



Navarre Beach & Dune Restoration Project

Status Report – to be regularly updated

June 23, 2016 Report

Work Completed (June 18 to June 23)...

- Weeks Marine Inc. (Contractor):
 - completed beach fill operations on Saturday June 18,
 - broke down the shorepipe, transported it to the staging area near Beach Access 12, and trucked it along with other shore equipment to Pensacola Beach,
 - removed the subline located just west of Beach Access 10,
 - finished with turtle relocation trawling operations, relocating a total of 212 turtles as of June 18, 2016 to a location outside of the borrow area, and
 - placed approximately 40,000 cubic yards (cy) of sand, (equivalent to approximately 2,200 18 cubic yard dump trucks), bringing the total to over 1.3 million cy placed since April 29.
- Coastal Tech – G.E.C., Inc. (Engineer):
 - continued daily shorebird and seabird surveys including the monitoring of nests outside the construction zone,
 - completed pre-fill and post-fill surveys at 100 ft intervals, and
 - continued with field compliance observations of the Contractor.

Work Planned (June 24 to July 18)...

- The Contractor will:
 - finish tilling the westernmost segment of the project,
 - complete removal of all equipment from the beach and staging area,
 - restore Beach Access 12 and open it to the public, and
 - commence planting of the restored dune areas on or around July 11th, expecting to take about one week.
- The Engineer will:
 - continue to monitor for shorebird and seabird nesting and breeding activity,
 - continue to communicate with the County and Contractor as demobilization completes, and
 - coordinate with the planting subcontractor to ensure all restored dune areas are planted.

For live video of existing beach - see: <http://www.navarrebeachlife.com/live-hd-1080-zoom-cam/>

For expected schedule of beach fill placement along a specific segment of beach, see the map below.

For an aerial video of the construction process - see <http://www.coastaltechcorp.com/Video>

Beach Fill Plan - Expected Schedule



Project Facts:

- On December 10, 2015, the Santa Rosa County Board of County Commissioners awarded a construction contract to Weeks Marine Inc.
- About 1.3 million cubic yards of sand was placed from immediately east of the Gulf Islands National Seashore to the eastern limits of the Navarre Beach Marine Park. The Project construction:
 - used two "Trailing Suction Hopper Dredges" – the "R.N. Weeks" and the "B.E. Lindholm" – to excavate sand from the offshore borrow area, haul the material to a pump-out station and the submerged pipeline near the beach, connect to the pipeline and begin hydraulic placement of the material onto the beach with extension of the pipeline along the beach as construction progresses,
 - lasted 50 days for dredging and sand placement including downtime related to Tropical Storm Colin,
 - made use of the same offshore borrow area used for the initial 2006 restoration project,
 - placed sand that looked slightly gray when first placed, but is lightening to near white as the sand dries and is exposed to the sun as occurred in 2006,
 - restored the dune crest to a width of 30 feet and will install native dune plants, and
 - increased the width of the beach berm by 100 to 200 feet.

Following completion of sand placement in Navarre Beach, the Contractor has begun using the same two dredges to construct the Pensacola Beach project.

- As required by the permits, seabird and shorebird monitoring began on March 31, 2016 and will continue until August 31 or until otherwise advised by FWC. Turtle monitoring began on May 1, 2016 coinciding with the start of Marine Turtle Nesting Season. Turtle trawlers operated in the borrow area and relocated 212 turtles as of June 18, 2016.
- The proposed Local Funding Plan includes federal funding from the Federal Emergency Management Agency and state funding from the Florida Department of Environmental Protection. The balance of project funding will come from local sources, including the Santa Rosa County Tourist Development Council, Santa Rosa County, and a municipal services benefit unit (MSBU) by Navarre Beach Leaseholders. The County has fronted the MSBU share of costs to be subsequently repaid to the County via the MSBU. The Santa Rosa County Commission is expected to consider the proposed Local Funding Plan and MSBU for adoption in August 2016.

For Questions, please contact:

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Frequently Asked Questions:

1. What is the approximate number of dump trucks in comparison of each dredge's delivery of sand and for the total project?
Answer: Each dredge load delivers about 140 dump truck loads (assuming an 18 cubic yard dump truck). The entire project volume is estimated at 1.3 million cubic yards which equates to approximately 72,200 dump truck loads (assuming an 18 cubic yard dump truck).

2. How many approximate sand trip deliveries for each dredge in a 24 hour period to the beach?

Answer: Each dredge has been completing 6 to 8 round trips within a 24 hour period.

3. What is the approximate time for each dredge to complete a cycle collecting sand from the borrow area, returning to the beach, distributing the sand onto the beach, and returning back to the borrow area?

Answer: The approximate cycle time for a dredge to fill its hopper at the borrow area, transit to the beach, discharge onto the beach, and then return to the borrow area has been 3 to 4 hours.

4. Will vegetation be added to the areas where sand is added to the berm?

Answer: Vegetation will be added to the dune (not the beach berm) where the dune is being re-constructed.

