



# Captiva

Erosion Prevention District

## 2021 BEACH NOURISHMENT

Dear Captiva Supporters-

As the Captiva Erosion Prevention District winds down its year, we have so much to be proud of and feel accomplished as a result. Despite the challenges of the pandemic, the CEPD embarked on its 7th beach renourishment project since its inception as a special legislative district in 1959. 820,000 cubic yards of sand was placed on our shoreline that helps to increase storm protection benefits and recreational use benefits to our visitors and residents. The project began on September 1st and ended on November 10th.

During the project, we took many elected officials off-shore to see the dredge and explain the process. We were honored to host Congressman Byron Donalds, State Representative Adam Botana, Lee County Commissioner Kevin Ruane, City of Sanibel Mayor Holly Smith, and CEPD Vice Chair Commissioner John Silvia. Resident Jay Brown allowed the use of his boat and local environmental expert, CEO of the Sanibel Captiva Conservation Foundation James Evans along with CEPD's coastal engineer Nicole Sharp from APTIM joined us to help present to the officials.

The CEPD welcomed new staff this year as we hired our new Director of Administration, James Elston, our new Communications Manager Laura Pegler, our new Legislative Administrative Aide Lindsey Ford, and our new part time parking lot attendant Austin Sharkey. This team will join us in taking the CEPD to the next level and add much needed infrastructure to the district as we take on new initiatives like strategic planning and developing a coastal resiliency plan.

We had a bit of sadness brought to our district earlier this fall with the passing of long time Captiva resident and CEPD Commissioner, Harry Kaiser. Also, we would like to wish Commissioner Mike Mullins well as he recently resigned his seat on the board. Their dedication and commitment to Captiva will be greatly missed.

On behalf of the CEPD staff and board of directors, we wish you all a very safe and happy holiday season.

Best,

Jennifer I. Nelson  
Executive Director  
Captiva Erosion Prevention District

**JOHN SILVIA**  
CHAIRMAN

**RENÉ MIVILLE**  
VICE CHAIRMAN

**RICHARD PYLE**  
TREASURER





*. Executive Director Jennifer Nelson accompanied by Captiva resident Jay Brown, Mayor of Sanibel Holly Smith, Congressman Byron Donalds and advisor Larry Wilcoxson , visiting the Lakes Great Dredge during the 2021 Beach nourishment project*

## **Beach Nourishment Completed**

Captiva Island has successfully managed its beaches through its island wide beach management program since the late 1980's. Most recently, the Captiva Erosion Prevention District (CEPD) completed the seventh beach renourishment project on the island in Fall 2021.

In 2014, CEPD secured 15-year permits, which allowed for year-round construction between FDEP reference monuments R-83 and R-109 to address background erosion and hotspots. The beach design is a composite of the 2005-2006 and 2013 project templates, with a progressive higher and wider beach to accommodate sea level rise. In addition, dune and scarp repair were added as a flexible component to the project design.

The design survey for the project was collected in October 2020 and was used as a basis for updating bid volumes and construction plans. Immediately following the survey, Hurricane Eta impacted the project area with high winds, waves, and elevated water levels. Hurricane Eta was a devastating Category 4 hurricane forming late October 2020 and dissipating early November 2020. Eta made two landfalls in Florida, with the first being near the central part of the Florida Keys late on November 7 and the second early November 12 near Cedar Key, roughly 130 miles north of Tampa. Observational accounts of erosion on Captiva Island following the passage

of Hurricane Eta indicated loss of beach and dune. Although the impacts of Eta were extensive and widespread, the storm was never declared a federal disaster for region including Captiva Island and a post-Eta storm survey was not conducted due to lack of FEMA eligibility. The potential erosional impacts of Eta and the impacts of background erosion rates between the October 2020 survey and the anticipated project start were considered in the proposed beach nourishment design update calculations and dune repair.

The project was bid in March/April 2021 with a flexible construction approach that would provide an extended contract time period and include summer construction to allow for cost savings. The project was awarded to Great Lakes Dredge and Dock, LLC for \$15,625,485 for the flexible summer construction window, which attributed to approximately \$2.5M in cost savings. From September and October 2021, approximately 5 miles of shoreline was nourished with 820,000 cubic yards of sand. The sand was placed on the beaches of Captiva Island using Great Lakes Dredge & Dock Company's (GLDD) trailing suction hopper dredges Dodge and Padre Island. The project was constructed entirely with sand from Borrow Area VI-E, which is located approximately 8.3 nautical miles offshore of the center of Captiva Island. At the request of the CEPD, a nearly continuous island wide dune feature was also constructed to repair damages attributed to Hurricane Eta.

