

LOCATION:

1900 Ninety Eight

1900 Scenic Hwy 98, Destin, FL 32541

THE CLIENT:

A high-end, gulf front condominium located 75 feet from the water.

ISSUES/SITUATION:

- » After construction of the building, residual debris were left on the beach and buried within the dune. Over the following few months, storms eroded the dune and exposed the debris. The Florida Department of Environmental Protection (FLDEP) mandated that the property extract the debris and repair the dune.

SERVICES PROVIDED:

- » Permitting
- » Construction Debris clean-up
- » Protection (Sand Fence Installation and New Vegetation)
- » Optimization (Addition of FLDEP-approved, compatible beach-white sand)

SOLUTION:

- » Removal of the construction debris and compromised sand
- » Shaping of the remaining sand into a protective dune with a 30' wide leveled top surface and progressive slope, and addition of a thick layer of FLDEP-approved white sand.
- » Installation of 17 sections of sand fences at the seaward toe of the newly created dune to help sand build-up evenly across the property
- » Addition of rope and signage to help limit destructive foot traffic on the dune.
- » Planting of 2,000 native grasses, 200 ground covers, and 150 flowers between the sand fences and over the entire dune to stabilize the newly placed sand.

BENEFITS:

- » The dune was built according to governmental guidelines and optimized for sand accretion.



PRESERVING 1900 NINETY EIGHT

THE GOAL:

Dune Doctors was tasked with the primary short-term goal of coordinating with the FLDEP to create a restoration plan in compliance with governmental regulations. As a result, we removed the construction debris from the eroded dune and then shaped the existing sand into a protective berm.

The secondary long-term goal was the stabilization of the newly created dune and the initiation of a new sand bank with sand fencing. Refer to the **“Before & After Restoration”** green picture column to see the implementation of the project.

THE CHALLENGE:

The edge of the building’s foundation was 75ft from the gulf and was at a heightened risk for storm surge damage. Shortly after the completion of our project, Hurricane Michael hit the Gulf Coast, and we anticipated our project to be severely impacted.

THE OUTCOME:

Despite the proximity to the water, the angle and alignment of the sand fencing accumulated an even distribution of sand during the powerful storm. The dune gained a fresh, 3-foot thick layer of pure coastal sand. Refer to the **“Before & After the Storm”** orange picture column to see how much sand Hurricane Michael brought in and how the sea oats resurfaced overtime despite being buried.

Sea oats are resilient plants that respond well to being buried. The plants we installed created a complex root web through the dune and sustained dune growth over the past two years. Since the beginning of our work at 1900 Ninety Eight, the dune has accumulated close to 4 feet of sand.

TAKEAWAY:

The strategic placement of sand fencing and healthy native vegetation create an environment conducive for sand accretion. Sand fencing can help accelerate the accumulation of a new berm. However, what stabilizes the newly captured sand and forms a healthy dune ecosystem are the native coastal plants that grow through it.



Through consultation, planning and construction we maximize the protective qualities of vegetation and hardscapes.

BEFORE & AFTER RESTORATION



BEFORE



DURING



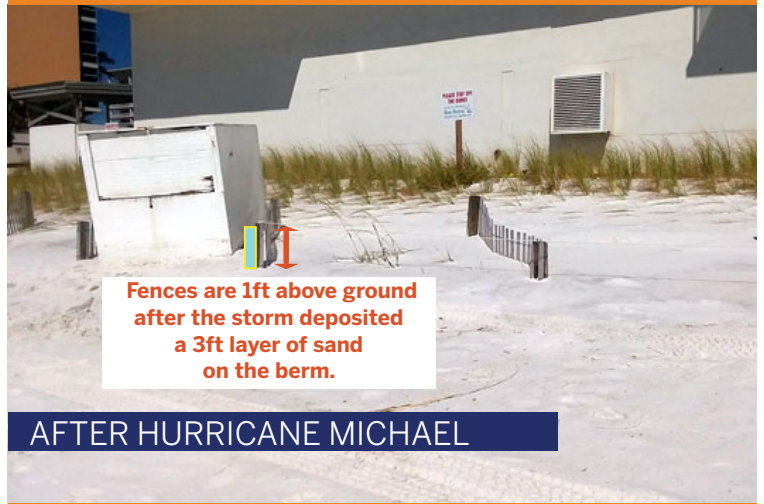
AFTER

BEFORE & AFTER THE STORM



Fences are 4 ft above ground

BEFORE HURRICANE MICHAEL



Fences are 1ft above ground after the storm deposited a 3ft layer of sand on the berm.

AFTER HURRICANE MICHAEL



The buried sea oats resurfaced.

ONE YEAR LATER

“Shortly after we cleaned the gulf front property and installed the sand fences and plants, Hurricane Michael hit. We were certain it would likely severely impact the sand fences. When we arrived, we were impressed that not only everything was still in place, but the sand fences accumulated 3 feet of sand in 3 days.”

» Frederique Beronet



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