



# COASTAL RESOURCES NEWSLETTER

JANUARY 2024



## Join Us for the 2024 Texas Coastal Roundup!

An exciting event is on the horizon! The GLO is hosting the Texas Coastal Roundup on June 1, 2024, at the Great Lawn at Water's Edge Park in Corpus Christi, TX. This free, one-day, event will take place from 10:00am to 4:00pm and is open to the public. The Roundup will gather 50+ coastal and environmental organizations together and allow each group to showcase the work they do to protect the Texas coast. Booths will provide education and outreach opportunities and interactive displays that will allow the public to learn more about how they too can help protect Texas coastal natural resources. There will be plenty of fun activities for the whole family to enjoy ranging from a kid zone to food trucks, door prizes, a welcome by the GLO's Land Commissioner, Dawn Buckingham, M.D., and more. This event was last hosted by the GLO in 2012 when the Coastal Exposition was held at the Texas State Aquarium in Corpus Christi. The GLO hopes this event will be bigger and better than ever before so please plan to join us! Additional information and details will be made available in early 2024. To register to attend this free event, click [here](#).



Save the date for the upcoming 2024 Texas Coastal Roundup! There will be fun activities for the whole family, just like the last Coastal Roundup held in 2012





At Bolivar Peninsula, 74 different targets were removed from the beach. Several targets were abandoned well stubs that had to be dug up, cut, capped, and reburied.

The Mission-Aransas Reserve removed Hurricane Harvey-related debris on the UTMSI campus and at Este Flats. The UTMSI research pier was severely damaged, and the entire pier had to be removed. The pier and its associated debris totaled approximately 226 tons, though most of the concrete was recycled. At Este Flats, UTMSI removed 60,000 pounds of debris that included large amounts of household and construction debris (timber, metal, and plastic). Additionally, UTMSI removed the Duderstat Pier, which had a footprint of approximately 6,080 square feet and five tons of debris. 14.7 tons of wood was recycled from the Este Flats site.

## Texas Sites and Coastal Sights

### ► CMP Helps the Texas Coast Shed 2.75 Million Pounds of Hurricane Harvey Debris

By Jessica Chappell, Texas General Land Office

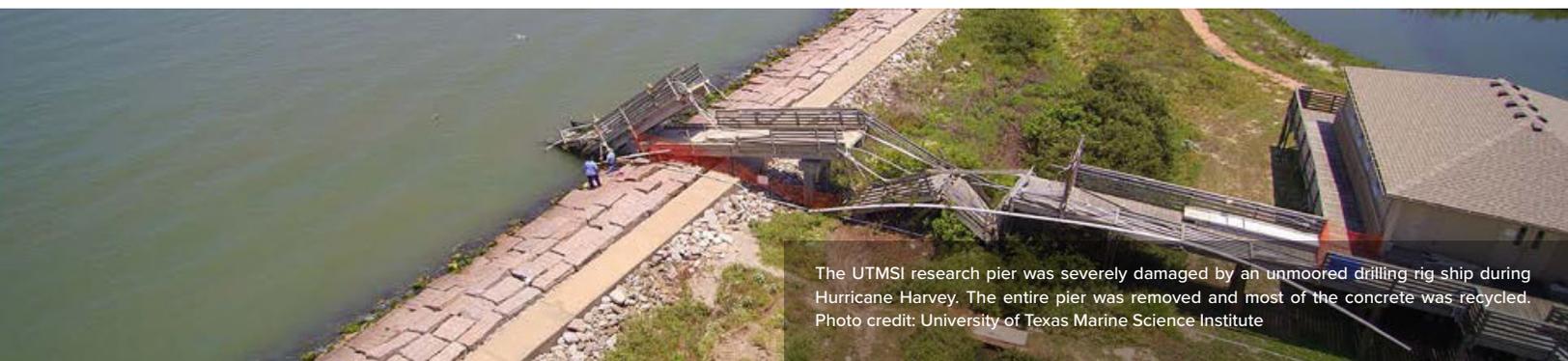
Hurricane Harvey made landfall on August 25, 2017 as a category 4 hurricane and caused extensive damage along the Texas coast. In 2018, the National Oceanic and Atmospheric Administration (NOAA) awarded the GLO's Coastal Management Program (CMP) \$3.8 million to remove Hurricane Harvey-related marine debris. To fulfill the award requirements, CMP partnered with several GLO divisions and the Mission-Aransas National Estuarine Research Reserve (Mission-Aransas Reserve).

The GLO passed \$800,000 in funds to the Mission-Aransas Reserve, a program run under the University of Texas Marine Science Institute (UTMSI). UTMSI passed-through funds to the Coastal Bend Bays and Estuaries Program (CBBEP) and the Texas Parks and Wildlife Department (TPWD). CBBEP removed 50.11 metric tons of debris from four locations, totaling approximately 488 acres. TPWD removed debris over 38 acres at Goose Island State Park. The restored habitat included live oak/red bay, coastal prairie habitat, saltmarsh, and tidal flats. TPWD removed approximately 600 cubic yards of debris that included lumber, metal, large chunks of cement, and asphalt that was displaced portions of a park road.

Finally, the GLO's Construction Services division completed debris removal at two sites: a derelict oil platform in Copano Bay and several targets along the Bolivar Peninsula Beach. The GLO removed 500 tons of debris from Copano Bay. From Bolivar Peninsula, 74 different targets totaling 560 tons of debris from were removed. The debris targets included concrete, wood, geotube, metal, piping, and well stubs.

