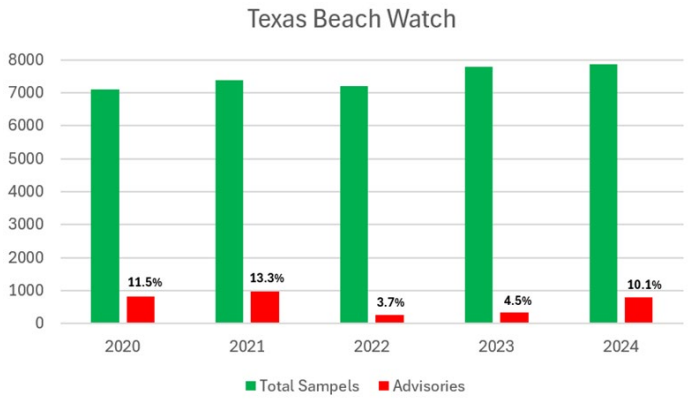
Researchers found the estimated health risk for all recreational activities were below the Environmental Protection Agency benchmark of 32 illnesses per 1,000 recreation events (red line). The figure shows the estimated health risk based on bacteria source for A) children swimming; B) adults swimming; C) adults fishing; D) adults' jet-skiing, E) adults boating; F) adults kayaking.

Texas Beach Watch Box

How's it Looking, Texas Beach Watch?!

By Jason Pinchback and Lucy Flores, Texas General Land Office

As the Texas beach season comes to a close, GLO's Water Resources team wanted to share a couple of highlights on general water quality through the eyes of Texas Beach Watch. Fecal indicator bacteria, enterococcus specifically, are highly variable and their presence is inextricably linked to thousands (likely millions) of influencing factors. The Texas Beach Watch network tests weekly at 172 sites spanning along the Texas coast from March through October, collecting around 7,000-8,000 samples annually.



Across the entire network, sampling results indicate a slight increase in advisories compared to the two prior years of excellent water quality. While many sites have a much lower beach action advisory rate, GLO staff are keeping a close eye on a handful of locations demonstrating significantly higher bacteria loading.

For more information on Texas beach water quality visit www.texasbeachwatch.com and check out its companion program, Clean Coast Texas at www.cleancoast.texas.gov to learn more about how GLO's Water Resources team is working with coastal communities to protect and enhance their stormwater management. To learn more about your favorite beach, click on the site of interest on the Texas Beach Watch site, and then click on "details" in the popup window. There you will find individual, site specific, information on how that location performed last year.

A beach advisory is posted when enterococcus results are greater than 104 colony forming units per 100 milliliters. The data presented (left) represents an aggregate of all Texas Beach Watch sites from all nine counties during the selected calendar year.

Natural Resources Damage Assessment Programt

GLO's Tara Whittle Elected to be Natural Resources Damage Assessment Alliance Chair

By Allison Fischer, Texas General Land Office

In September 2024, the GLO's Natural Resources Damage Assessment (NRDA) Team, along with their legal counsel, Scottie Aplin, attended the State's NRDA Alliance meeting in Missoula, Montana. Texas NRDA Trustees met with other state NRDA Trustees from across the country to discuss restoration projects, settlement strategies, cleanup methods, and other program topics. One of the business items was to elect a new chair to the State's NRDA Alliance, and GLO's own Tara Whittle was unanimously elected to lead the group for the next two years. Congratulations to Tara, we look forward to your leadership!

Featured in this photo is Carly Vaughn (left), Allison Fischer (middle), and Tara Whittle (right). Tara is the new State's Natural Resources Damage Assessment Alliance Chair and will lead the group for the next two years.

Joe Vega is the Director of Cameron County Parks and has cultivated partnerships across the south Texas coast.

Stories From the Surf

Joe Vega: A Lifetime of Service

By: Cara Stewart, Texas General Land Office

If you have spent any time at a Cameron County Park or enjoy hanging around the South Padre Island/Port Isabel area, then you probably have heard of Joe Vega. Most people know Joe as the Director of Cameron County Parks. However, there is so much more to learn about Mr. Vega and all the amazing contributions and partnerships he has cultivated across the south Texas coast.