During construction, CEPD staff utilized GIS tools for public outreach to inform interested parties of the projected areas of active construction. This proved as an invaluable visualization tool to help residents, visitors, and businesses owners alike to understand the time frames in which construction may affect their beach front. The CEPD also utilized GIS tools as a method to visually convey their apportionment model to the property owners of the island. The ability to search an interactive map and compare the assessments of all properties on Captiva eased many resident concerns and allowed property owners to better understand the method, as well as the consistency, in which the properties on the island were categorized for this model.

The enabling legislation of the CEPD allows special assessments to be used to finance erosion control project to be levied against benefitting properties in proportion to the benefits received by the properties from the project. In addition to this assessment, the project was constructed using funding from the Department of Environmental Protection's Beach Management Funding Assistance (BMFA) Program, FEMA, and Lee County Tourist Development Council.

"We are grateful for our partnership with the Florida Department of Environmental Protection, the Lee County Natural Resources Department, the Tourism and Development Council, and our Board of County Commissioners who recognize the importance of this project in protecting our shorelines that further our economy in Lee County," said Jennifer Nelson, Captiva Erosion Prevention District Executive Director.

## THE CHANGING BEACH

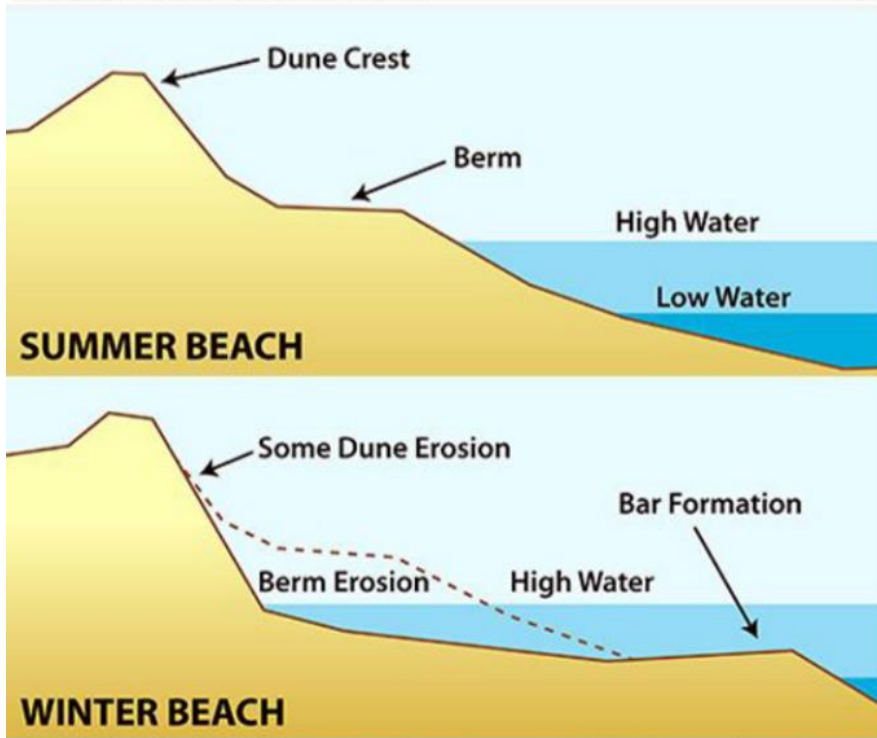
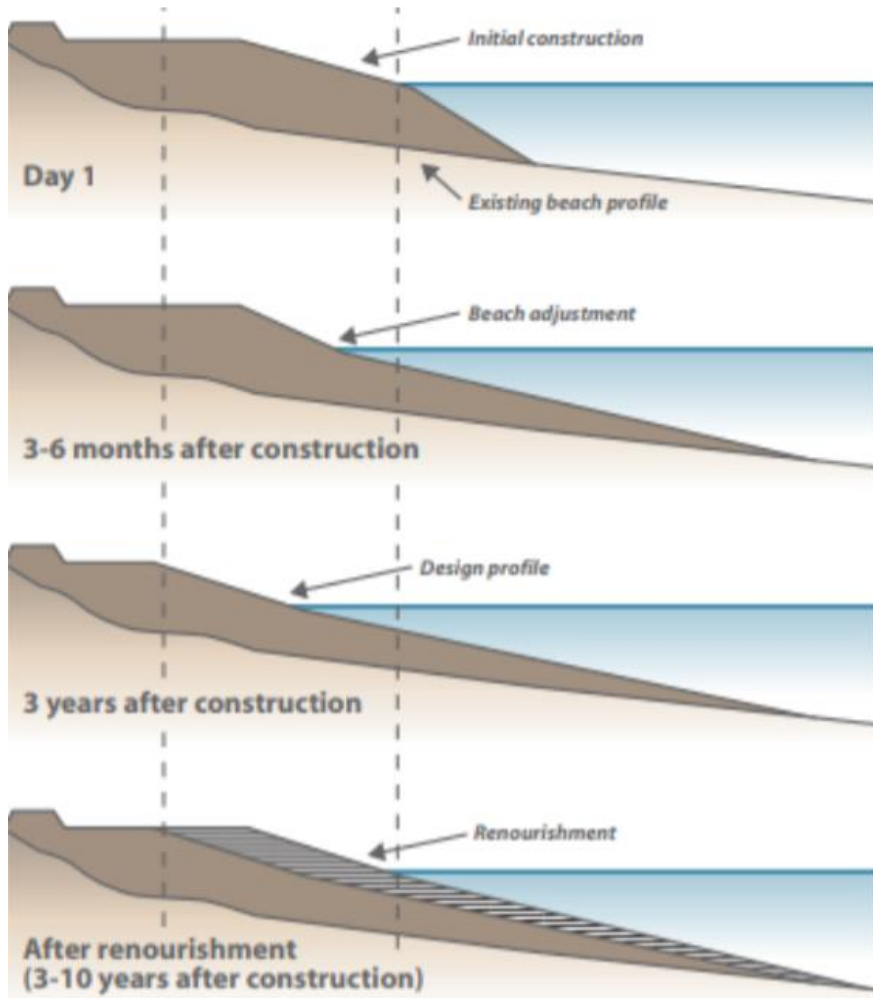
As our beach nourishment project concludes, it is important for beachgoers to understand what to look forward to in the coming months. There are two major events to consider separately and jointly. The first, and most obvious, is the beach nourishment project itself.

