WEDA GULF COAST CHAPTER MEETING

GLDD'S ATB ELLIS ISLAND & TUG D.B. MACKIE

Galveston, Texas

13 November, 2019

Ellis Island	length 433 ft.	Breadth 92 ft
	Installed power	11,300 hp
D. B. Mackie	length 158 ft.	Breadth 52 ft.
	Installed power	17,300hp

15,000 cubic yard hopper capacity
(largest hopper dredge in US Market)

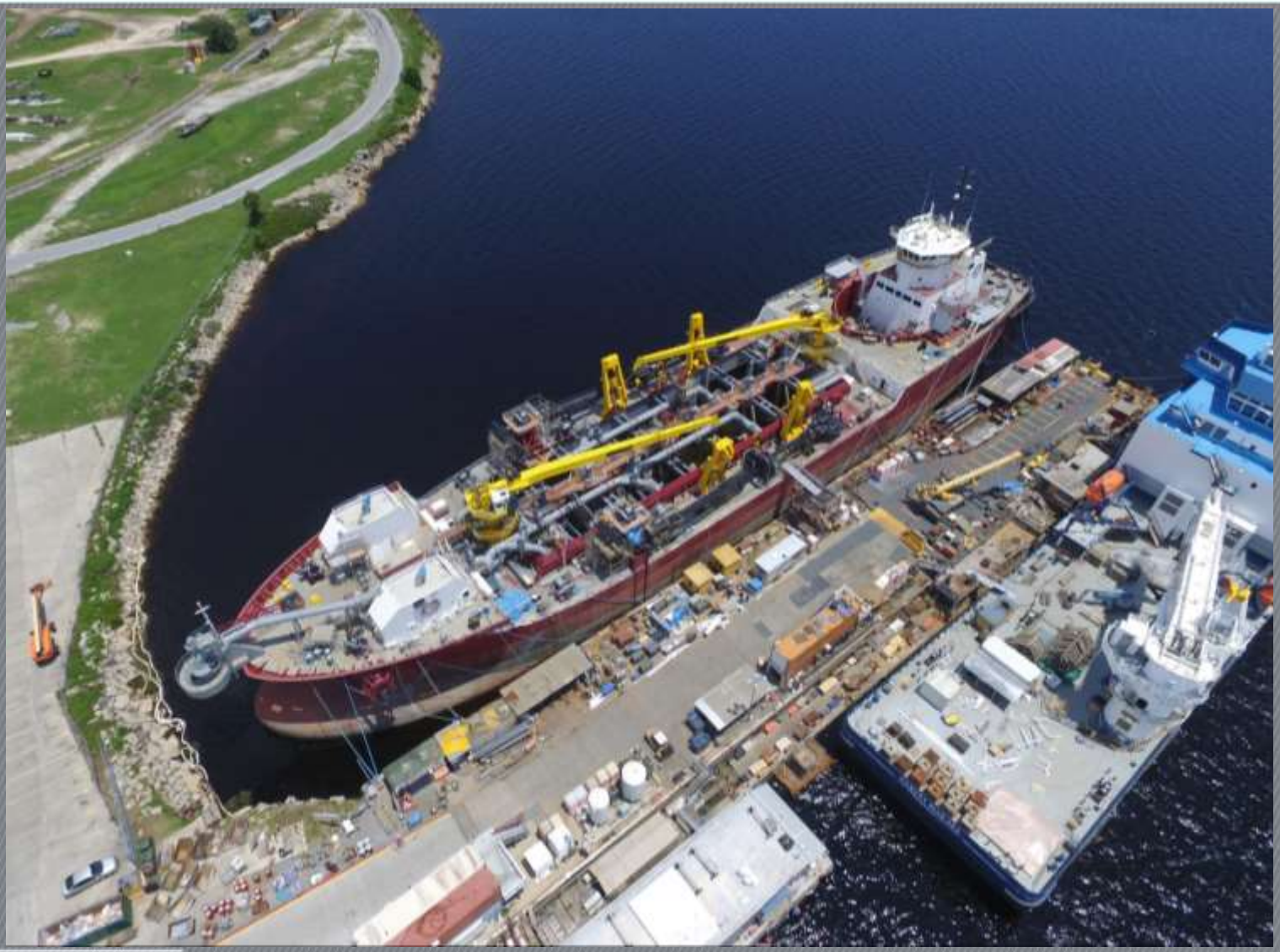
Douglas B. Mackie

GREAT LAKES HOPPER DREDGE BEGINNINGS

MANHATTAN ISLAND 1ST SPLIT HULL HOPPER DREDGE

LAUNCH 30 SEPTEMBER 2016

TUG MACKIE AND ELLIS ISLAND AT OUTFITTING PIER



GREAT LAKES U.S. HOPPER FLEET IN 2017

SOME ATB ADVANTAGES

- ✓ Today's trend in the U. S. Coastwise-Qualified (Jones Act) trade is to build an ATB instead of a ship for any route where the transit