

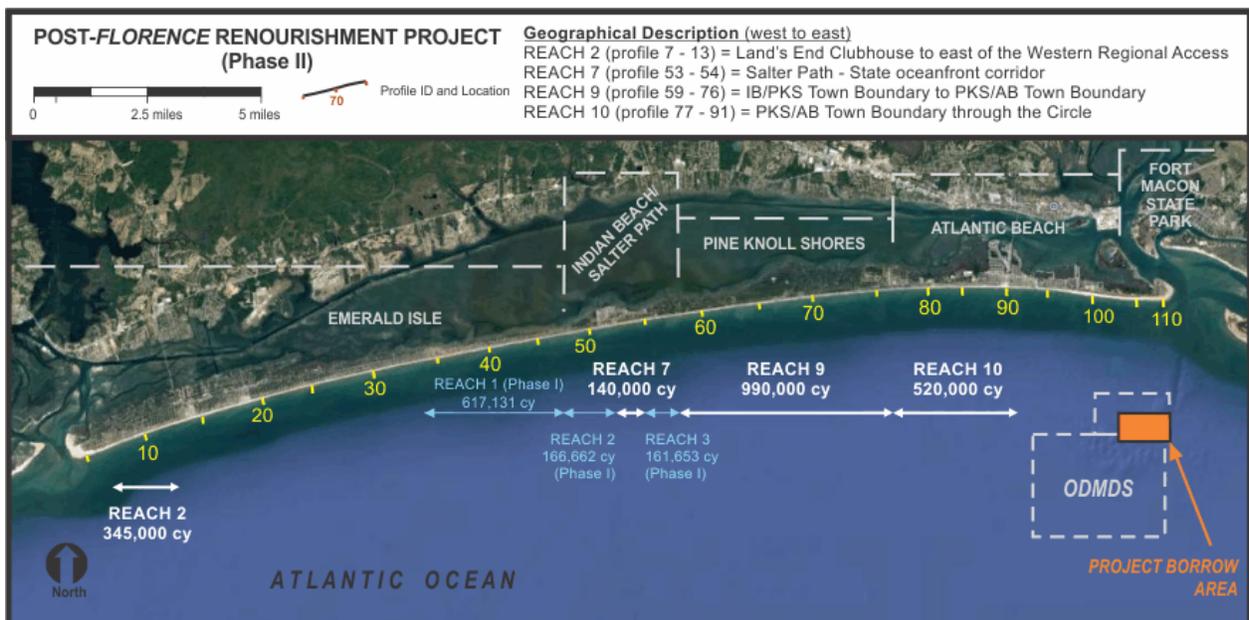
## SHORELINES – June 2020

As presented to the *Island Review* magazine

### Phase II Nourishment Beach Nourishment Complete – Dune Planting Underway

On April 29<sup>th</sup>, our dredging contractor ([Great Lakes Dredge & Dock](#)) successfully completed [PHASE II](#) of the Post-Florence Beach Renourishment Project. In general, the Post-Florence Renourishment Project as a whole is aimed to nourish roughly 21 miles of Bogue Banks shoreline from the Circle in Atlantic Beach to the Point in Emerald Isle in three phases. The [Phase I](#) effort was completed in late April 2019 dredging/pumping wise, and the dune planting stage was finished in August of that same year. 975,141 cubic yards (cy) of sand was placed along 5.2 miles of beach between the Indian Beach/Pine Knoll Shores Town boundary and the “dog-leg” 4-Wheel Access Ramp in Emerald Isle – roughly the equivalent of ~81,300 dump trucks worth.

The recently completed Phase II project encompassed 9.5 total miles of shoreline as West Emerald Isle, Salter Path, Pine Knoll Shores, and West Atlantic Beach received roughly 345,000 cy, 140,000 cy, 990,000 cy, and 520,000 cy, respectively (1,995,000 cy total) in four discrete reaches. That’s roughly double the Phase I Project both in terms of cubic yardage (volume) and project length. The accompanying map (Fig. 1) depicts the geographic extents of both the Phase I and II projects. Phase III is scheduled to be constructed next winter (2020-21) in central and west Emerald Isle. Sand has and will continue to be obtained from the Offshore Dredged Material Disposal Site ([ODMDS](#)) associated with Morehead City Federal Navigation Project (also depicted in Fig. 1).



**Figure 1** – Map depicting the geographic extents and cubic yardage (volume) involved with Phase I (2019) and Phase II (2020) of the Post-Florence Beach Renourishment Project.

Akin to the Phase I effort, a detailed dune planting work scope was included in our dredging contract for Phase II, which incorporates the planting, fertilization, and initial

watering of roughly 700,000 of sea oats (mostly) and bitter panicum on top and mostly down the entire slope of the newly constructed dune (Fig. 2) Sea oats and bitter panicum are native plants to this area and were cultivated by our subcontractor, [Coastal Transplants](#), Bolivia, N.C. (Fig 3.).



**Figure 2** – May 14, 2020, Atlantic Beach. The top (dune crest) of the newly constructed dune is planted with the aid of a mechanical planter, while the slope of the dune is planted by hand.



**Figure 3** – Plantings and slow release fertilizer (in the water bottle) used on our newly installed dune. To the right is *Uniola paniculata* (Sea Oats) and to the left is *Panicum amarum* (Bitter Panicum), often referred to as “running beach grass”.

Planting the entire 9.5 miles stretch of Phase II will take a few months to complete and importantly, please help the plants by educating visitors to not step on the new plantings. The plants have enjoyed the luxury of a climate controlled greenhouse and are now subjected to spray and the heat of the beach – they need to be left alone so they can grow like you see here (Fig. 4) – just about a year after initial planting.



**Figure 4** – Sea oats less than a year after initial planting near 5<sup>th</sup> Street, Emerald Isle looking extremely robust and doing their job of “sand catching” very well.