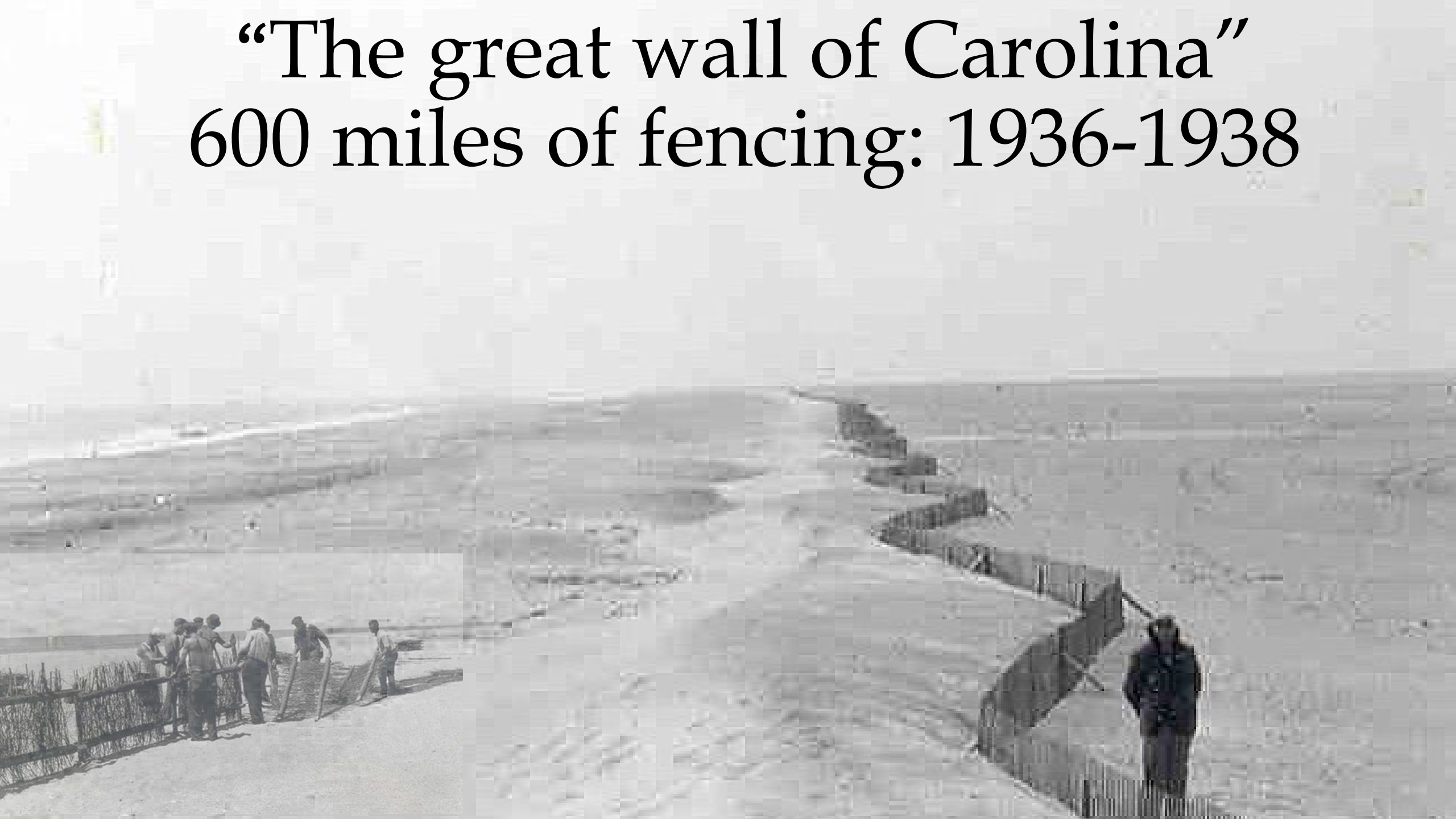
“The great wall of Carolina”
600 miles of fencing: 1936-1938