In total, 2.75 million pounds of marine debris was disposed of through this project, and 1.27 million pounds was sustainably disposed. 7,575 acres of the Texas coast was cleaned after this five-year effort spearheaded by the GLO. Already, Bolivar Peninsula visitors are enjoying the debris-free beach for the first time in years.

GLO Land Commissioner Dawn Buckingham says, "I grew up near the Texas coast and spent over a decade living on Galveston Island— so our beautiful beaches are very near and dear to my heart. As a little girl, I loved going to the beach, and now, as a mother, I am so happy to share this experience with my children. Texas beaches are a Texas gem. My mission is to maintain and keep our beaches clean and pristine for all to enjoy. With 2.75 million pounds of Hurricane Harvey-related marine debris cleared from the coast, this project is a momentous achievement in our pursuit to protect and preserve our beautiful beaches for visitors and wildlife. I would also like to applaud the hard work and dedication of the several GLO divisions and the Mission-Aransas National Estuarine Research Reserve, who partnered with the GLO's Coastal Management Program on this project."



The UTMSI research pier was severely damaged by an unmoored drilling rig ship during Hurricane Harvey. The entire pier was removed and most of the concrete was recycled. Photo credit: University of Texas Marine Science Institute



## Federal Activities in Coastal Waters

### ► Texas Deepwater Port News

By Leslie Koza, Texas General Land Office

Texas has four pending deepwater port (DWP) license applications. All DWP applications are required to be consistent with the Texas Coastal Management Plan 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 GLO’s conditional concurrence was issued 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 (ROD), with conditions. The Maritime Administration is working with the Applicant to ensure that all conditions of the ROD are satisfied prior to the issuance of the SPOT License.

#### **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 has been finalized but has yet to be published as of November 2023.

#### **Bluewater (Bluewater Texas Terminal, 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 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 Offshore Port, LLC (BMOP):**

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. Additional information can be found at the regulations website below or at:

[www.bluemarlinnepaprocess.com](http://www.bluemarlinnepaprocess.com)

More information on the applications can be found at [www.regulations.gov](http://www.regulations.gov) using the docket no in the table below.

DWP Applicant	Docket No MARAD-	Date Application Submitted to MARAD
<b>SPOT</b> (Sea Port Oil Terminal/ Enterprise Products)	2019-0011	1/31/2019
<b>GulfLink</b> (Texas GulfLink, LLC)	2019-0093	5/30/2019
<b>Bluewater</b> (Bluewater Texas Terminal, LLC)	2019-0093	5/30/2019
<b>BMOP</b> (Blue Marlin Offshore Port, LLC)	2020-0167	10/1/2020

## Living Shoreline Lowdown

### ► GLO's Living Shoreline Initiative Still Going Strong

By Kristin Hames, Texas General Land Office

The GLO participates in several living shorelines initiatives at the local, state, regional, and national level. In October 2023, the GLO presented at the national Restore America's Estuaries (RAE) Technical Transfer Workshop in Galveston on living shorelines permitting. The event created a platform to learn, engage, and exchange knowledge with professionals, experts, and stakeholders in the field of coastal and estuarine habitat restoration. Participants also attended a variety of field trips in the greater Galveston area to see Texas living shorelines in action. Further information on the workshop can be found at <https://estuaries.org/living-shorelines/2023-living-shorelines-workshop/>

The Harte Research Institute at Texas A&M University – Corpus Christi hosted a Texas Living Shorelines Practitioner Forum on August 25, 2023 to identify common obstacles for living shorelines practitioners and develop potential solutions to engineering, regulatory, and environmental challenges. The GLO attended to provide information on the leasing process for living shorelines projects as they relate to State owned submerged land.

The GLO also presented at the Gulf of Mexico Alliance (GOMA) All Hands living shorelines workshop in Austin in June 2023. The workshop discussed living shorelines challenges for the Gulf of Mexico states and potential solutions for overcoming those barriers. The GLO presented on the status and trends of Texas living shoreline. More information on the meeting can be found at <https://gulfofmexicoalliance.org/announcements/all-hands-meeting/>

Finally, the GLO assisted with a GOMA funded grant held by Mississippi State University for understanding and navigating the living shorelines permitting process in all the Gulf states. With this grant, representatives from each Gulf state produced documents on the permitting process and workshop tool kits. The representatives also compiled a summary document of obstacles to living shoreline construction with potential solutions for all the Gulf states. Additionally, the GLO, in conjunction with the Galveston Bay Foundation, held a workshop for coastal landowners on May 23, 2023 in Webster to discuss living shoreline projects constructed in the Galveston area and the Texas permitting process. The documents created as part of this grant are housed at <https://masgc.org/living-shorelines/contractor-resources>.

Moving forward, the GLO will continue to assist landowners and other entities interested in constructing living shorelines as a green alternative to traditional shoreline stabilization techniques. The GLO's living shorelines website will be updated to include the resources mentioned above and improved project maps. Living shorelines on public property may qualify for GLO CMP or CEPRAs funds. Applications solicitation for CMP will open March 1, 2024, and the CEPRAs application will open in spring of 2025.



