

National Park Service
U.S. Department of the Interior



MOREHEAD CITY HARBOR, NC

Dredged Material Management Plan (DMMP)

Shackleford Banks
Cape Lookout National Seashore

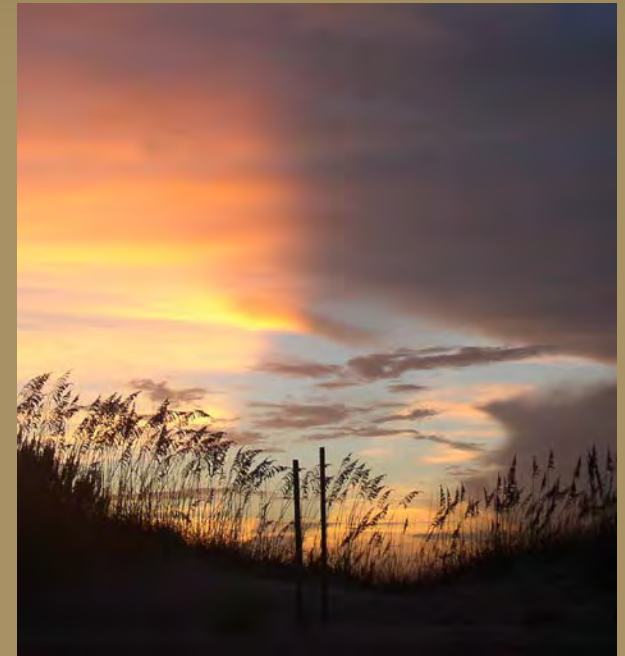
January 15, 2014

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The National Park Service

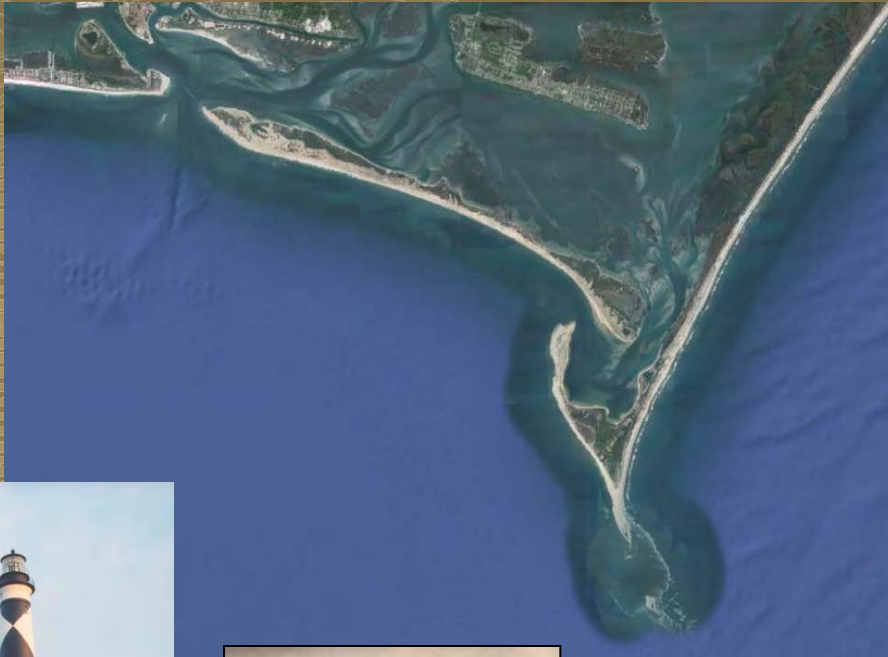


“...to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”



