

## SHORELINES – June 2021

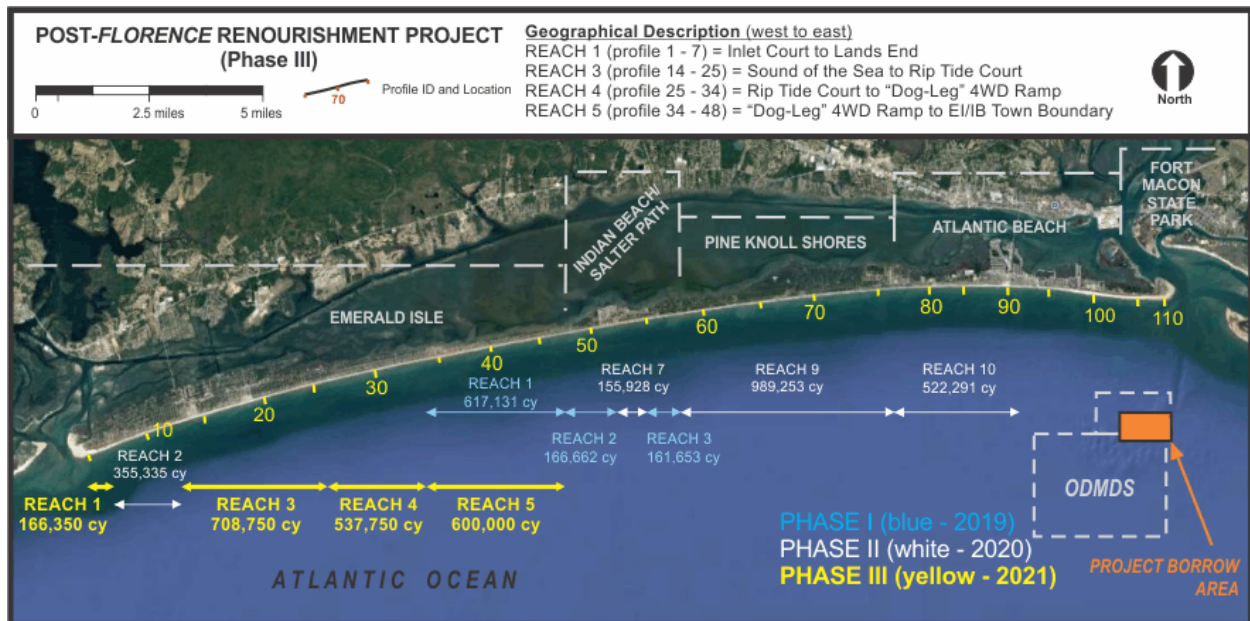
As presented to the *Island Review* magazine

### Phase III Completed & Caps The Post-Florence Renourishment Project

On April 26<sup>th</sup> our dredging contractor ([Great Lakes Dredge & Dock](#)) successfully completed [PHASE III](#) of the Post-Florence Beach Renourishment Project, culminating in the placement of roughly 166,350 cubic yards (cy) and 1,846,500 cy of sand along the far west portion of Emerald Isle and a larger zone in Central and East Emerald Isle, respectively (2,012,850 total cy). The Post-Florence Renourishment Project as a whole was aimed to nourish approximately 21 miles of Bogue Banks shoreline from the Circle in Atlantic Beach to the Point in Emerald Isle in three consecutive years utilizing over 5 million cy in the process. A dump truck holds ~12 cy as a quick mental image (before you pull out your cell phone, smart watch, or calculator; that’s roughly 417,000 dump trucks worth of sand - wow).

For completeness sake and as a quick review, the [PHASE II](#) effort was finished on April 29, 2020 encompassing 9.5 total miles of shoreline as West Emerald Isle, Salter Path, Pine Knoll Shores, and West Atlantic Beach received 355,335 cy, 155,928 cy, 989,253 cy, and 522,291 cy, respectively (2,022,807 cy total) in four discrete reaches. Dune planting efforts were concluded in late July 2020. 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.

The accompanying map (Fig. 1) depicts the geographic extents and cubic yardage involved for all Phases of the Project. Sand was obtained from the Offshore Dredged Material Disposal Site ([ODMDS](#)) associated with Morehead City Federal Navigation Project (also depicted in Fig. 1).