*Restore America's Estuaries field trip participants explore oysters collected from a living shoreline project at Sweetwater Preserve with the Galveston Bay Foundation in October 2023. Participants came from all over the U.S. to see Texas living shorelines in action. Photo credit: Galveston Bay Foundation*



*Living shorelines, such as this one at Clear Lake Forest Park, are a green alternative to traditional shoreline stabilization techniques. The GLO will continue its work to promote living shorelines in 2024.*

# Beach Dune Digest

## ► Beach Access GLO-Ups along the Texas Coast

By Mei Ling Valdes, Texas General Land Office

“The public...shall have the free and unrestricted right of ingress and egress to and from the state-owned beaches.” Texas Open Beaches Act Section 61.011.

The Texas Open Beaches Act (OBA) requires the public’s free and unrestricted right to access Texas Beaches. As part of the OBA, local governments are responsible for regulating, maintaining, and ensuring public access. Additionally, local governments are required to adopt dune protection and beach access plans, which the GLO reviews for consistency. The Beach Access & Dune Protection Program (Beach Dune team) coordinates efforts with local jurisdictions to ensure that their dune protection and beach access plan not only protects the integrity of beaches and dunes, but also offers unrestricted and safe access for all members of the public to use the beach. However, the combination of limited resources, damages from unpredictable storms, and daily usage of amenities and accessways causes ongoing challenges with maintaining and improving public access.

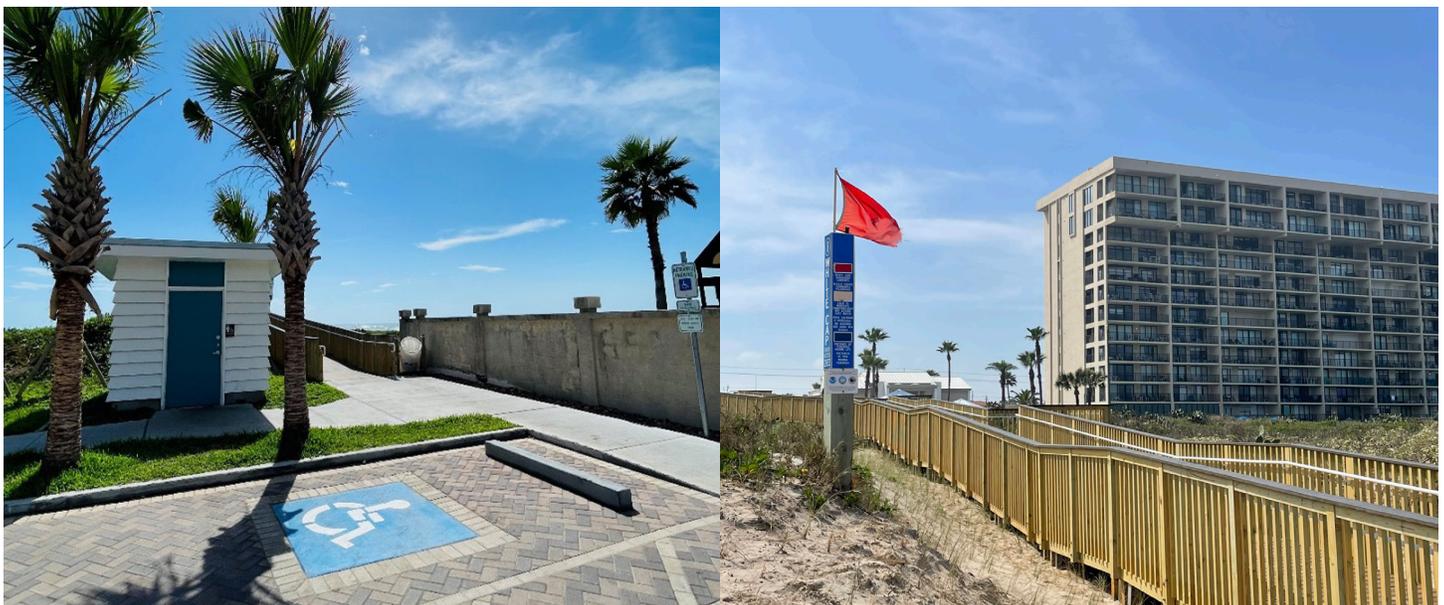
The Coastal Management Program (CMP) provides funding opportunities for the creation and enhancement of public access to beaches, bays, and other coastal natural resource

areas. The Beach Dune team coordinates with CMP on public access projects as technical reviewers, offering their expertise on the local and state regulations and knowledge of the beach and dune system. The synergy between the two programs facilitates the permitting process to ensure the completion and success of these projects.

Through this concerted effort, the GLO has funded projects that allow local jurisdictions to improve access to public beaches along the Texas Coast. Some local jurisdictions have also used funds to provide amenities such as public restrooms, rinse stations, and picnic tables to enhance the quality of the public’s beach experience. The City of South Padre Island has utilized CMP funds to construct a public ADA-compliant dune walkover, sidewalk, permeable parking lot, and associated amenities such as restrooms and rinse stations at Whitecap Circle, Public Beach Access #8.

The Beach Dune team works collaboratively to make beach access GLO-ups (pronounced *glow-ups*) a reality, allowing equal access for visitors to make unforgettable beach memories.

If you’d like to learn more about GLO Beach Dune, please contact Mei Ling Valdes, Beach Dune Natural Resource Specialist, at [MeiLing.Valdes@glo.texas.gov](mailto:MeiLing.Valdes@glo.texas.gov).