Mr. Vega's family history on the coast is one that spans back all the way to his great grandfather, who opened a business on South Padre Island that consisted of a hotel, bathhouse, and restaurant. His grandfather owned a bakery and a store in Port Isabel. Joe's father was a Municipal Court Judge in Port Isabel, a school board member, and was involved in civic organizations. His father also started the first Salvation Army Unit in the area, which instilled in young Joe the importance of helping his community flourish.

As a child, Joe would ride his bike down to the shrimping docks and watch all the fresh shrimp come in off the boats. When he was around 10 years old, Joe, his brother, and friends would often help unload the shrimp to collect a hefty bag of the day's catch and an extra $20 for their services. Well into his teenage years, Mr. Vega gravitated to the surf, catching waves with his school friends. He was enamored with the idea of surfing because of the community aspect that being out on the water created. Cameron County's Isla Blanca Park was, and still is, Joe Vega's playground for family, coastal protection, and community. The park was recently ranked the number one Texas gulf coast beach by USA Today, which Joe takes great pride in.

Mr. Vega considers himself blessed to be the Director of Cameron County Parks and understands the responsibility that it takes to elevate the quality of life in the Laguna Madre area. However, his dedication to the coast and local community started much earlier in his career. Mr. Vega has served as City Commissioner, Mayor of Port Isabel, and Deputy Parks Director, where he was involved in restoration projects such as restoring wetlands to Bahia Grande. The project was one of the largest wetland restoration projects in the state of Texas, with over 21,000 acres of degraded land converted into wetland.

Although being the Director of Cameron County Parks keeps him busy, Joe enjoys spending his free time with his wife Lucy and their children Isabella and Jude. His family thrives off coastal living and often participates in yearly fishing tournaments. The Vega family also has a deep need to protect the environment and frequently attends Adopt-A-Beach Cleanups.

Mr. Vega's 's passion is to ensure that future generations have the opportunity to live and thrive on the coast. He attributes his greatest successes to the wonderful partnerships established with the GLO, County Judge Eddie Treviño Jr., County Administrator Pete Sepulveda. Jr., the Commissioners Court, and his Cameron County Parks Family.

To learn more about the Cameron County Parks Department, visit: https://www.cameroncountytx.gov/parks-home/

Mr. Vega's children, Isabella (top right) and Jude (bottom), participating in the Texas International Fishing Tournament.

Eyes on the Horizon

Continuing a History of Adaptive Planning for the Texas Coast

By: Josh Oyer, Texas General Land Office

The GLO has launched the multi-year effort to develop the next iteration of the Texas Coastal Resiliency Master Plan (TCRMP). This next effort will build and improve on the formula behind the previous iterations of the TCRMP released in 2017, 2019, and 2023. This next iteration is anticipated to be released before the 91st Texas Legislative session in 2029. The TCRMP is the GLO's ongoing planning framework to continue to adapt recommendations for actions and strategies for the changing coast and the evolving preferences of coastal communities. The planning effort behind the TCRMP is heavily driven by input from stakeholders on a regional level through the Technical Advisory Committee (TAC) and informed by data that illuminates current and future anticipated vulnerabilities within the coastal system.

AECOM and the Harte Research Institute of Texas A&M – Corpus Christi (HRI) work with the GLO to develop the TCRMP. This consulting team has been in place since the inception of the TCRMP and their collective expertise will be leveraged to expand on previous efforts. AECOM and HRI will deploy modeling results and integrate various data sources to identify the most vulnerable areas along the Texas coast, given anticipated landscape change over the next few decades. The GLO anticipates the first round of TAC stakeholder meetings to occur in spring 2025.

This ongoing TCRMP process continues a history of coastal planning at the GLO manifested in previous publications that have been referenced by state and federal agencies to inform strategic investments. Before the TCRMP, the GLO worked with HRI on a publication named Shoring Up Our Future that established the TAC, delineated geographic regions along the coast with similar attributes, and identified the prevailing issues of concern in those regions. In the wake of the impacts of disasters such as Hurricane Ike and the Deepwater Horizon Oil Spill, and the impending increase in coastal project funding through the Gulf of Mexico Energy Security Act, the GLO saw a need for a formalized and robust coastal planning program and continued to build on the work from Shoring Up Our Future to begin the TCRMP.