Millions of square feet of grass; millions of trees and shrubs





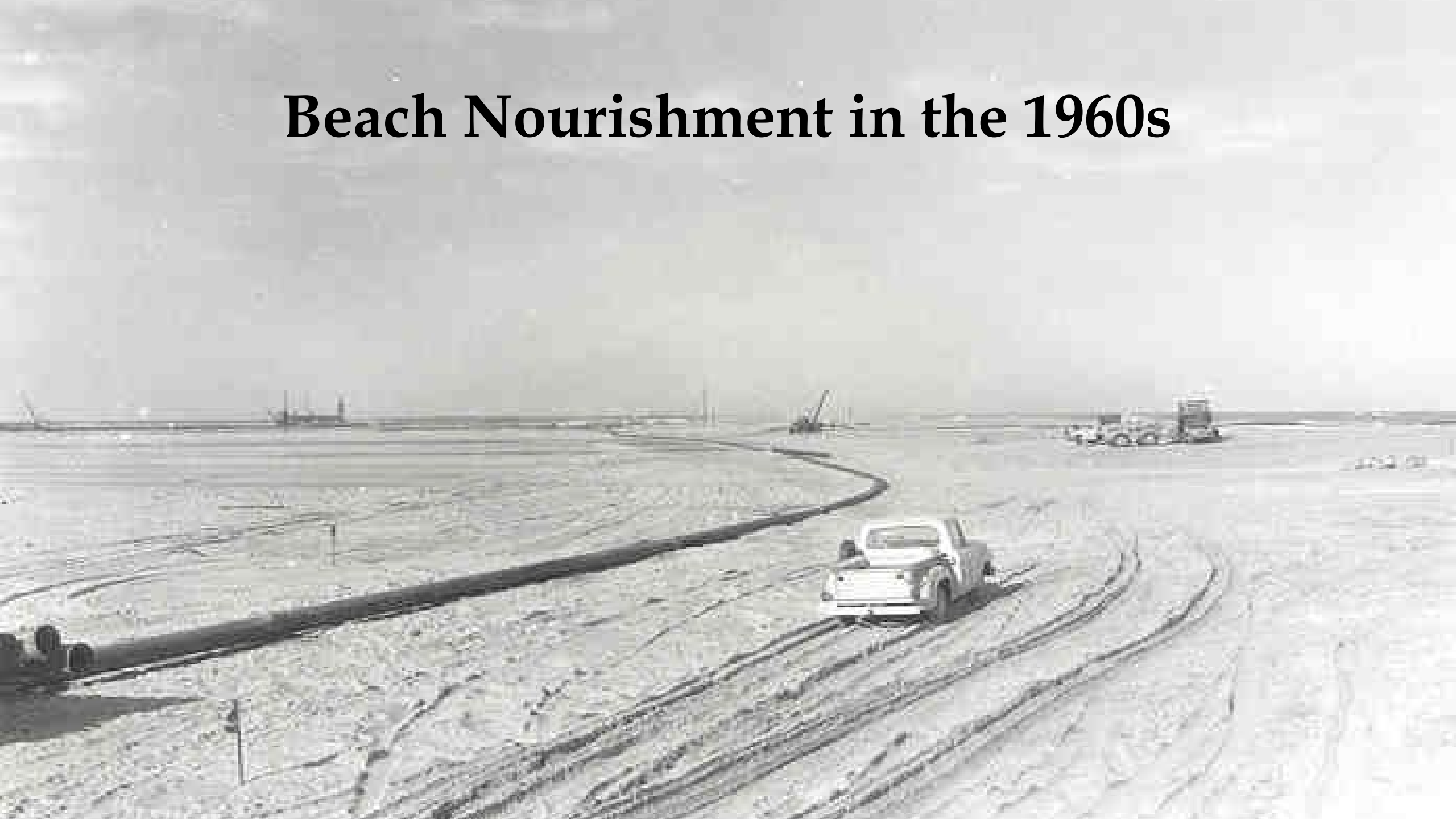
Fertilizer application via helicopter – 1960s


