

Salt Marsh Losses in Mt. Sinai Harbor

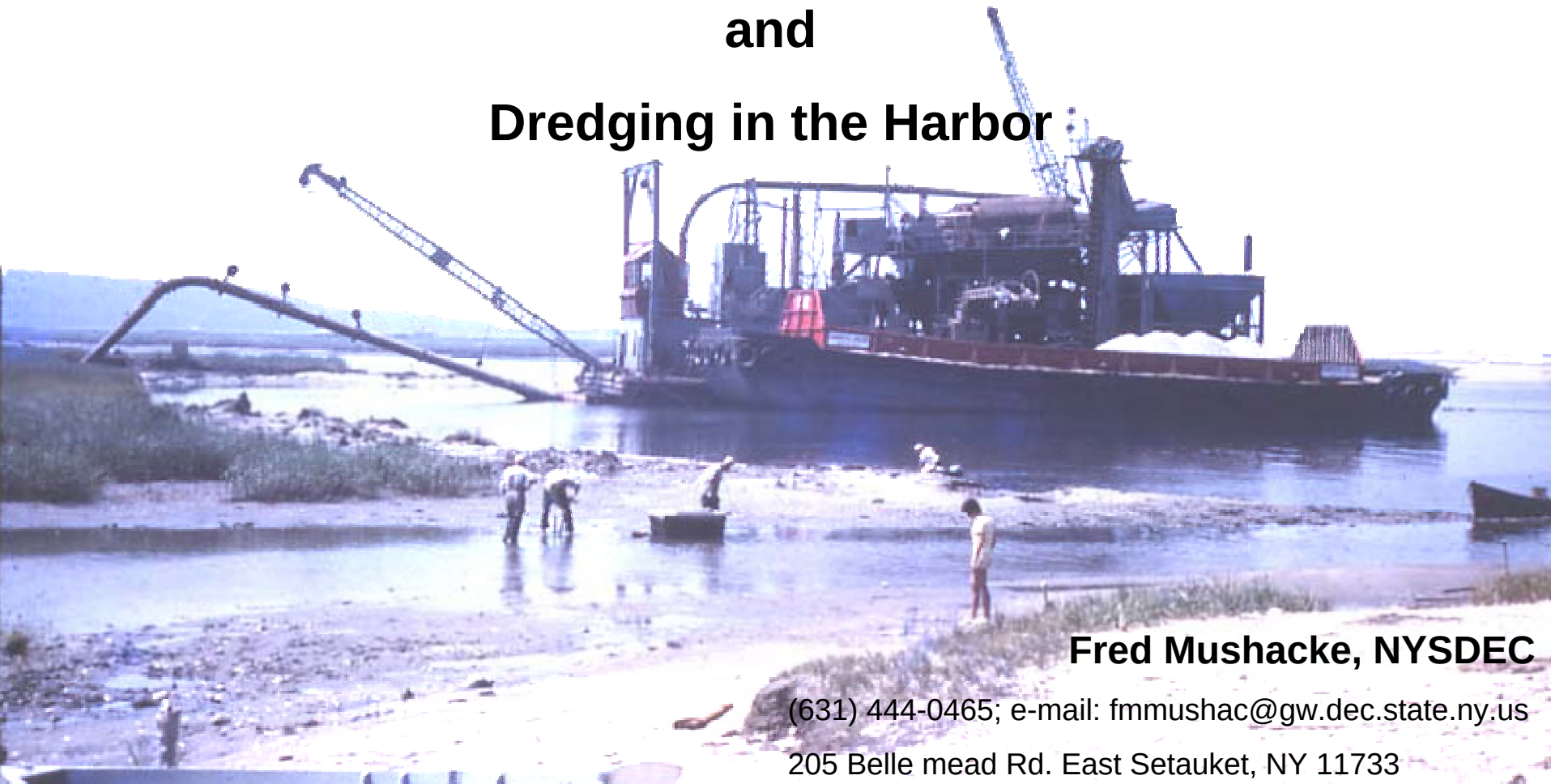
And their

Potential Correlation

To Historic Borrow Pits