NPS Organic Act, 16 U.S.C. § 1

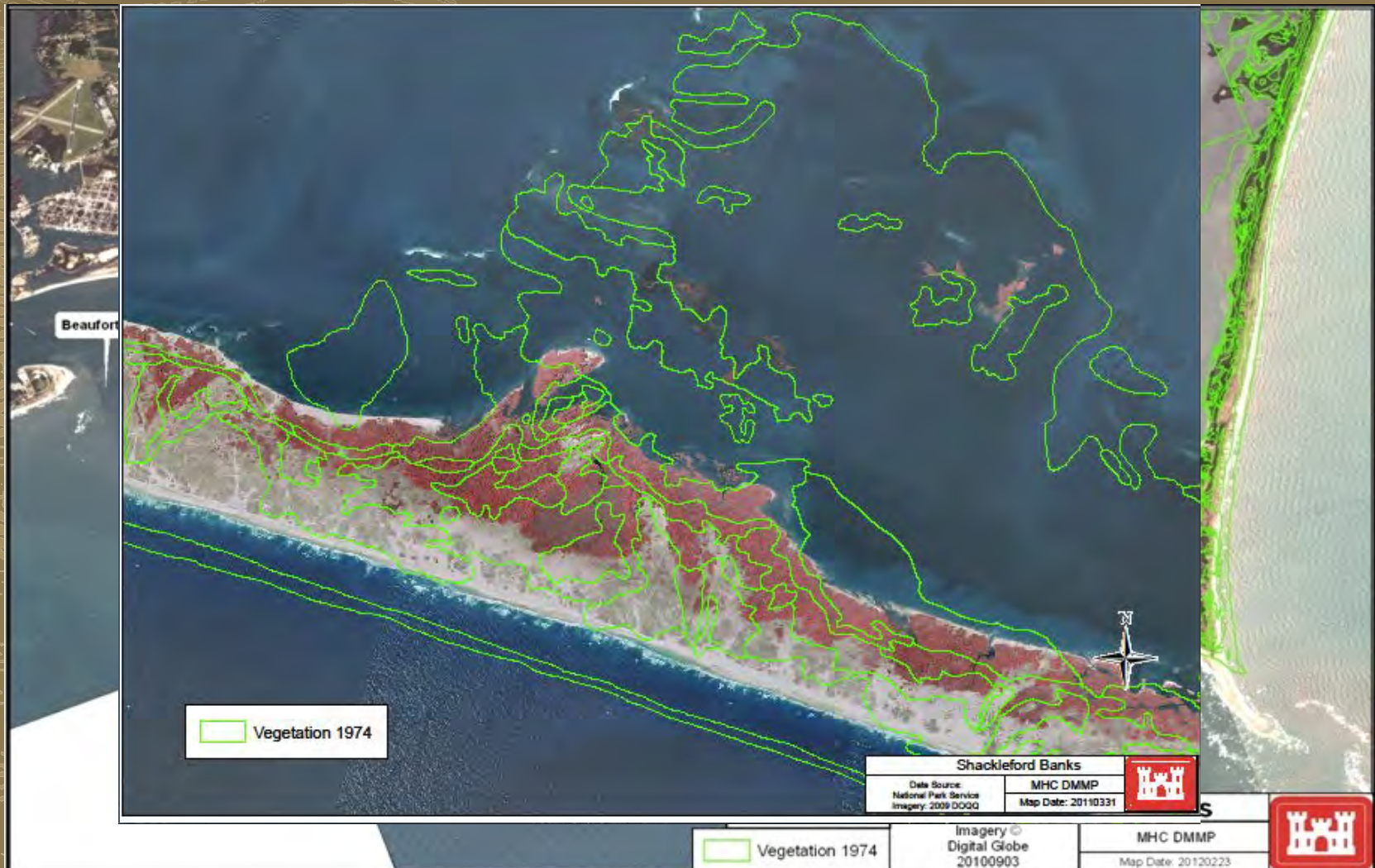
Cape Lookout National Seashore



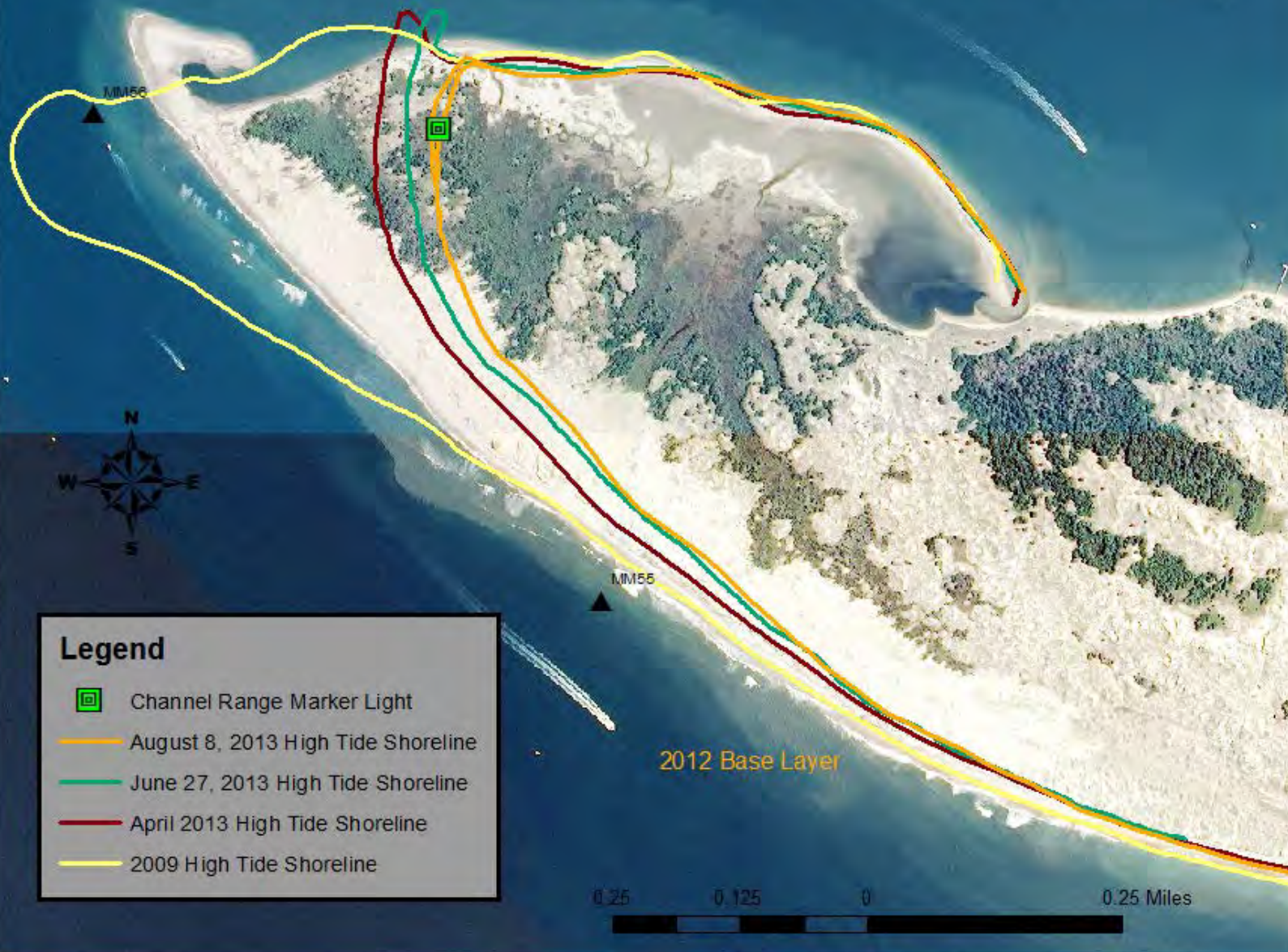
NPS Involvement - 2010

- Requested that the option of returning sand to Shackleford Banks be analyzed in EIS
 - Based on scientific understanding of the impacts to Shackleford Banks
 - Consistent with NPS Management Policies
- Requested to become a Cooperating Agency
 - Fulfills National Environmental Policy Act requirements
 - Assess the impacts:
 - dredging the western portion of Shackleford Banks
 - placement of sand on Shackleford Banks