Push sand up from the ocean


Push sand up from the sound



Beach Nourishment in the 1960s





1970: The Navy constructed three groins

Beach nourishment projects in 1972 and 1973

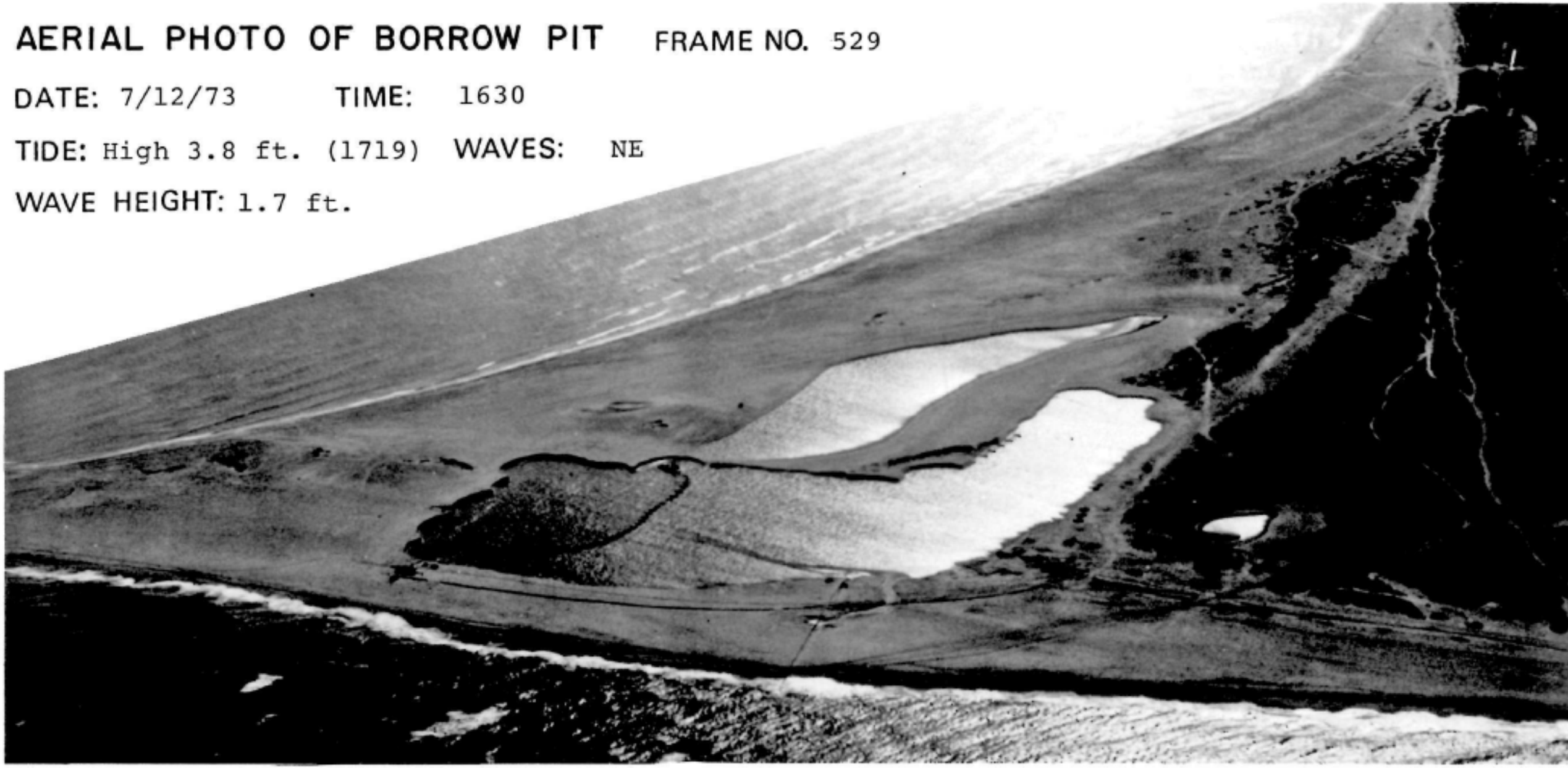


AERIAL PHOTO OF BORROW PIT FRAME NO. 529

DATE: 7/12/73 TIME: 1630

TIDE: High 3.8 ft. (1719) WAVES: NE

WAVE HEIGHT: 1.7 ft.



Over 750,000 yards^3 had been excavated from the borrow pit at the time of this photo. At