The City of South Padre recently completed ADA accessible restrooms and dune walkover at Whitecap Circle using CMP funds. The GLO’s Beach Dune team and CMP work together to successfully complete CMP beach access projects.

## Stories from the Surf

### ► Brad Lomax: My Time on the CCAC

By Jessica Chappell, Texas General Land Office

Brad Lomax is a name many people along the Texas coast are familiar with. He's lived and surfed in Corpus Christi for 40 years, owns the Water Street Oyster Bar, the Sushi Room, the Executive Surf Club, and holds the first oyster mariculture permit issued in the state of Texas. However, when we sat down to talk with Brad about one of his favorite coastal experiences, he didn't mention any of these. Instead, he talked about his time as a member of the Coastal Management Program's (CMP) Coastal Coordination Advisory Committee (CCAC).

The CCAC (pronounced *khak*), advises the CMP and consists of representatives from the eight networked agencies and four citizen members. The citizen members are appointed by the Land Commissioner and represent agriculture, coastal businesses, coastal elected officials, and coastal resident interests. Mr. Lomax served as the CCAC's coastal business representative for several years.

One of the main duties of a CCAC member is to annually review CMP project funding applications. CMP typically awards \$1.75 million for projects to be completed along



*Brad Lomax walking along the beach in 1971. Mr. Lomax has been a resident of the Texas coast for over 40 years.*

the Texas coast through its grant program. The application process is highly competitive and requires applicants to submit a pre-proposal and a final application. In total, CCAC members typically read nearly 100 applications each year. "Being on the CCAC Review Team was a ton of work," Mr. Lomax said, "but I learned more about the Texas coast during my time on the CCAC than I have through any other endeavor."

Even after living along the coast for decades, there was still so many issues Mr. Lomax wasn't aware of. "I learned about topics that spanned everything from wildlife preservation efforts to how the coast will recover from hurricanes. And I learned lots of scientific terms, like 'benthic' and 'nonpoint source pollution'. For a 60 something year old guy to be able to learn that much about the Texas coast is amazing!"

In addition to learning more about the Texas coast, participating on the CCAC also helped Mr. Lomax advocate for the Texas Mariculture Law, which was passed in 2020. Mr. Lomax knew just who to contact to help get the law passed, thanks to his time on the CCAC. "Serving on the CCAC was a good networking opportunity and educational," Mr. Lomax emphasized.



*Now that Brad Lomax is no longer a member of the CCAC, he plans to spend his time working on his oyster farm and playing with his three grandkids.*

Recently, Mr. Lomax has had to take a step back from serving on the CCAC to pursue other interests. When asked what's next, Mr. Lomax responded that he will be focusing on spending time with his family and his oyster mariculture farm. "I'm looking to make 2024 a breakout year for Texas oyster mariculture," he said.

To learn more about Brad Lomax and his oyster mariculture efforts, check out this Texas Monthly article <https://www.texasmonthly.com/food/texas-first-oyster-farm-launch-saga/>



*THSCMP students measure shore-normal beach and dune profiles, observe weather and wave conditions, and measure longshore currents at multiple sites during three field trips spaced across the academic year. Photo credit: Tiffany Caudle*

## The Deeper Dive

### ► Texas High School Coastal Monitoring Program Tracks the Shoreline for 25 Years

By Tiffany Caudle, Bureau of Economic Geology

The Texas High School Coastal Monitoring Program (THSCMP) is a long-term Texas CMP project led by the University of Texas at Austin's Bureau of Economic Geology (BEG). The program, which just completed its 25th year of data collection, is designed to help high school students living on the Texas coast and their communities develop a better understanding of their natural environment. THSCMP students measure shore-normal beach and dune profiles, identify and map the vegetation line and shoreline using hand-held GPS units, observe weather and wave conditions, and measure longshore currents at multiple sites during three field trips spaced throughout the academic year. As participants in this multiyear coastal research project, students enhance their science education and collect valuable data on their changing shoreline.

Eight high schools participate in THSCMP, monitoring changes in beaches, dunes, and vegetation-line position on Bolivar Peninsula, Galveston Island, Follets Island, Matagorda Peninsula, Mustang Island, Northern Padre Island, and South Padre Island. All data collected by THSCMP are integrated

into past and ongoing coastal research programs at the BEG and are used by partner agencies. Decisionmakers, coastal managers, and scientists use the data to address coastal issues, inform regulatory implementation and policy decisions, and educate the public. THSCMP actively monitors beach nourishment projects on South Padre Island, the North Padre Island seawall, and at Galveston Island's Dellanera Beach Park and Babe's Beach for the GLO's Beach Access & Dune Protection Program. Additionally, THSCMP monitors a GLO Coastal Erosion Planning and Response Act (CEPRA) dune restoration project in Jamaica Beach, foredune modification and beach maintenance practices on Mustang Island, and impacts to the beaches adjacent to the recently closed Rollover Pass on Bolivar Peninsula.