Dating back even to the early 2000s, the GLO conducted the Coastal Texas 2020 planning study that began this legacy of coastal planning by establishing advisory committees, identifying the top issues of concern, and providing a series of recommendations. This publication was released in 2003 and used "2020" in the name to refer to both looking forward to that year and with clear "20/20" vision, learning from past experiences to plan for the future of the Texas coast.

Now, keeping our eyes on the horizon, the GLO is excited to start up the next TCRMP with more precedent, more data, and even more opportunities for stakeholder engagement. Be on the lookout for an open public survey to collect opinions and perceptions about the state of our coast, the concerns facing us, and the most impactful solutions. For questions or comments on the TCRMP, please contact Joshua Oyer at joshua.oyer@glo.texas.gov.

Before there was a Texas Coastal Resiliency Master Plan, the GLO worked with the Harte Research Institute to establish the Technical Advisory Committee, delineate geographic regions along the coast with similar attributes (pictured), and identify the prevailing issues of concern in those regions.

Federal Activities in Coastal Waters

Texas Deepwater Port News

By: Leslie Koza, Texas General Land Office

Texas has three pending (and one issued) deepwater port (DWP) license applications. All DWP applications are required to be consistent with the Texas Coastal Management Program and the Texas Governor must approve or deny each Texas DWP application. The status for each DWP application is listed below.

SPOT (Sea Port Oil Terminal, LLC):
SPOT has applied to own, construct, and operate a DWP to export domestically produced crude oil approximately 27.2 to 30.8 nautical miles off the coast of Freeport. The Texas General Land Office (GLO) issued a conditional concurrence June 21, 2021. The Final Environmental Impact Statement (FEIS) was published August 23, 2022. On August 31, 2022, Governor Abbott issued his approval for the issuance of the deepwater port license. On November 21, 2022, the Maritime Administrator issued the SPOT Record of Decision, with conditions. The Maritime Administrator signed the SPOT Terminal Services LLC Deepwater Port License April 08, 2024.

GulfLink (Texas GulfLink, LLC):
Gulflink has applied to own, construct, and operate a DWP to export domestically produced crude oil approximately 28.3 nautical miles off the coast of Brazoria County. The GLO's conditional concurrence was issued April 13, 2023. The FEIS was published July 4, 2024, and Governor Abbott's approval letter dated October 2, 2024, was issued.

Bluewater (Bluewater Texas Terminals, LLC):
Bluewater has applied to own, construct, and operate a DWP to export domestically produced crude oil approximately 15 nautical miles off the coast of San Patricio County. The Draft EIS (DEIS) was published for public notice and comment October 28, 2021, and the United States Army Corps of Engineers public notice was published November 18, 2021. A supplemental DEIS is in progress.

Blue Marlin Onshore Port, LLC:
Blue Marlin Onshore Port (BMOP) has applied to develop the BMOP Project in the Gulf of Mexico to provide crude oil transportation and loading services for crude oil produced in the continental United States. The project extends from Nederland, Texas to Cameron Parish, Louisiana. The application was deemed administratively complete on October 22, 2020, and two public scoping meetings were held on December 2, 2020 and December 3, 2020, for the communities of Cameron Parish, Louisiana and Jefferson County and Orange County, Texas.
Interim DEIS is expected early 2025.

Additional information can be found at www.regulations.gov

Keeping up with CEPRA

Protecting the Hidden River Delta

By: Kristin Hames, Texas General Land Office

The Nueces River is the site of early human settlement, European colonization, international dispute, hidden treasure, and a modern-day birdwatching paradise. Originally named the Río Escondido (translating to the "Hidden River") by Spanish explorers, this quiet, unassuming river was a central conflict area of the Mexican American War. Mexico once claimed the Nueces River as the country's northernmost boundary; Texas did not agree, and the ensuing Mexican American War established the current day border at the Rio Grande.

During the war, the Nueces River was part of the infamous Nueces Strip, a no man's land where armies from both sides attempted to claim ground. Ranches were abandoned as families fled the area, allegedly burying their valuables until they could return. Bands of robbers roamed, and Native American raids further destabilized the Nueces Strip and gave rise to tales of buried doubloons, silver bullion, and other treasure.