distance is short enough for the positive construction and operating cost economies to offset the negative cycle economies of the somewhat smaller size ATB.

- ✓ Cargo capacity - The cargo capacity of a hopper dredge is based on the vessel's displacement and its lightship weight which includes propulsion engines, generators, accommodations structure, fuel and other ship installations. This weight deducts from the cargo carrying capacity of the dredge.

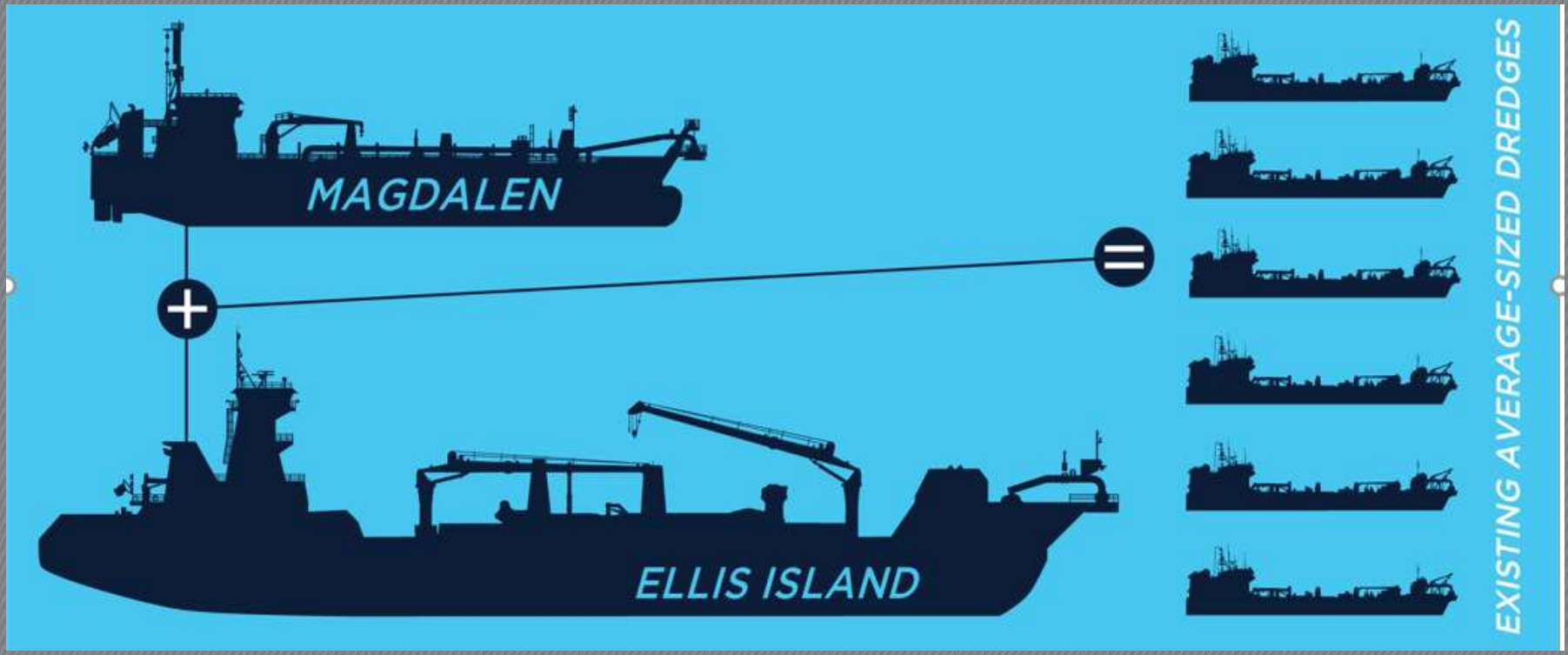
  In an ATB hopper dredge, these components and their associated weight are built into the tug and therefore do not deduct from the cargo carrying capacity of the barge. The tug's draft remains constant as the barge increases its load and draft.

