



THE IMPORTANCE OF DUNE RESTORATION

Prepared by Green Coast Consulting
for the Highland Beach Beaches and Shores Club



PRISTINE NATURAL DUNES ...
THE WAY THEY SHOULD BE









THE DANGER WE FACE . . .



SEVERE COASTAL EROSION



LOSS OF BEACH



LOSS OF NATIVE DUNE HABITAT
AND PROPERTY VALUE



THE MAJOR PROBLEM:
A DEGRADED AND WEAKENED
DUNE SYSTEM . . .



OVERRUN WITH EXOTIC/INVASIVE SPECIES,



AND OVERGROWN SEA GRAPES

WHAT NEEDS TO BE DONE

- Develop a long-term comprehensive dune restoration and management plan
- Re-establish the natural dune ecosystem
- Create a shoreline defense against erosion



FIRST STEP



SELECTIVELY HAND CLEAR THE DUNE



TRIM BACK THE OVERGROWN SEAGRAPES



SECOND STEP



January 2017



PLANT THE DUNE WITH SEA OATS
AND OTHER NATIVE SPECIES



THE GROWTH OF THE
RESTORED DUNE
AFTER 2 MONTHS



March 2017



SEA OATS HAVE TAKEN HOLD ...



March 2017

AND TRIPLED IN SIZE



THE DUNE AFTER 9 MONTHS:
ONE DAY BEFORE HURRICANE IRMA



September 2017

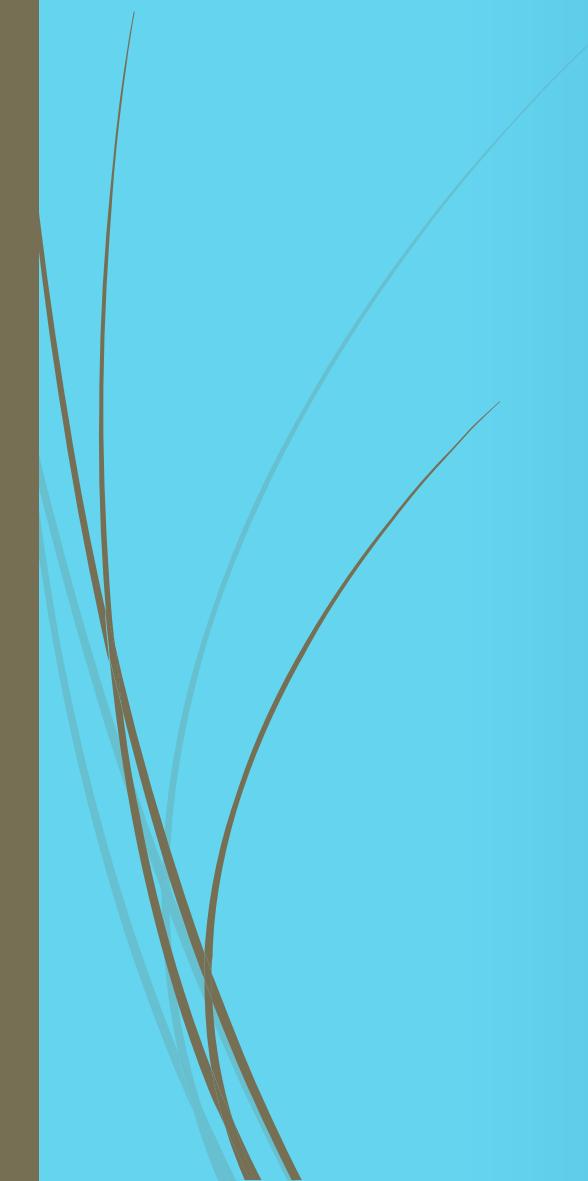


A NATURAL, COMPLEX DUNE ECOSYSTEM . . .



September 2017

THAT IS STABLE AND SUSTAINABLE



THE DUNE 3 DAYS AFTER
HURRICANE IRMA



September 2017



THE DUNE PLANTS HAVE
HELD THE DUNE TOGETHER



September 2017

AND BUILT UP OVER 3 FEET OF SAND!



DUNE RECOVERY: TWO MONTHS AFTER HURRICANE IRMA



November 2017

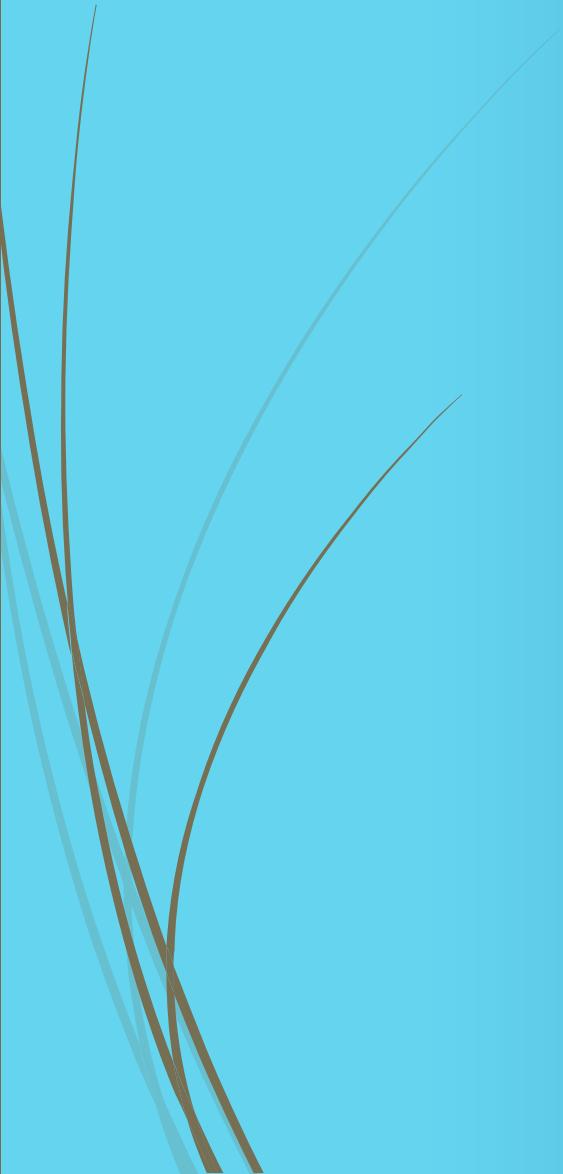


SEA OATS HAVE SPREAD AND RE-GROWN



November 2017

AND A DIVERSE DUNE ECOSYSTEM
HAS BEEN RE-ESTABLISHED



THE RESTORED DUNE
ONLY ONE YEAR AFTER
INITIAL PLANTING:

A HEALTHY AND VIBRANT
NATURAL DUNE HABITAT
HAS BEEN CREATED

January 2018



SEA OATS HAVE GROWN TO 4 AND 5 FEET

DUNE RESTORATION
IS THE KEY FIRST STEP



TO SAVING OUR BEACHES
AND OUR PROPERTY