Beginning in the late 1800s, the Nueces River was subjected to man made changes including the construction of the Lake Corpus Christi dam and re-routing the lower portion of the river. The river once directly fed the Nueces Delta, one of the most extensive marshes in Texas. The Delta is now owned and managed by the Coastal Bend Bays and Estuaries Program (CBBEP) as part of the 11,000-acre Nueces Delta Preserve. The Delta's Bay shoreline was rapidly eroding, endangering marsh habitat that is home to Texas diamondback terrapin, blue crab, drum, trout, shrimp, and numerous bird species that Corpus Christi is known for. In response CBBEP, in partnership with the Coastal Erosion Planning and Response Act (CEPRA), completed a protective 3,600 linear feet rock rubble breakwater in 2024. This is part of a larger, ongoing conservation initiative by CBBEP to restore the marsh lands protecting the uplands, an area of the Coastal Bend valued for its history and ecology.

The historic Nueces River at the Coastal Bend Bays & Estuaries Program Nueces Delta Preserve.

The rock rubble breakwater in Nueces Bay protects the delta's shoreline from wave energy and erosion.

Texas A&M University — Corpus Christi researchers sample the beach benthic macrofauna. These results will provide support for an allowable frequency of beach nourishment under the Regional General Permit.

Sediment Management Scoop

Sediment Management Plan Updates

By: Caroline Jurca, Texas General Land Office

The Coastal Management Program (CMP) continues to lead the development of the Texas Sediment Management Plan (SMP). Roughly 80% of the Texas Gulf-facing shoreline is eroding, so effective and efficient coastal sediment management is crucial for coastal resiliency. The SMP will provide comprehensive sediment management guidance to address these needs. The first iteration of the SMP is planned for 2027, with new iterations to follow every four years to incorporate new data and policy recommendations. The writing of the SMP is currently underway.

Additionally, the GLO has applied for a U.S. Army Corps of Engineers (USACE) regional general permit (RGP) and is attempting to obtain a programmatic biological opinion to expedite permitting beach nourishment projects at any publicly accessible, critically eroding, Gulf-facing beach. Nourishment under the RGP will fall into two categories—standard maintenance nourishment or storm response nourishment—which will have different limitations on location, spacing between adjacent nourishment events, maximum nourishment length, and maximum template size. Additional best management practices will also be used to meet the requirement of no more than minimal impacts. Public Notice comments were reviewed over the summer, and the US Fish and Wildlife Service is reviewing the Biological Assessment associated with the RGP. Texas A&M University – Corpus Christi is currently conducting beach benthic macrofaunal monitoring to assess the time for the benthic invertebrate community to recover following a beach nourishment event. These results will provide support for an allowable frequency of beach nourishment under the RGP. The project will wait for the conclusion of nourishment events to complete the post-nourishment portion of the study.

The GLO continues searching for valuable sediment resources to use as borrow areas for coastal resiliency projects. The GLO's CEPRA team is leading the search for offshore sediment in state and federal waters. Coastwide geophysical surveys have been completed throughout all four Regions to locate potential sediment resource areas. Geotechnical investigations have been completed in Region 1, while Regions 2-3 are underway, confirming and characterizing sediment deposits that may serve as future borrow areas. Region 4 will begin in late 2024.

Additionally, the GLO is funding a coastwide investigation of susceptibility to barrier island breaching. The study will map historical washover locations and combine this information with lidar elevation data, dune volumetrics, dune continuity, and dune vegetation to determine a breaching susceptibility index (BSI). The project has begun processing high-resolution imagery, aircraft trajectories, and lidar data collected in Spring 2024 for the upper Texas coast. The BSI will be one of many environmental and socioeconomic metrics that will feed into the critical erosion area identification tool planned for 2025. The tool will provide a data-driven way to determine funding priorities for coastal resiliency projects.

For more information or to get involved with the Texas Sediment Management Plan, contact Caroline Jurca (caroline.jurca@glo.texas.gov).