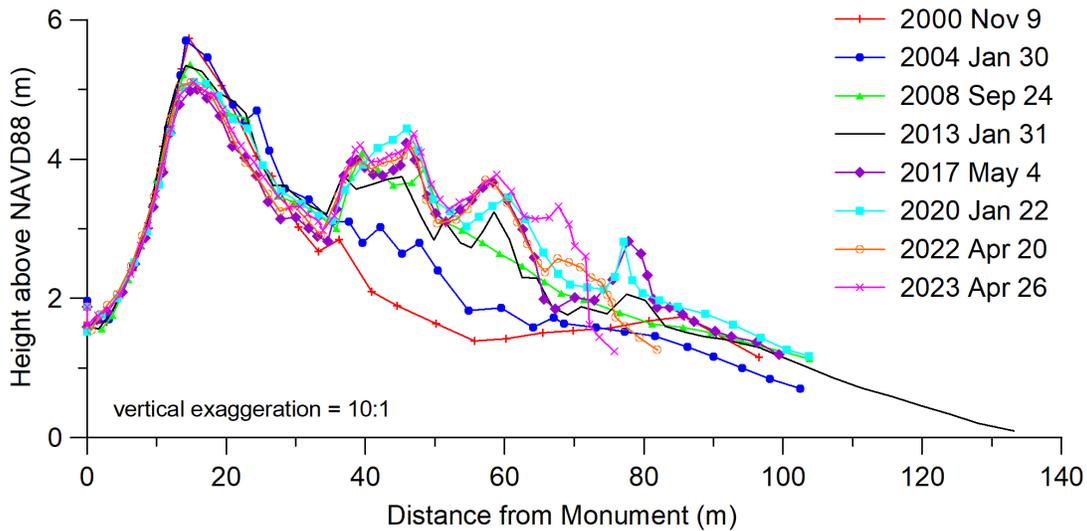
Data collected by THSCMP students are invaluable in verifying shoreline positions for updates of Texas' long-term shoreline-change rates, which are widely used by public officials, corporations, and private citizens. THSCMP also monitors beaches and dunes in the Lower Colorado River Authority's Matagorda Bay Nature Park, Cameron County's

Isla Blanca Park, Brazoria County's Quintana Beach County Park, and Texas Parks and Wildlife Department's Mustang Island and Galveston Island State Parks. The data collected within these park systems helps BEG's partners develop a better understanding of the coastal environment, which allows managers to make informed decisions in long-term management and future park development and contributes to their natural science education programs. These real-world examples of scientific observation allow THSCMP

students to gain a better understanding of environmental issues and coastal geologic processes affecting their coastal communities.

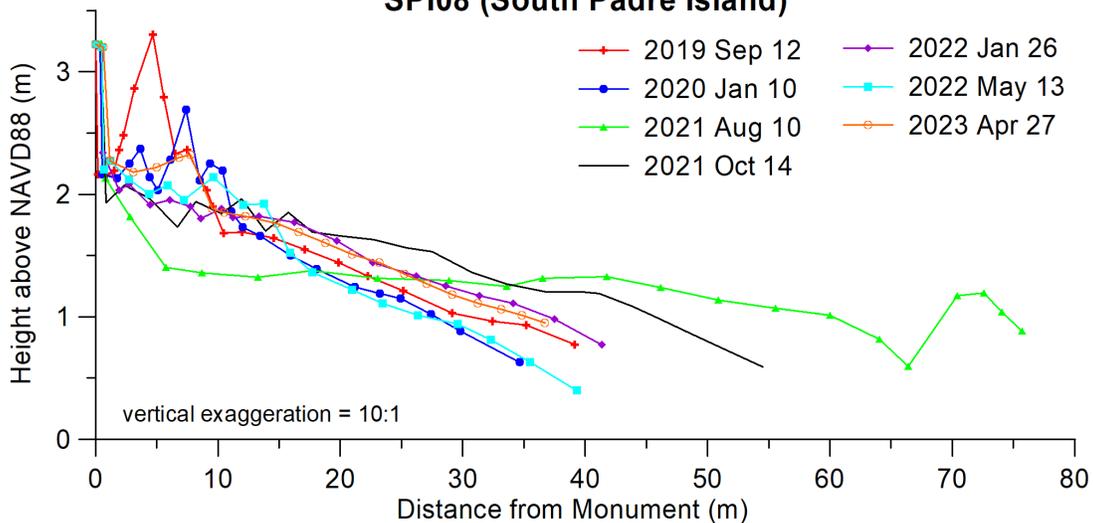
For more information and to find data, project reports, scientific journal articles, and additional educational resources, please visit the THSCMP website <http://www.beg.utexas.edu/thscmp/>

### MUI02 (Mustang Island State Park)



Seaward expansion of the dune system at Mustang Island State Park between 2000 and 2020. Note how the beach is very narrow at this site. The small, seaward most dune crest present in 2020 was lost due to erosion by April 2022. During the final field trip of the 2022-23 academic year, water levels were extremely high, and a large scarp was present on the seaward most dune.

### SPI08 (South Padre Island)



Beach profiles from before and after the latest nourishment project (2021) and dune restoration project at SPI08 at the Tiki Condominiums on South Padre Island.

## Keeping up with CEPRA

### ► Partnering to Protect 6,000 Acres of Marsh Habitat on Matagorda Island

By Carver Wray, Texas General Land Office

“The partnership between the CBBEP, ANWR, and the GLO exemplifies the shared commitment to preserving and enhancing our coastal ecosystems. Through dedicated teamwork, we have made significant progress in habitat restoration and resource management. The restoration of the Matagorda Island Western Marsh will contribute to the overall resilience of this unique and vital ecosystem. The CBBEP remains optimistic about the future of our collaboration and the positive outcomes it will yield for the Coastal Bend’s bays and estuaries.” - Rosario Martinez, Senior Project Manager, Coastal Bend Bays & Estuaries Program.