Captiva's island wide beach nourishment consisted of over 800,000 cubic yards of sand that has been placed along the entire shoreline of the island. The newly constructed beach may seem "overbuilt" during construction, since sand is often placed on the shore at fairly steep slopes. After construction, it is normal for the newly nourished beach to readjust and change substantially within the first few months.

Engineers expect modest waves to move and spread the sand so that the nourished beach can begin assuming a more natural form. The sand will continue to move offshore, so that larger waves are prevented from reaching the shore. This movement of sand, while decreasing the width of the nourished beach somewhat, is not erosion; rather, it indicates that the project is performing as designed.

The second major event is the change from the summer beach profile to the winter beach profile. The natural configuration of a beach is known as a beach's profile. Due to variations in wind and wave energy between the winter and the summer seasons, there is a very visible difference in the beach between the two seasons. It is natural for beaches to show signs of scarping during this transition.

Please keep in mind that our beach is changing based upon these two major events. While these changes may seem jarring, there is no need to panic over the loss of our freshly constructed paradise. The beach is intended to be molded by the wind and the waves to a natural formation.



# CEPD Welcomes New Staff Members

## DIRECTOR OF ADMINISTRATION

**James Elston** grew up in Orlando, Florida. He has a bachelor's degree in management as well as an Army veteran having served from 2004-2008. Before joining the CEPD he was a manager for Paradise Lagardere overseeing the day-to-day operations of a minimum 6 retail shops in the airport as well as the logistics side where he oversaw the ordering and distribution of the merchandise. He is very excited and looking forward to being an asset to both CEPD and preserving and protecting the beaches.



## LEGISLATIVE ADMINISTRATIVE AIDE

**Lindsey Ford** grew up in Fort Myers, Florida. Her knowledge in operations and management have provided her with organizational, communication and problem-solving skills. Before joining CEPD she was the property manager of a residential community, overseeing staff members and managing board meeting/ association procedures including budgeting and rules regulations of the community, while providing customer service to all the residents and visitors.

## SOCIAL MEDIA MANAGER

**Laura Pegler** was born in Bogota, Colombia and has been a resident of Fort Myers since 2009. She has a Bachelor's degree in Communications. In addition to joining the CEPD, Laura oversees the operations and social media needs of a historic landmark located in Downtown Fort Myers. She is very excited to continue to use her marketing knowledge to increase the exposure of the CEPD and continue to educate the residents and visitors of Captiva Beach.



## PARKING LOT ATTENDANT

**Austin Sharkey** was born and raised in Southwest Florida. Growing up, Austin received numerous awards and recognitions including being recognized at the state level by Duke University's Talent Identification Program and receiving the Cambridge University AICE Diploma in 2016. Austin is currently attending Florida State University where he is pursuing a degree in Environmental Science and Policy. Austin's passion makes him a great asset to the CEPD team.

Please Note: Florida has a very broad public records law. Most written communications to or from CEPD employees and officials regarding CEPD business are public records available to the public and media upon request.