Living Shorelines Lowdown

Living Shorelines Techniques Benefit Bird Islands

By: Kristin Hames, Texas General Land Office

Every year, thousands of colonial waterbirds flock to islands in Texas bays to nest and raise their chicks. Over 26 species seek out these "rookery" islands for a safe place to raise their offspring, free from predators and the human disturbance that plagues mainland nesting sites. Black skimmers scrape indentations on the rookery's beaches to lay their eggs, roseate spoonbills busily build nests in the shrubbery, and groups of great blue herons comically poke their long necks out from the prickly pear cactus where their nests are hidden. Historic records indicate the largest rookery islands in the United States may have hosted up to 2 million birds. Following the decimation of bird populations in the 1800s and subsequent habitat loss from coastal development, rookery islands have become essential for the continuation of coastal bird populations. Though few natural rookeries remain, the spoil islands created by dredging the Gulf Intracoastal Waterway (GIWW) have provided important additional habitat.

Rookery islands are shrinking and disappearing due to erosion, sea level rise, and disrupted hydrology. A variety of techniques are utilized to restore the rookeries, including the following living shorelines techniques:

- Rock breakwaters buffer wave action to shield the shoreline and create a calm water area for seagrass growth and bird foraging
- Smooth cordgrass planting anchors the sediment and provides habitat that attracts food for the birds
- Sediment fill increases the rookery size and elevation to resist wash-over
- Oyster shell encourages reef growth for direct bird feeding, as the American Oystercatcher is known for, and habitat for other prey species

Dr. David Newstead, Director of the Coastal Bird Program at the Coastal Bend Bays & Estuaries Program (CBBEP), is among those dedicated to habitat management, stewardship, and conservation of bird populations. You may see him in stakeholder meetings, boating around the bay, or outfitting birds with tiny backpack tracking devices. In his words,

"It's clear that loss of nesting habitat is a significant driver of population decline of colonial nesting waterbirds, so it's important to address this problem on two fronts – through intensive management of what remains, and restoration and rehabilitation of what's been lost. Many common coastal bird species depend not just partly but entirely on these islands for their reproduction."

Approximately 30 islands have been, or are currently in the process of being, restored using living shoreline techniques through GLO, US Fish and Wildlife Service, Texas Parks and Wildlife Department, Galveston Bay Foundation (GBF), CBBEP, The Nature Conservancy, and other entities. Many rookeries are also actively managed by the Texas Audubon, the Houston Audubon Society, GBF, and CBBEP for debris removal, invasive species removal, predator control, nesting platforms, and signage.

General information on Texas rookeries can be found through the Audubon Texas website at https://tx.audubon.org/conservation/audubon-texas-coastal-islands. As restoration efforts continue to progress along the Texas coast, resource management agencies are hopeful to see an increased number of successfully nesting birds that will contribute to colonial waterbird populations.

A rock breakwater protects the Dagger Island shoreline and marsh from eroding. The newly planted smooth cordgrass will grow to establish habitat for bird foraging.

A great blue heron stands above its nest on a rookery island, with many other nesting birds visible in the background. Photo credit Dr. David Newstead

Congratulations to Subrecipients

Announcing CMP Projects of Special Merit

By: Meghan Martinez, Texas General Land Office

The Texas Coastal Management Program is excited to announce the Cycle 29 Projects of Special Merit (PSM). PSMs are funded through allocations the state of Texas receives from the Gulf of Mexico Energy Security Act (GOMESA). Cycle 29 PSMs started in 2024 and are ongoing. During Cycle 29, CMP is funding nine PSMs. More information about each of these projects can be found at: https://www.glo.texas.gov/coastal/coastal-projects

Preserve and Enhance the Resilience of Bayside Wetlands on Mustang Island

The Coastal Bend Bays and Estuaries Program (CBBEP) will work to develop a Resilience Plan for Mustang Island in the Coastal Bend region of Texas. The Resilience Plan will aim to identify the causes of wetland loss and recommend near-term and long-term strategies to enhance Mustang Island's resilience to future anticipated climate conditions.