Coastal Bend Bays & Estuaries Program (CBBEP) entered into a Project Cooperation Agreement with the GLO to perform levee and water control infrastructure repairs from Hurricane Harvey at the Aransas National Wildlife Refuge (ANWR). CBBEP and the US Fish & Wildlife Service (USFWS) identified five structures in need of repair on Matagorda Island within ANWR. Restoration of the five levees and water control structures will protect approximately 6,000 acres of marsh land. This effort is part of an ongoing effort by USFWS to promote the recovery of the endangered Whooping Cranes as a top biological priority for ANWR.

CBBEP is leading the project with the assistance of the GLO’s CEPRA team. Currently, the project is in the construction phase; however, one of the five levee and water control structures has been completed as of October 26, 2023. All the levee and water control structures will be constructed with a slope and armor to reduce the impacts of future storm surge, improving the longevity of the structures. Additionally, the structures will provide access to parts of ANWR that have been difficult to reach, allowing USFWS to implement best management practices to restore and preserve the habitat on Matagorda Island.

“This project has benefitted from the partnership between GLO, CBBEP and Aransas NWR. The structures we are designing and building today will contribute greatly to the success of this marsh complex, as adapting to future needs, particularly in conserving natural resources. Additionally, in light of increasing human pressures and their impacts coupled with climate change, rates of erosion are expected to increase. As the speed of climate change accelerates

so do the challenges. This project will allow us to slow down the erosion process through habitat restoration, living shoreline development, and making these wetlands more resilient. Working together is a very good way of fitting into the larger conservation picture, expanding our vision, and connecting the work with others.” - Felipe Prieto, Wildlife Refuge Specialist, Aransas National Wildlife Refuge, U.S Fish & Wildlife Service

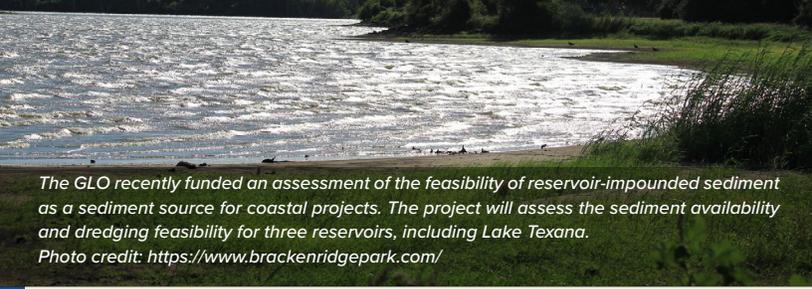
Contact Carver Wray, CEPRA project manager, with questions on this project ([carver.wray@glo.texas.gov](mailto:carver.wray@glo.texas.gov)).



*North view of the first completed levee and water control structure. In total, the project will repair five levee and water control structures that were damaged by Hurricane Harvey.*



*Coastal Bend Bays & Estuaries Program (CBBEP) and the GLO are working to repair levee and water control infrastructure on Matagorda Island. The protection of the Matagorda Island marsh habitat is part of an ongoing effort to promote the recovery of the endangered Whooping Cranes.*



The GLO recently funded an assessment of the feasibility of reservoir-impounded sediment as a sediment source for coastal projects. The project will assess the sediment availability and dredging feasibility for three reservoirs, including Lake Texana. Photo credit: <https://www.brackenridgepark.com/>

## Sediment Management Scoop

### ► Update on the Texas Sediment Management Plan

By Melissa Smuck, Texas General Land Office

The Coastal Management Program (CMP) is continuing to lead the development of the Texas Sediment Management Plan (SMP) as the 2021-2025 §309 Enhancement Strategy. 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 for efficient and effective coastal resiliency efforts. The first iteration of the SMP is planned for 2026, with new iterations to follow every four years to incorporate new data and policy recommendations.

The writing of the SMP is currently underway, with sections focusing on:

- **Defining** authorities and involvement of all federal, state, and local entities in sediment management
- **Providing** context of the geological history and geomorphology of the Texas coast
- **Providing** guidance to identify and develop potential sediment borrow areas
- **Providing** guidance for efficient authorization and permitting of sediment placement projects and dredging of offshore borrow areas
- **Improving** tools for the inventorying of sediment resources
- **Providing** guidance to appropriately allocate sediment resources
- **Creating** best practices for monitoring sediment resources, budgets, and transport
- **Making** recommendations for policy development or modification to protect access

to and optimize the use of sediment resources

- **Defining** State priority areas to best focus limited financial and sediment resources

Several projects are underway to support the development of the SMP:

The Texas General Land Office (GLO) is applying for a USACE regional general permit (RGP) and attempting to obtain a programmatic biological opinion to expedite permitting of 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. Application submission is planned for the end of 2023.

The GLO is continuing the search for valuable sediment resources to use as borrow areas for coastal resiliency projects. The GLO’s CEPR team is leading the search for offshore sediment in both state and federal waters. Coastwide geophysical surveys are nearing completion to locate potential sediment resource areas. Geotechnical investigations are underway in Region 1 and will soon follow for the rest of the coast to confirm and characterize sediment deposits that may serve as future borrow areas. Additionally, CMP has recently funded an assessment of the feasibility of reservoir-impounded sediment as a sediment source for coastal projects.