- ✓ The manning requirements on this size tug typically result in a crew of 7-10 personnel. The license requirements are lower, i.e. tug license not ship license

- ✓ The manning requirements on the barge are typically zero, since the barge is considered unmanned; the owner crews to meet his *operational requirement*, not an imposed *regulatory requirement*.

SAFETY – Tug to Barge Transfers

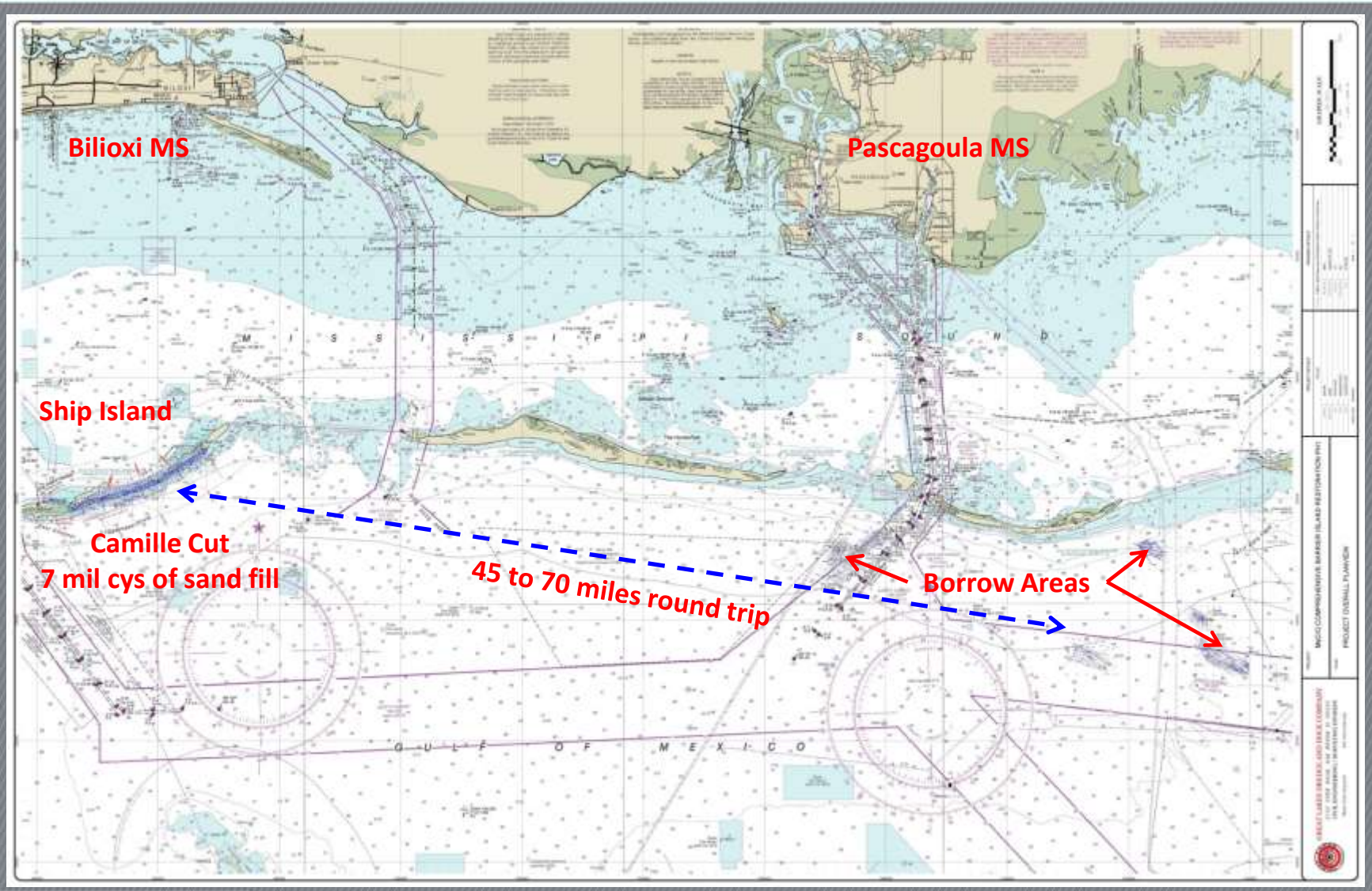
Change in Industry Capacity



Historical Industry Capacity (1997-2015) – 66,340 cy