December 27, 1972


March 23, 1973



March 23, 1973



March 23, 1973

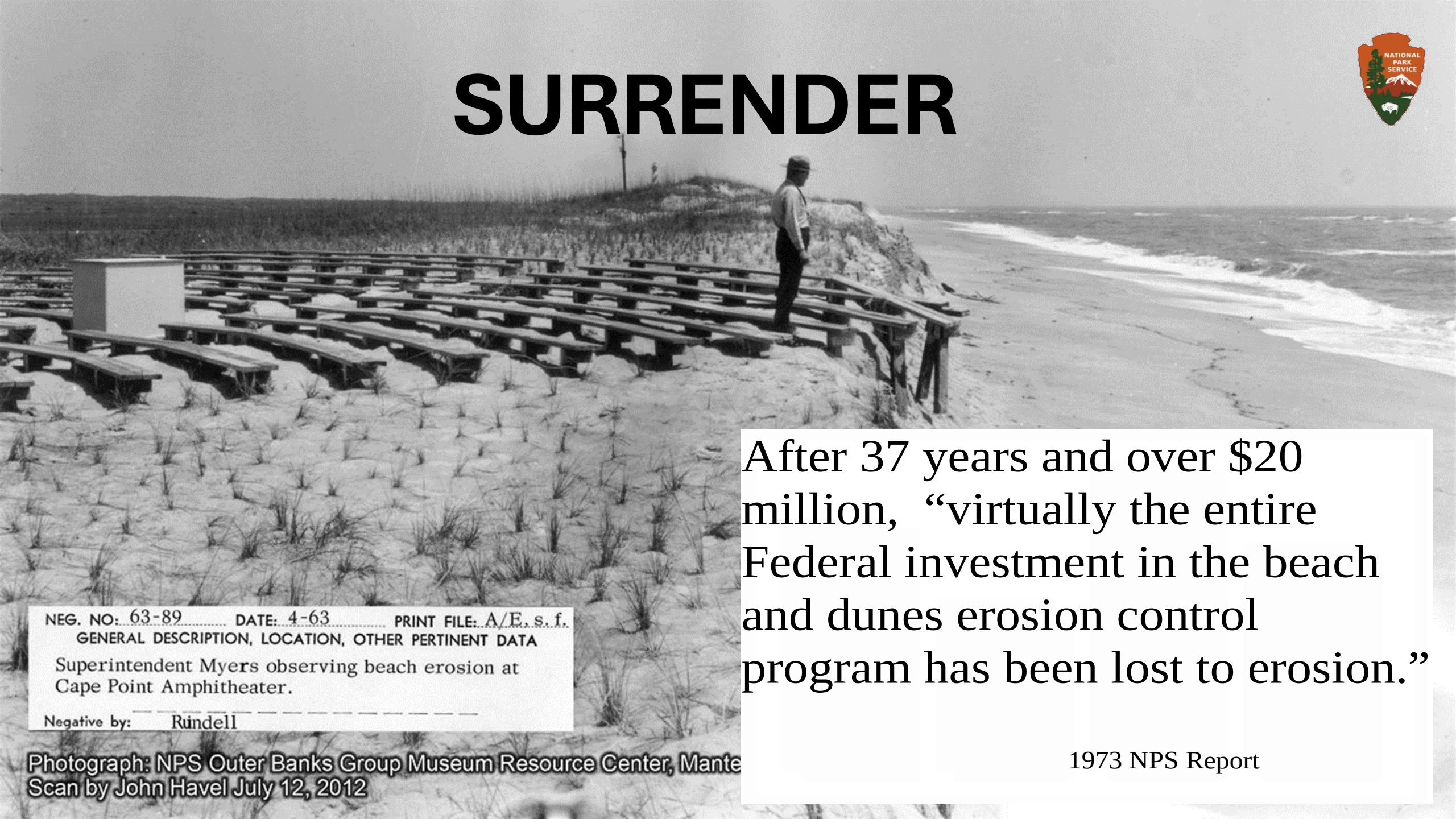


March 23, 1973



THE 1958 AND 1973 SHORELINES AT BUXTON

SURRENDER



After 37 years and over $20 million, "virtually the entire Federal investment in the beach and dunes erosion control program has been lost to erosion."

1973 NPS Report

C.W. Cooke, Geologist – U.S. Geological Survey: 1936

"The barrier islands will continue to be pushed gradually landward…..inlets will continue to migrate, new inlets may open and old ones close….these processes cannot be stopped nor can they be much retarded."