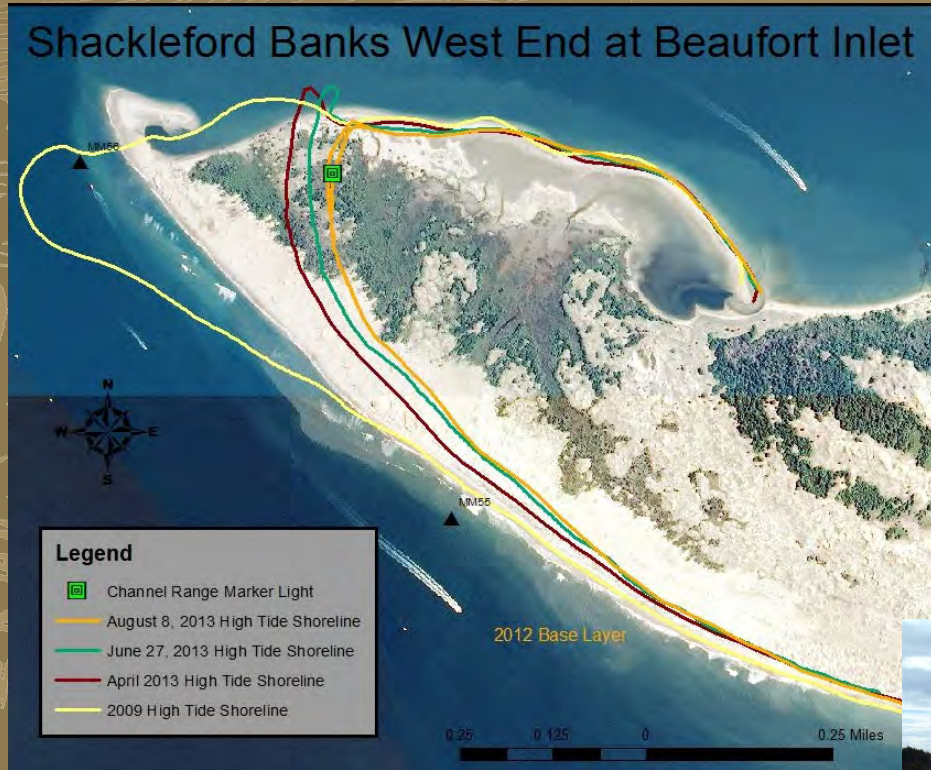
Shoreline Changes 1974-2010



Shackleford Banks West End at Beaufort Inlet



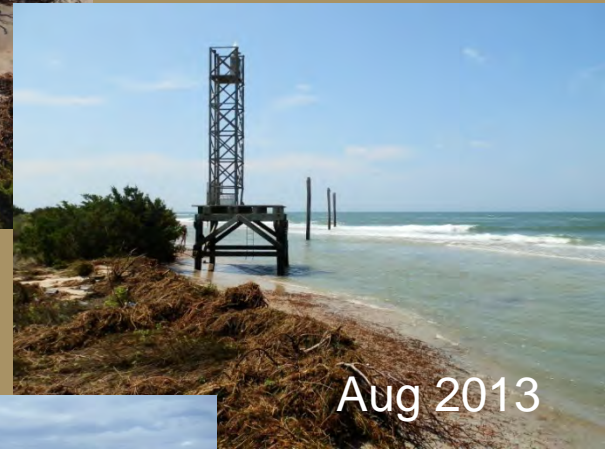
Shackleford Banks – West End



Aug 2013



Aug 2013



Jan 2014



Documentation of Erosion

- Erosion along Shackleford Banks is strongly associated with channel dredging and deflation of the ebb tidal delta
- Shoreline changes have occurred in the west and middle portions of Shackleford
- Surveys indicate the offshore portion of Shackleford Banks is getting deeper
 - Beach volume loss = up to 900,000 cubic yards /year above 30 foot depths (1991 - 2000)
 - Channel induced erosion of 166,450 cubic yards/year (2000 - 2010)

(USACE 2001; Olsen 2006)

NPS Management Policies

- “Fundamental purpose...a mandate to conserve park resources and values”
- “must leave park resources and values unimpaired”
- “seek ways to avoid or to minimize...adverse impacts on park resources and values.”
- “seek to return disturbed areas to the natural conditions and processes...”



NPS Management Policies

Shorelines and Barrier Islands

“Natural shoreline processes ... will be allowed to continue without interference.

Where human activitieshave altered the nature or rate of natural shoreline processes, the Service will... investigate alternatives for mitigating the effects of such activities ... and for restoring natural conditions.”

NPS Management Policies 2006

§ 4.8.1.1

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Example of Placement of Sand to Protect Resources at CALO



CALO lighthouse - 2006

Wilderness

- Shackleford Banks is proposed wilderness.
- Intervention is allowed “to the extent necessary to correct past mistakes, the impacts of human use, and influences originating outside of wilderness boundaries”
- Continued erosion may adversely affect wilderness character
- DMMP includes draft minimum requirement analysis as required by Wilderness Act

The Plan

- Establishes the option to return sand to Shackleford Banks for next 20 years
- Base decision on best available science
- The sand amounts would be based on estimated dredging-induced losses
- Sand would be placed approx. 1.5 miles from west end over a 3.65 stretch of beach
- USACE would need a permit from the NPS
- Monitoring would be critical

Current Status

- No decision has been made – we are in a decision-making process (NEPA)
- We will analyze the comments submitted by the public
- We will continue to collaborate with USACE to complete the NEPA process
- Continue dialogue with various scientists and engineers to ensure best available science is used



Thank You

Patrick Kenney, Superintendent
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