Industry Capacity with Weeks and GLD&D Newbuilds – 90,040 cy

MSCIP - Ship Island Restoration Project Phase I



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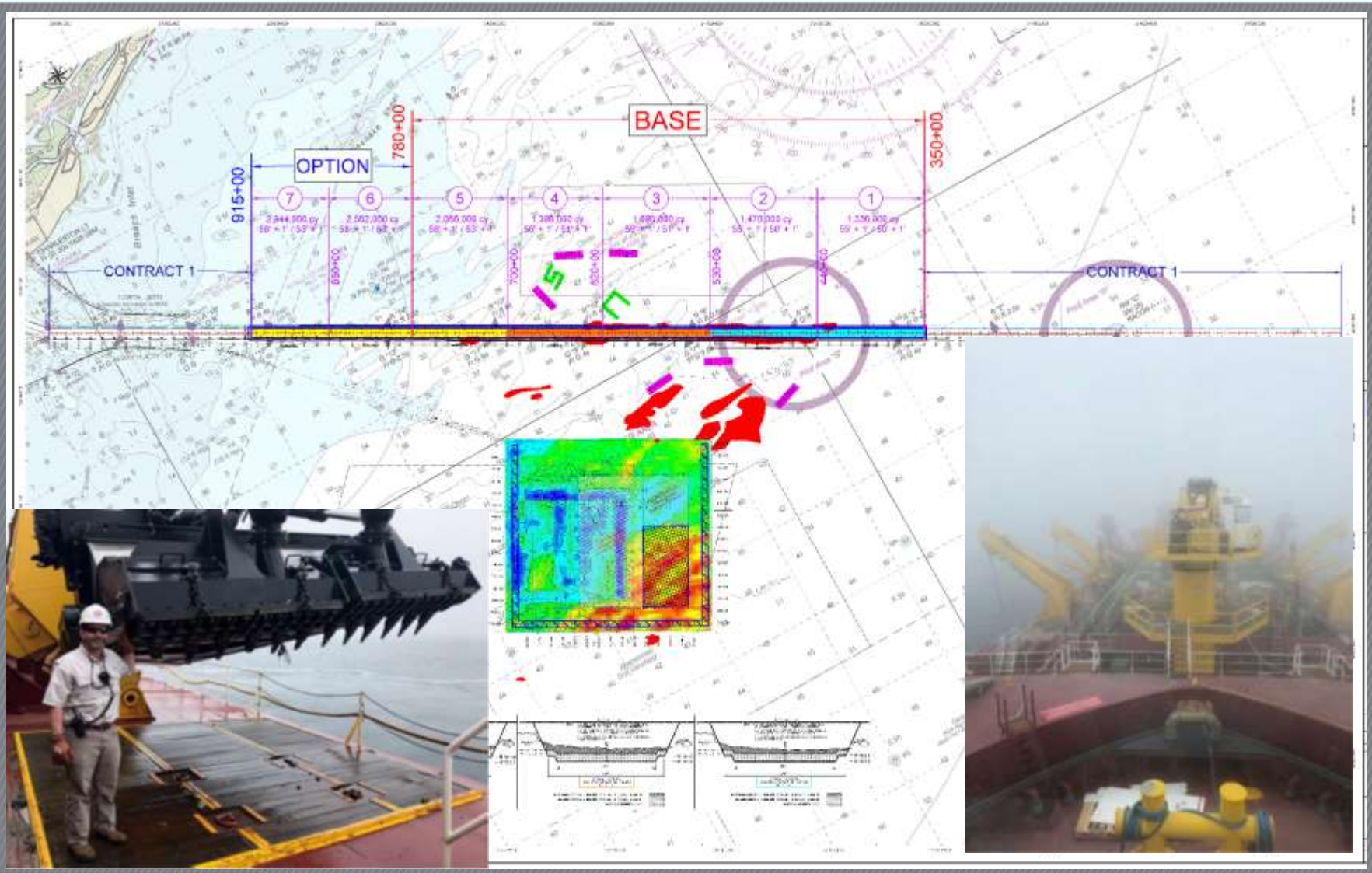
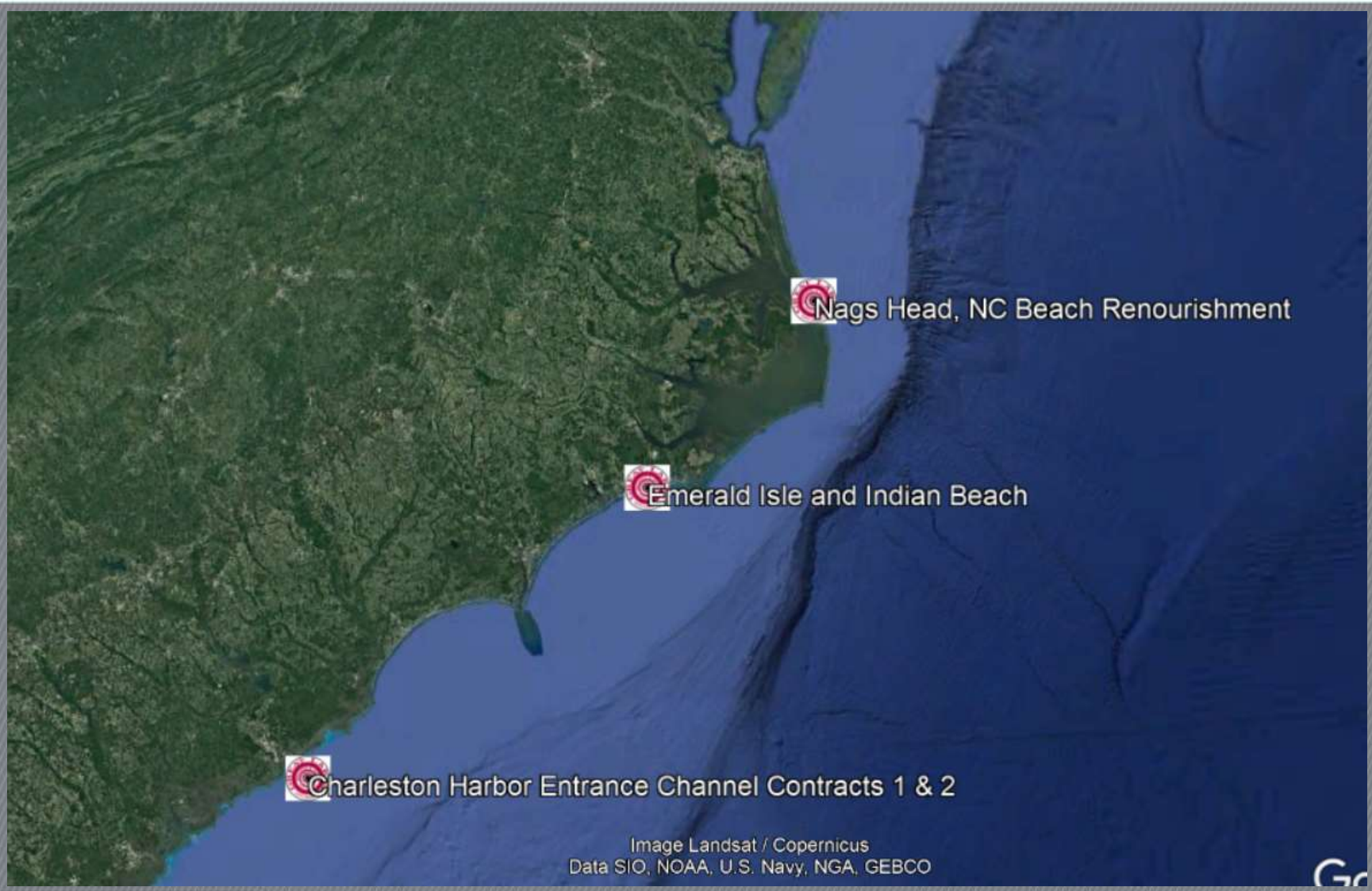
Charleston Entrance Channel Deepening – Contract 2