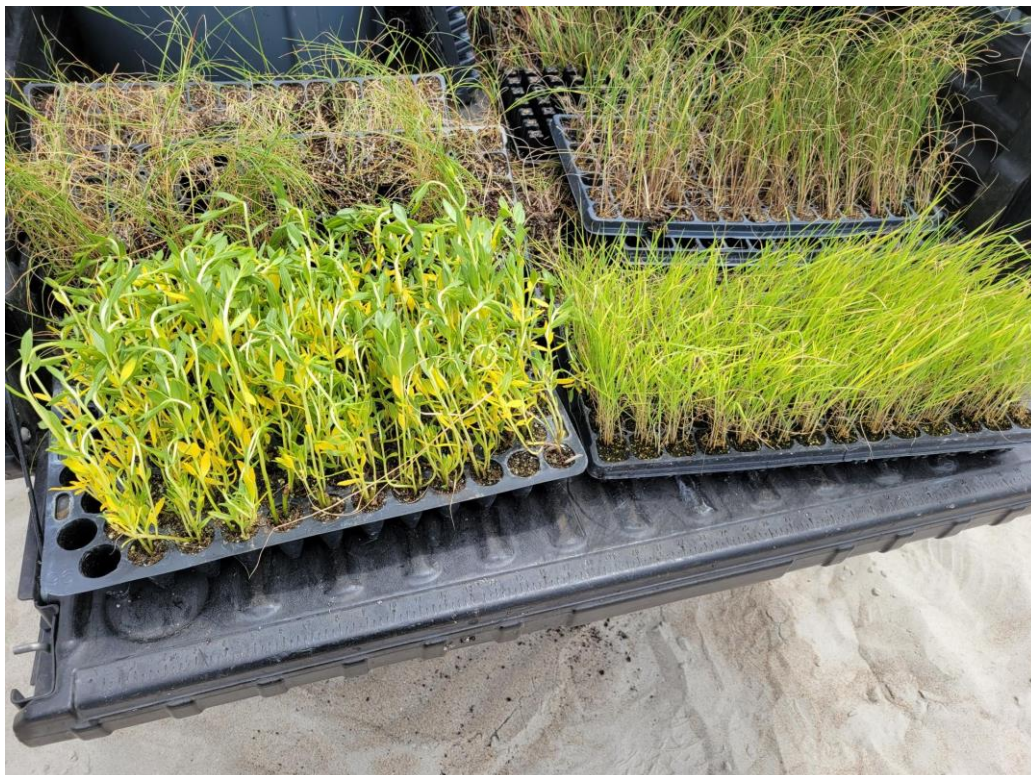


**Figure 1** – Map depicting the geographic extents and cubic yardage (volume) involved with Phase I (2019), Phase II (2020), and the recently completed Phase III (2021) scopes of the Post-Florence Beach Renourishment Project.

Akin to the Phase I and II projects, a detailed dune planting scope-of-work is included in our dredging contract for Phase III, which incorporates the planting, fertilization, and initial watering of several 100,000s of Sea Oats (*Uniola paniculata*), a bunch of Bitter Panicum (*Panicum amarum*), and some Seashore Elder (*Iva imbricata*) on top and mostly down the entire slope of the newly constructed dune (Fig. 2). The plants (100,000s) are truly native – they were germinated from either seed (Sea Oats and some Bitter Panicum) or cuttings (Bitter Panicum and Seashore Elder) obtained from Emerald Isle back in October 2020 by our subcontractor [EarthBalance](#) (Fig 3). Planting started on May 6<sup>th</sup> and should be completed in June of this year for the Phase III reach.



**Figure 2** – Good photo of planting from last year (5/14/2020; Atlantic Beach) – notice the top (dune crest) and slope of the newly constructed dune are the zones we plant.



**Figure 3** – The trio of plantings to be installed this year; the bottom left is *Iva imbricata* (Seashore Elder), to the bottom right is *Panicum amarum* (Bitter Panicum), often referred to as “running beach grass”, and the remaining trays of plants are *Uniola paniculata* (Sea Oats).



And lastly, 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 salt 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. For property owners - please wait until AFTER EarthBalance has completed their work planting if you wish to install sand fencing and/or post-and-rope borders along the walkways. Also check with the Emerald Isle Planning & Inspections Department as well before disturbing the dune as the State has some new(er) guidelines that need to be adhered to regarding spacing, position orientation, materials, etc.



**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.