In his "Notes on the Hatteras Region," Cooke outlined the peculiar geological characteristics of the Outer Banks. He began by describing how melting continental ice caps at the end of the Pleistocene epoch had raised global sea levels by some twenty-five feet. The rising sea flooded Pamlico plain leaving small peaks above water to form barrier islands while submerged areas became shoals. According to Cooke:

> Conditions similar to those of the present may be expected to continue for a long time—perhaps for as long as the sea maintains its present level. The barrier islands will continue to be pushed gradually landward and may eventually merge with the mainland. The sounds will continue to be slowly silted up by sand blown from the barrier islands and brought down by streams from the mainland. Much of them will be converted into tidal marshes penetrated by ramifying systems of tidal channels. Inlets will continue to migrate; new inlets may open and old ones close, subject dominantly to the forces of the prevailing winds but temporarily modified by the vagaries of storms. These processes cannot be stopped nor can they be much retarded.[93]

CAHA archives.

93. C. W. Cooke, "Notes on the Hatteras Region," Box "Proposed National Park, Cape Hatteras, Part I (12-22-1934 to 10-31-1937)," Drawer "CHNS Historic Files," Vault, CAHA archives.

A highly dynamic area that is eroding

PHOTO INTERPRETATION OF SHORELINE CHANGES BETWEEN CAPES HATTERAS AND FEAR (NORTH CAROLINA)

MOHAMED T. EL-ASHRY AND HAROLD R. WANLESS

TABLE I

DIMENSION CHANGES IN CAPES HATTERAS, LOOKOUT AND FEAR

Location	*Changes in Cape Hatteras (ft.)*						
	1852–1872	*1872–1917*	*1917–1939*	*1939–1945*	*1949–1953*	*1953–1962*	*net change*
Beach just north of cape	—700	—1,800	+450	0	+300	0	—1,750
Beach 1/2 mile west of cape	+900	+2,100	0	—1,200	—1,200	—800	—200
Southward extension of cape point	—2,100	+3,200	+900	—4,100	—1,100	+700	—2,500
Eastward extension of cape point	—700	—1,200	—200	+600	+1,600	—2,500	—2,400

Thirty-two houses have collapsed in recent years



#1 May 29, 2020
#2 Feb. 9, 2022
#3-4 May 10, 2022 (2)
#5 March 13, 2023
#6 May 28, 2024
#7 Aug. 16, 2024
#8-9 Sept. 20, 2024 (2)
#10 Sept. 24, 2024
#11 Nov. 14, 2024

#12 Sep. 16, 2025
#13-18 Sept. 30, 2025 **(6)**
#19 Oct. 1, 2025
#20 Oct. 2, 2025
#21 Oct. 3, 2025
#22 October 18, 2025
#23-27 Oct. 28, 2025 **(5)**
#28-29 Feb. 1, 2026 **(2)**
#30-31 Feb. 2, 2026 **(2)**
#32 June 2, 2026

21 collapses since 2025

go.nps.gov/cahatos


CAUTION

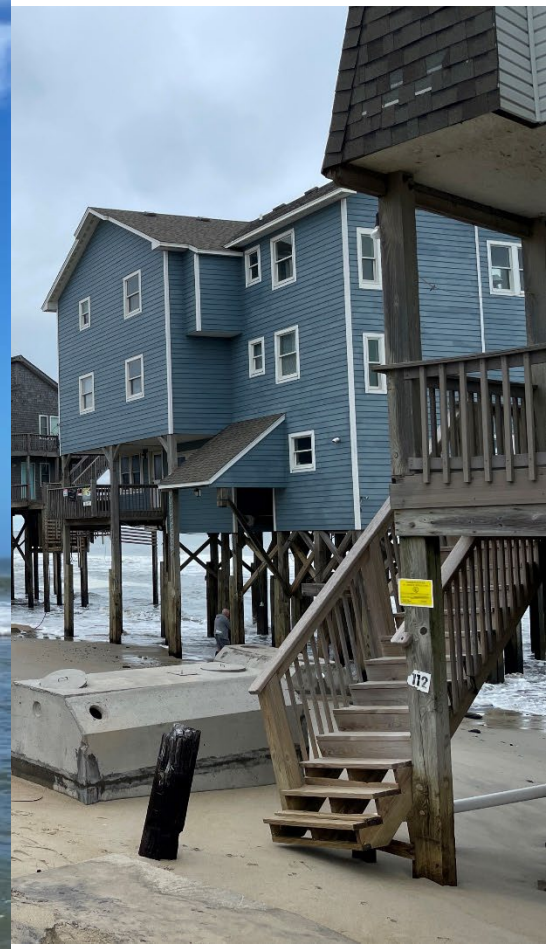


August 27, 2025

(Post-Erin)







h.