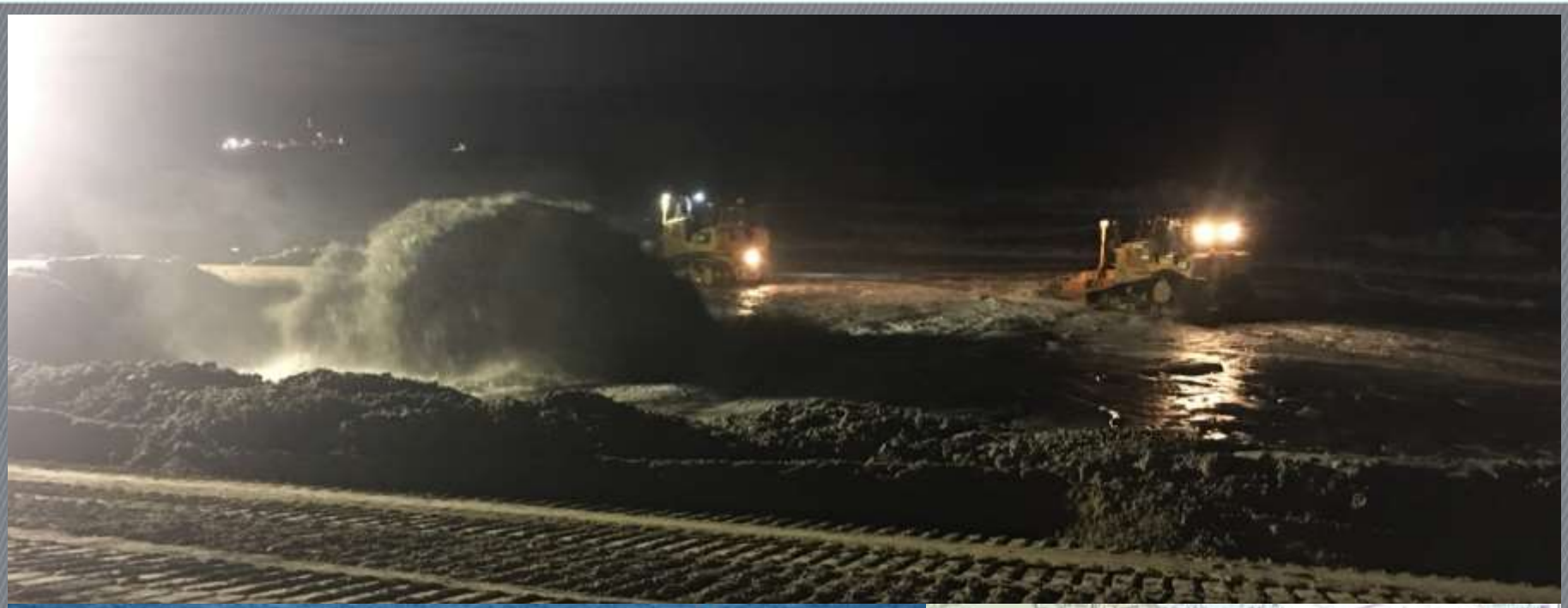


Charleston Entrance Channel Deepening – Contract 2

North Carolina Beaches



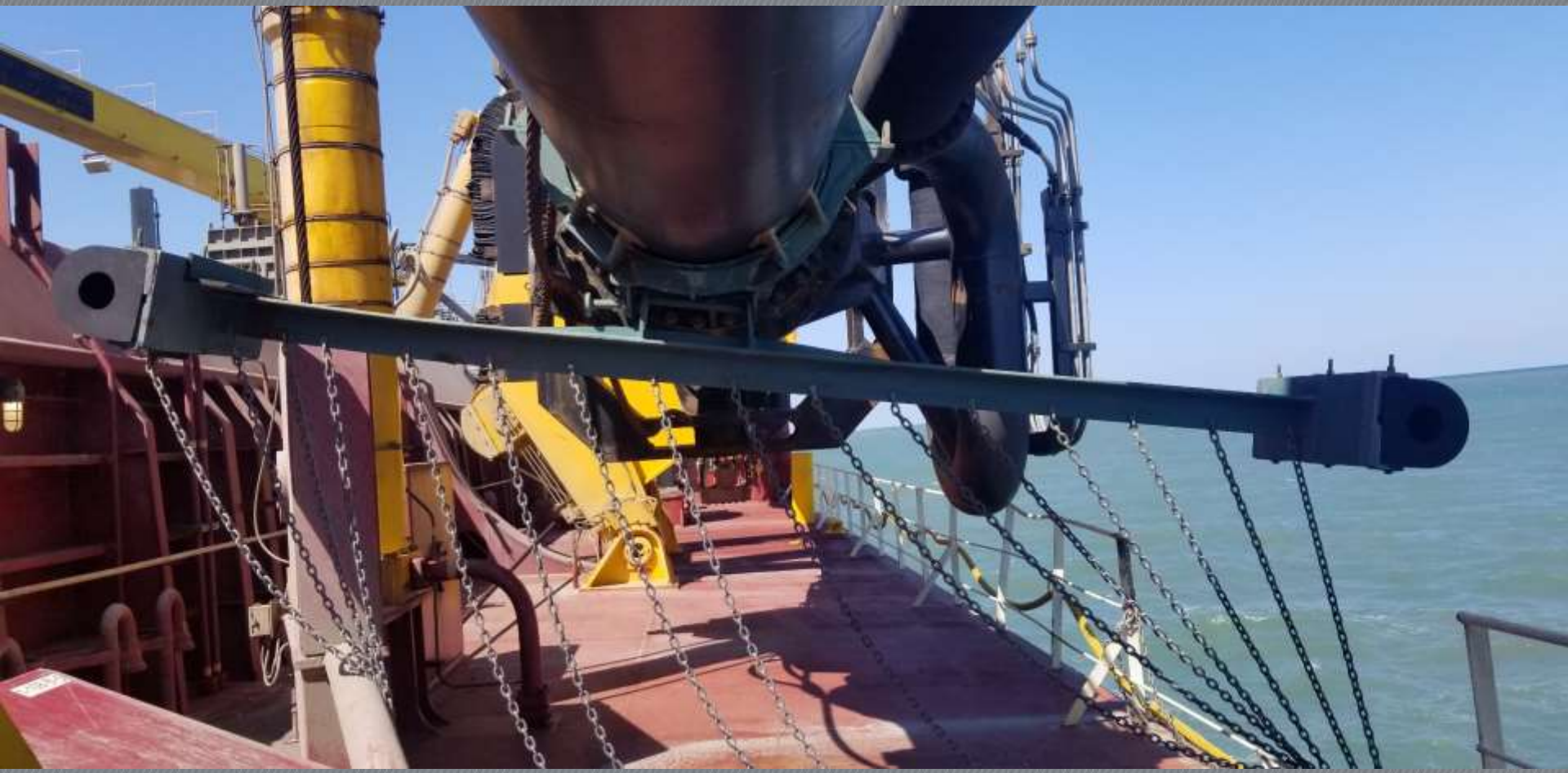
North Carolina Beaches



GALVESTON ENTRANCE CHANNEL MAINTENANCE

Corpus Christi Deepening

Corpus Christi Deepening



Corpus Christi Deepening

GREAT LAKES' OBJECTIVES

- The dredge that will carry our Hopper Division to the next generation; the next step in the transition from a fleet of nearly identical dredges to a fleet consisting of different dredges for different purposes – each the low cost producer in its target market
- Compete in non-traditional hopper markets
- Meet future market needs with increased O & M demand and funding due to HMTF, Coastal Protection, Gulf Coast Restoration, and the latest channel deepening (Capital Dredging) cycle
- Make otherwise marginal projects possible due to reduced cost to owner

Thoughts

In order to increase efficiency and reduce cost, it may be in the Government's interest to:

- Increase bin size restrictions for ODMDS disposal.
- Consider hopper dredges for hard material excavation (stiff clay, soft rock, pre-treated rock, etc.). Do not allow exclusion by permit, or fail to include because "its not a hopper job".
- Evaluate improved production efficiency on long distance borrow area projects. Areas that were formerly "too far away" may not be now.
- Continue efforts to raise visibility of prospective projects (DIS listings, Industry Days, etc.) to allow optimization of equipment, forward planning etc.

THANK YOU!