The Clean Coast Texas Collaborative Years 5 & 6

The Clean Coast Texas Collaborative (CCTC) is a primary initiative of the Texas Coastal Management Program's (CMP) Coastal Nonpoint Source (NPS) Pollution Program that was implemented in 2021 (CMP Cycle 25). Texas A&M University-Corpus Christi Harte Research Institute for Gulf of Mexico Studies, in collaboration with CCTC partners, will continue working with coastal communities to achieve their economic, ecological and public health goals.

Restoring TCOON by Re-imagining Lighthouse, a Data Platform

The Texas Coastal Ocean Observation Network (TCOON) is a unique network of scientific data stations ranging from South Padre Island to Sabine Lake that collect critical environmental, meteorological, and oceanographic data. Texas A&M University-Corpus Christi Conrad Blucher Institute (CBI) will restore a comprehensive 30+ year dataset from the TCOON consisting of historical and current data along the entire Texas coast by re-imagining the former Lighthouse data platform.

Petronilla Wetlands

The Nueces River Authority (NRA) is working towards the long-term goal of constructing a Regional Wastewater Treatment Plant (WWTP) and green stormwater infrastructure that will enhance the treatment capacity of effluent and nonpoint source stormwater contaminants to ultimately reduce the amount of nutrients and bacteria flowing into the Baffin Bay watershed. To work towards this goal, the NRA will acquire multiple land tracts.

Copano Cove Ranch Acquisition

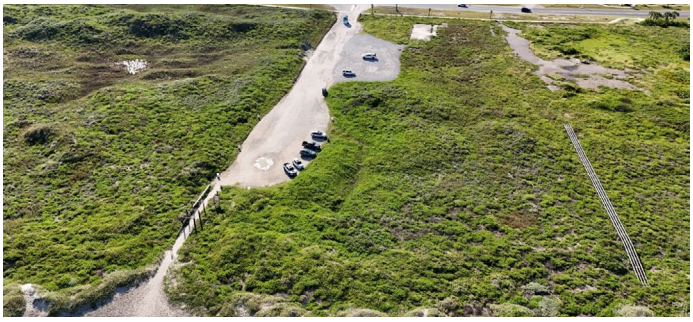
Aransas County will purchase the Copano Cove Ranch property—an estimated 973 acres of waterfront lowlands in unincorporated Aransas County, TX. The property has 2,700 linear feet of shoreline along Copano Bay and its inlets and protects coastal prairie, and estuarine and marine wetlands adjacent to the Mission-Aransas National Estuarine Research Reserve (NERR) that support endangered and threatened wildlife species such as the Whooping Crane.

A Stakeholder Driven Plan for Long-Term Coastal Hydrologic Monitoring

Texas State University Meadows Center for Water and the Environment will implement Phase 1 of the Long-Term Coastal Hydrological Monitoring Program (LTCHMP). The Meadows Center will develop an interactive web map and recommendations for coastal hydrologic monitoring data and establish and maintain a LTCHMP through a stakeholder-driven process.

Cameron County Beach Access #3 Accessibility Infrastructure

Cameron County will construct an Americans with Disabilities Act (ADA) compliant dune walkover that will allow beachgoers to access the parking lot from the beach¬ and a parking lot with a permeable paving system. In addition to enhancing public access, other improvements include police surveillance, seasonal lifeguards and beach patrol, and portable restrooms.



Beach Access #3 in South Padre Island, Texas prior to construction of public access infrastructure.

Packery Channel Nature Park Habitat Creation and Public Access

Nueces County will construct additional public amenities at the Packery Channel Nature Park in Corpus Christi, Texas. Amenities include the extension of the existing ADA compliant elevated boardwalk, kiosks, shaded bench structures, and interpretive signage.

Upcoming Events

Texas Plastic Pollution Symposium
April 3, 2025: Houston, TX
https://texasplasticpollutionsymposium.com/

Texas Bays and Estuaries Meeting
April 23-24, 2025: Port Aransas
https://texasbaysandestuaries.com/

Texas Coastal Roundup 2025
April 26, 2025: Isla Blanca Park, South Padre Island, TX
10:00am-4:00pm

Gulf of Mexico Alliance (GOMA) All Hands Meeting
May 5-8, 2025: Biloxi, MS
https://gulfofmexicoalliance.org/announcements/all-hands-meeting/