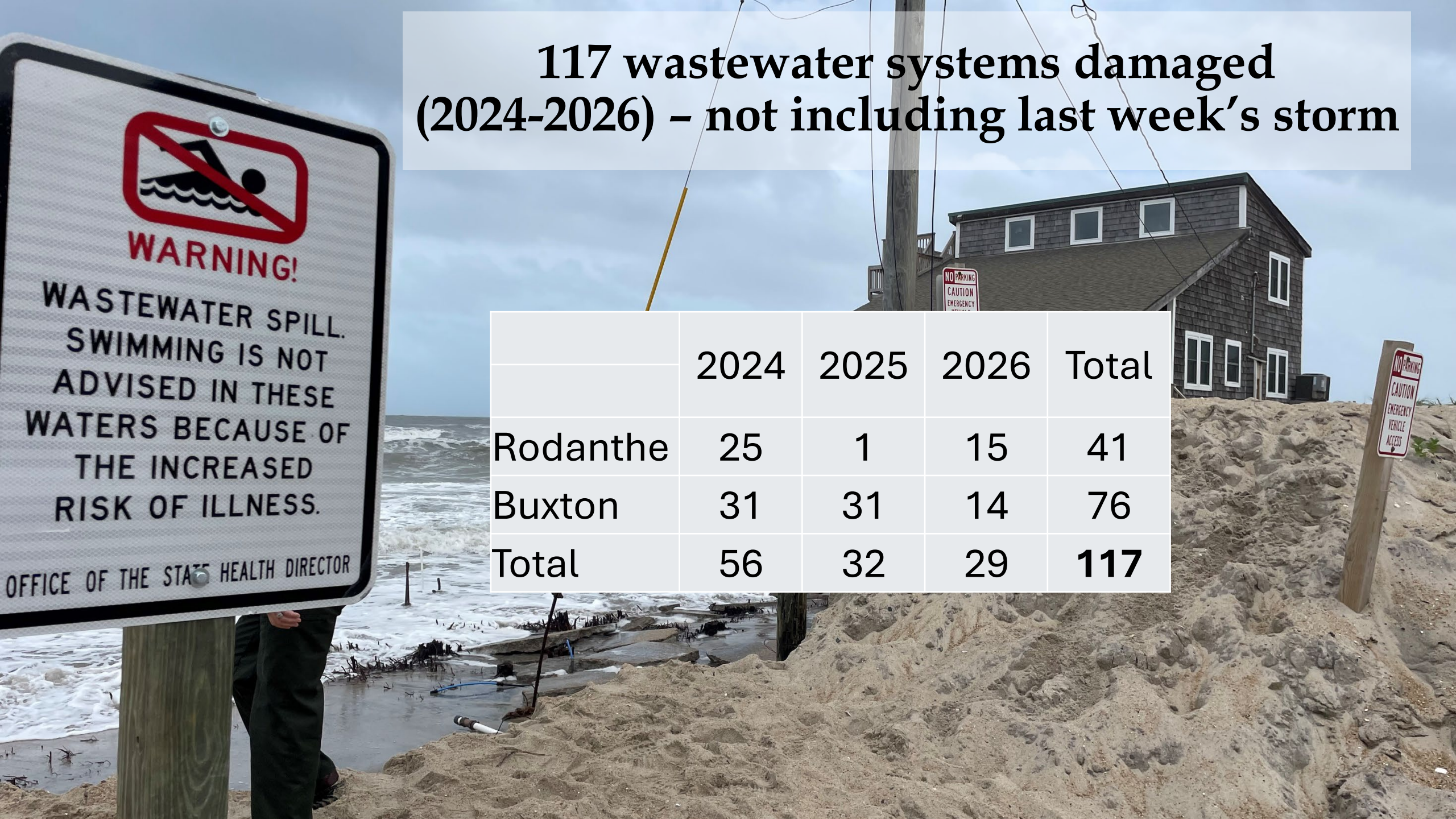








117 wastewater systems damaged (2024-2026) – not including last week's storm



	2024	2025	2026	Total
Rodanthe	25	1	15	41
Buxton	31	31	14	76
Total	56	32	29	**117**


Beach
Nourishment


Relocate/Remove
Houses


Ocracoke Island Welcome Sign
12
1993 IMAGE











- Change is rapid
- Change will continue
- Change is needed

Photo credit: Daniel Pullen – Daniel Pullen Photography