The GLO is also funding a coastwide investigation of susceptibility to barrier island breaching. The study will map historical washover locations and combine this with lidar elevation data, dune volumetrics, dune continuity, and dune vegetation to determine a breaching susceptibility index (BSI). The BSI will be one of many environmental and socioeconomic metrics that will feed into the beach nourishment prioritization model project that is planned for 2025 to provide a data driven way to determine funding priorities for Gulf-facing beaches.

# Clean Coast Texas Corner

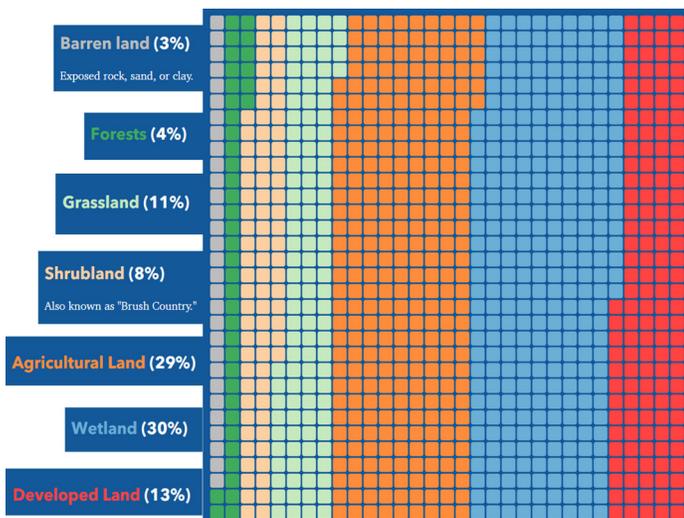
## ► Land Use Trends in the Texas Coastal Zone Boundary

By Jason Pinchback, Texas General Land Office

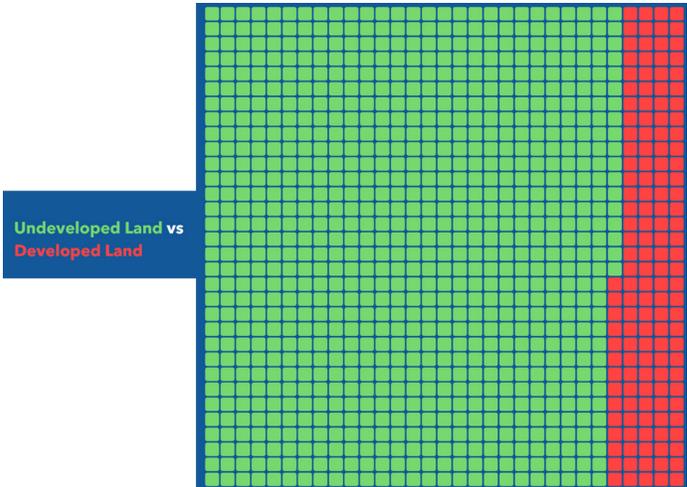
The Texas Coastal Zone Boundary (CZB) was delineated through the formation of the Texas Coastal Management Program (CMP) in the 1990s. Originally based on the area defined by the 1990 Oil Spill Act, the CZB encompasses both the area in which land activities impact coastal waters and the related natural resource areas of concern in 18 coastal counties. In total, the CZB encompasses roughly 8.9 million acres.

Texas’ coastal zone continues to experience economic and population growth, with development concentrated in larger cities. There are 92 municipalities in the CZB, each seeking new ways to accommodate their growing citizen base with homes, utility infrastructure, and amenities. When driving to, through, and around these areas, it can be difficult to get a grasp of the “big picture” on how land is being used throughout the coastal zone.

The United States Geological Survey (USGS), in association with the Multi-Resolution Land Characteristics Consortium, has maintained the National Land Cover Database (NLCD) since 2001. The NLCD characterizes land cover, land cover changes, and is updated periodically. The USGS released the latest NLCD in 2021. [Clean Coast Texas](#) and Texas State



Infographic depicting the 8.9 million acres of the Texas Coastal Zone and the associated land use/land cover from the 2021 USGS National Land Cover Database. Photo credit: Tyler Hartwick, Texas State University’s Meadows Center for Water and the Environment.



Infographic showing the undeveloped (green) vs. developed (red) land in coastal Texas. Photo credit: Tyler Hartwick, Texas State University’s Meadows Center for Water and the Environment.

University analyzed the most recent NLCD and created an infographic to help better interpret land use in the Texas coastal zone. The Infographic first creates a grid that is scaled to depict the 8.9 million acres of the Texas Coastal Zone. Then, the grid is colored based on the various land use/land cover options.

Using this method for characterizing land use in the CZB makes it easier to interpret the existing land cover. From the grid, it’s clear most of coastal Texas has yet to be developed. This means Texas is in a unique position to guide sustainable development in ways that promote economic prosperity while also protecting the coastal waters and natural resource areas. In the face of ongoing population growth, the [Clean Coast Texas](#) program continues to collaborate with coastal communities and seek ways to enhance the management of sustainable stormwater drainage and the related nonpoint source pollutants.

Visit the program website at [www.cleancoast.texas.gov](http://www.cleancoast.texas.gov) for more information on how we can build a prosperous future together.