5. Is it safe to assume the 24/7 work schedule will create a less than desirable sleeping environment in beachfront residences?

Answer: The Contractor is to use the minimum lighting that is necessary and complies with OSHA standards. Nighttime work may be loud enough to be disruptive when directly in front of a property. As the Contractor is expected to move equipment along the beach to construct about 500 feet of beach each day, noise disruption in front of a particular property is expected to be limited to one night. Sleeping with closed windows should substantially diminish any noise during the night.

6. How far in advance of beach closing at my property will I be able to know exactly when it will happen?

Answer: The fact sheet will be updated weekly so everyone is aware of what work is expected in the next week. You should have at least a week's notice.

7. How will the construction be sequenced and what is the general process, both for the dredges and for the shore equipment?

Answer: As described in the Project Facts, the Contractor will generally place sand in four segments from East to West along the beach; the Contractor will specifically place fill in the following sequence:

- **Segment 1 (COMPLETE)** – started at the landward end of Pipeline Corridor 1 then moved from West to East to the eastern limits of Segment 1 and the eastern limits of fill;
- **Segment 2 (COMPLETE)** - beginning at the landward end of Pipeline Corridor 1 then moving from East to West to the western limits of Segment 2;
- **Segment 3 (COMPLETE)** – starting at the landward end of Pipeline Corridor 2 then moving from West to East to the eastern limits of Segment 3; and
- **Segment 4 (COMPLETE)** - beginning at the landward end of Pipeline Corridor 2 then moving from East to West to the western limits of Segment 4 and the western limits of fill.

The two dredges work in an alternating sequence on the same pipeline. While one dredge is unloading fill at the shoreline, the other dredges material from the borrow area 4 miles away. They then switch, providing a quick succession for unloading material onto the beach. As the material is pumped onto the beach, the Contractor will add "shore pipe" (40-foot lengths of pipe) to extend the pipe discharge point along the beach to fill each segment as described above.

8. Will the Pier parking lot remain open?

Answer: Now that Segments 1 and 2 are completed, the pier parking lot is back open.

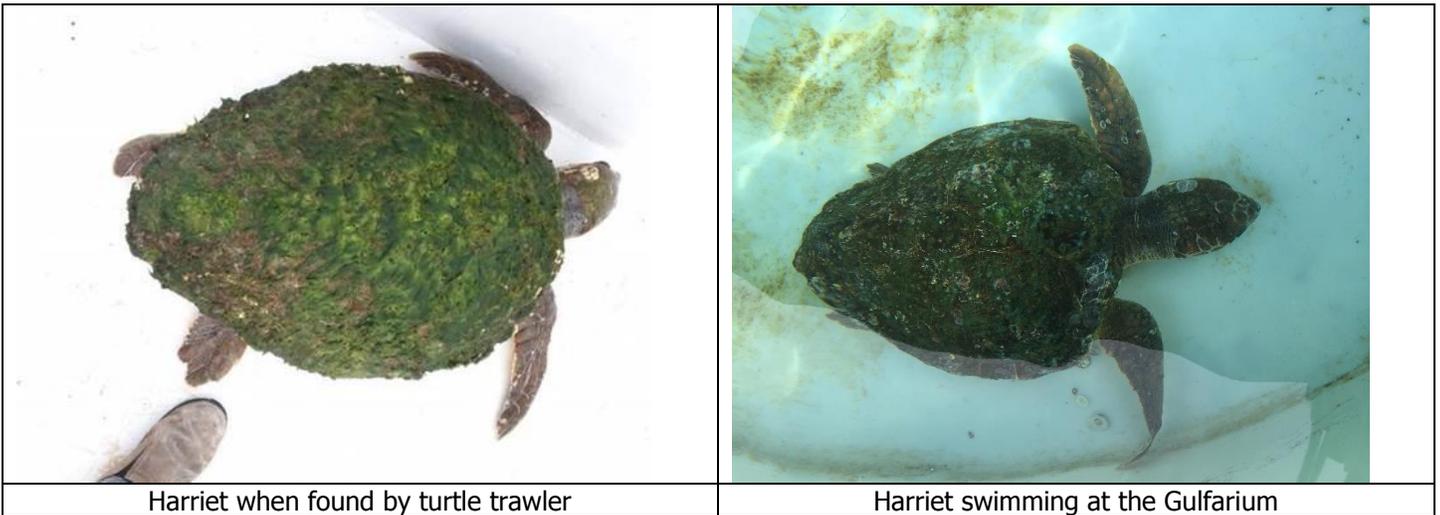
9. Why was the nearshore water east of the pier pink on May 4th?

Answer: Per the Contractor, the pink water was the result of a "velocity test" to calibrate their equipment on the dredge. The test used a non-toxic pink dye which was inserted into the pipeline at the dredge. Then, the amount of time for the dye to reach the beach was measured. Per the Contractor, the test was completed in accordance with industry standards and will not likely be needed again during this project.