Wilson's Plover are one of the bird species prioritized by the American Bird Conservancy's protection efforts along the Texas coast. Photo credit: Gulf Coast Bird Observatory

## CMP Success Story

### ▶ American Bird Conservancy Uses CMP Funds to Protect Hundreds of Beach-Nesting Birds

By Kristen Vale, American Bird Conservancy

Beach-nesting birds are unique in that they lay their eggs directly on the sand and in the dunes of beach habitats. Their camouflaged nests and chicks are often located within short vegetation along the outer edges of growing dunes. Unfortunately, beach-nesting bird populations are declining and face a number of threats including human disturbance from recreation, habitat loss from coastal development, storms, and pollution. Beach-nesting bird species in peril include Snowy and Wilson's Plovers, Black Skimmers, and Least Terns, all of which are on the Texas Priority Species List in Texas Parks & Wildlife Department's Conservation Action Plan.

Since 2012, American Bird Conservancy (ABC) has partnered with conservation organizations and agencies to implement management measures to maintain or increase reproductive success of beach-nesting bird species at important nesting sites along the Texas coast. To do this, ABC and partners take a three-pronged approach: 1) protect habitat, 2) education and outreach; and 3) monitor the birds' response to management actions through collecting demographic data. Protecting habitat involves working closely with land managers to identify sensitive breeding areas and protecting those areas



The American Bird Conservancy was able to reach over 2,400 people through outreach events sponsored by a CMP grant. The outreach events included setting up informational tables near the project's temporary fencing, such as this one at East Beach, Galveston. Photo credit: American Bird

via seasonal postings, while ensuring the public still has access to the beach. Education is an important part of the conservation work. ABC engages the public at outreach and community events and on the beach to become stewards for the land and the birds. ABC's education and outreach efforts also extend to the land managers ABC works with, as they collaboratively work together to implement habitat protection measures and engage visitors at the ABC monitored sites.

In 2021, ABC was awarded funding through CMP Cycle 26 to continue their protection, monitoring, and outreach efforts during the 2022 nesting season. During that time, ABC partnered with Houston Audubon, Gulf Coast Bird Observatory, and the Coastal Bend Bays & Estuaries Program to monitor 1,716 acres of beach-nesting bird habitat and protect nearly 800 acres of that habitat at 12 sites along the Texas coast. The project documented over 1,400 breeding pairs and 600 chicks that fledged from the monitoring sites. Through community outreach efforts and stewardship activities, ABC and their partners directly reached 2,400 people during this 18-month project. Thanks to the CMP for funding important conservation work along the coast that helps protect the future for beach-nesting birds and helps champion stewards for the birds and their habitat.

To learn more about this project, visit <https://www.glo.texas.gov/coastal-grants/projects/22-045-001-d077-beach-nesting-bird.html>



The American Bird Conservancy installed temporary fencing at several sites along the Texas coast to protect beach nesting-birds, including at San Luis Pass County Park. Photo credit: American Bird Conservancy

## Upcoming Meetings

### Galveston Bay Estuary Program's State of the Bay Symposium

January 31 and February 1, 2024: Harris or Galveston County  
<https://gbep.texas.gov/state-of-the-bay-symposium/>

### 2024 Gulf of Mexico Alliance Conference

February 19-22, 2024: Tampa, FL  
<https://gulfofmexicoalliance.org/announcements/alliance-meetings/gomcon2024/>

### Texas Plastic Pollution Symposium

March 21, 2024: Corpus Christi, TX  
<https://texasplasticpollutionsymposium.com/>

### CMP Grant Workshops

GLO's CMP will be hosting grant application workshops in April to provide information on the funding opportunity, review the online application portal, and allow potential applicants to discuss project ideas with staff. Once available, workshop dates and times will be posted at: <https://www.glo.texas.gov/coast/grant-projects/funding/index.html>

### Texas Bays and Estuaries Meeting

April 3 – 4, 2024: Port Aransas, TX



Texas A&M University – Corpus Christi students collect a porewater sample from the beach as part of the PSM titled "Hydroclimatic Modulations of Bacteria/Nutrient Input to Texas Coastal Water". The project is tracking bacterial and nutrient contamination of coastal waters by analyzing various water sources.

## Announcing CMP Projects of Special Merit

The Texas Coastal Management Program is excited to announce the Cycle 28 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 28 PSMs started in the summer of 2023 and are ongoing. During Cycle 28, CMP is funding three PSMs. More information about each of these projects can be found at: <https://www.glo.texas.gov/coastal-grants/#search>.

### Improvements to the Wastewater Treatment in Western Nueces County

The Nueces River Authority will (1) improve water quality by updating and maintaining existing wastewater treatment plant (WWTP) infrastructure in the cities of Bishop and Driscoll and (2) develop a Regional Plan that outlines the environmental and community benefits of a future Regional WWTP for the Baffin Bay Watershed.

### Hydroclimatic Modulations of Bacteria/Nutrient Input to Texas Coastal Water

Texas A&M University- Corpus Christi will conduct a study to track sources and identify processes and vulnerabilities leading to bacterial and nutrient contamination of coastal waters through data analyses of groundwater, porewater, and surface water samples collected at Surfside-Quintana Park and Artist Boat Coastal Heritage Preserve.

### Beneficial Dredge Use Master Plan - Phase 2 GLO Regions 3 and 4

Ducks Unlimited, Inc. (DU) will work closely with various stakeholders to advance engineering designs from 60% to 90% for two priority Beneficial Use Dredge Material (BUDM) sites that were identified in Phase 1 of this project during CMP Cycle 26. The two priority BUDM sites include Causeway Bird Island for rookery island construction and PA9-S for marsh creation.