10. Who is Harriet the turtle?

Answer: Harriet was named by workers at the Gulfarium after she was brought there for rehabilitation. She was captured by turtle trawlers on May 9 and found by the endangered species observer to be lethargic, emaciated, and had much of her body covered in algae and barnacles. She was brought to the Gulfarium's Sea Turtle C.A.R.E. Program in Fort Walton Beach for rehabilitation. Allen McDowell, curator of fish and invertebrates reports she is "...doing well and responding to treatment. She started eating on her own, which is a big milestone for her recovery."

Turtle trawling is a common practice associated with hopper dredging operations, such as the Navarre Beach renourishment. Turtle trawling is conducted by dragging nets within the dredging area only. Any captured sea turtles are relocated further offshore to keep them away from potential harm.



11. It appeared that sand was lost due to Tropical Storm Colin and the shape of the beach changed. What happened?

Answer: With the elevated water level and flooded beach associated with the passage of Tropical Storm Colin, it appeared that much sand had been lost from the beach, but most, if not all of the placed sand remains as appears evident now with more normal water levels. The sand was placed in a construction template that is expected to shift and equilibrate into a more natural beach profile over time. The equilibration happens rapidly at first then slowly evolves over time. Based on monitoring of the 2006 Project within the first year the Mean High Water Line (Shoreline) migrated landward about 20 feet on average. During the monitoring period of 2006 to 2014 the Mean High Water Line migrated 55 feet on average throughout the project. The same monitoring data indicate that within the nearshore system (out to 18 feet water depth) only about 1.2% of the placed sand had been lost since 2006. This indicates that while the sand shifts and moves, nearly all of it remains in the system and provides upland protection and associated storm damage reduction. As part of the permit required monitoring, surveys will be performed after construction is completed to document the constructed beach and assess any actual losses.

12. How do they bring the sand to the shore?

Answer: The Contractor has been using two hopper dredges to remove sand from the offshore borrow area and transport the sand to a nearshore pump-out station from where the sand is pumped through a pipeline to the beach.

13. Why are there no signs posted?

Answer: A project sign is posted by the Navarre Beach Pier.

14. Are they taking sand away from the shore?

Answer: No, the Contractor is placing sand to extend the beach.

15. Is it making the water shallower?

Answer: Immediately following construction the nearshore water will likely be shallower. Over time, as the constructed template adjusts to wave conditions and equilibrates to the natural profile, water depths will be similar to how they were before construction.

16. Where is the best spot to get the most shells?

Answer: Some shells are deposited within the beach fill, but it appears the "best spot" for shelling is along the water's edge where the shells are "flushed out" by the wave action and most easily collected.

17. When will they be finished?

Answer: The current estimate is for the Contractor to complete dredging operations around June 20th and to completely demobilize all dredging equipment prior to July 4. Dune planting will be done in mid-July.

18. Are they still on schedule due to the storms?

Answer: Yes, they are mostly on schedule in spite of some weather delays; dredging is still expected to be completed by mid-June. The Contractor generally operates 24/7 rain or shine, but even moderate waves can impeded dredging operations. TS Colin led to a brief delay due to wave heights that made it unsafe to operate the dredges, but only a few weather delays have been encountered since construction began.

19. How deep is it where they are dredging?

Answer: Natural water depths in the borrow area average 70 feet. The Contractor is permitted to dredge to depth of about 78 feet.

20. Is this hurting the environment?

Answer: There are temporary adverse impacts upon the environment during construction – associated with equipment operations and turbidity. Environmental impacts to shorebirds, marine turtles and turbidity are closely monitored – particularly during construction. Trawlers almost continuously sweep the borrow area to capture and relocate turtles from the borrow area to avoid adverse impacts to turtles by the hopper dredges. Turtle and shorebird monitors check conditions along the beach each morning to ensure no birds or turtle nests are endangered by construction operations. Turbidity is monitored near the beach and in the borrow area to ensure that levels remain within State water quality standards. When completed, the restored beach will provide enhanced habitat for shorebird and turtle nesting.

21. Is it possible they could finish sooner than mid-June?

Answer: June 20th is the current target date for completion of dredging operations.

22. How often does Navarre Beach do this process?

Answer: The initial restoration of Navarre Beach occurred in 2006. This 2016 Project is the first beach nourishment since 2006. It is likely – depending on weather conditions – that the next nourishment event may become warranted in 8 to 10 years.

23. Why are the seagulls flocking towards the pipes as the water is gushing from it? Is it because they are feeding off small fish?

Answer: The discharge pipe pushes out a slurry of dredged material (mostly sand) and water. Within the slurry is a small amount of marine invertebrates that the birds feed on.

24. When will the rebuilt dune be planted?

Answer: The rebuilt dune will be planted with native vegetation by Aquatic Plants of Florida beginning on or around July 11.