and

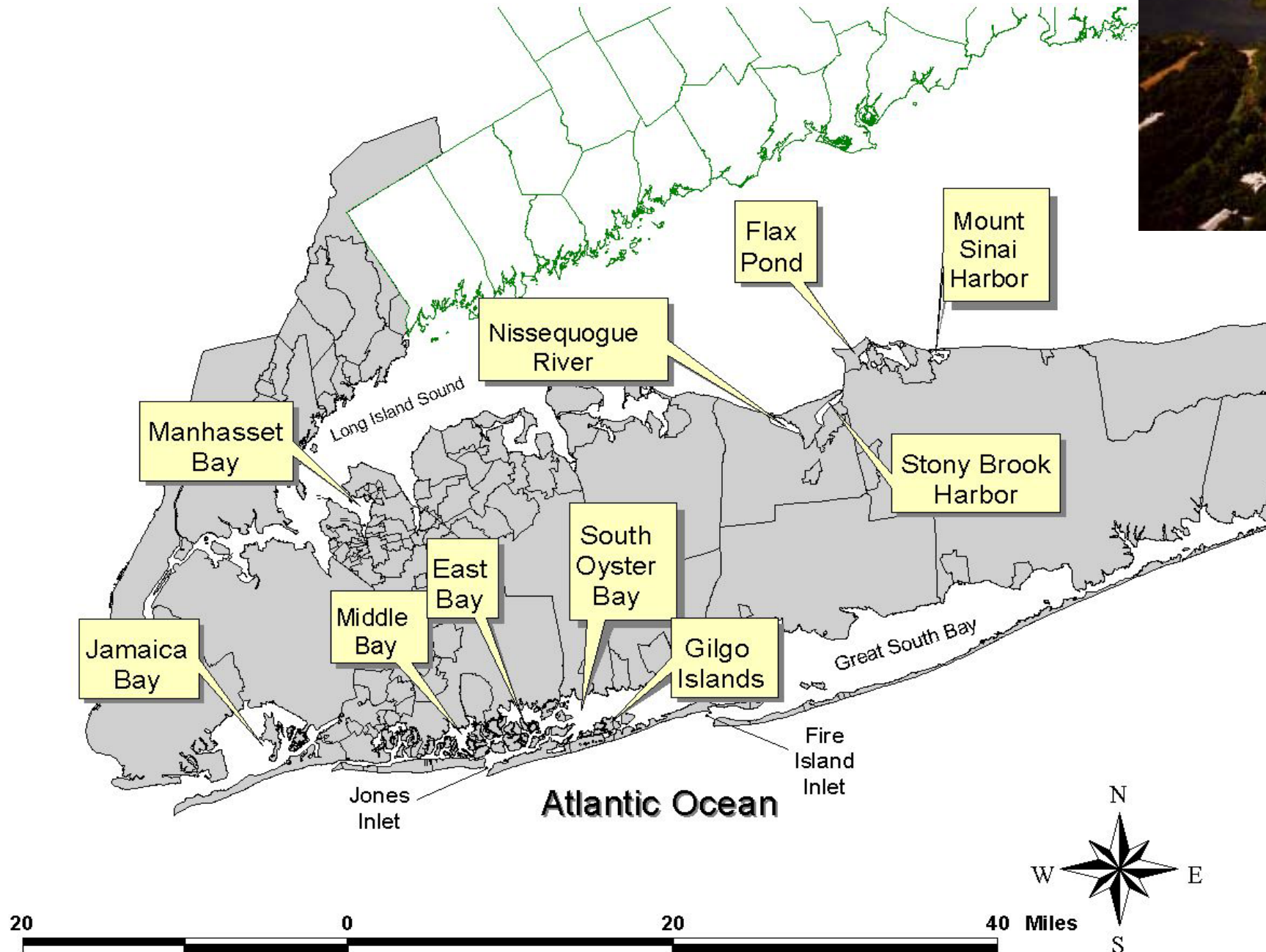
Dredging in the Harbor



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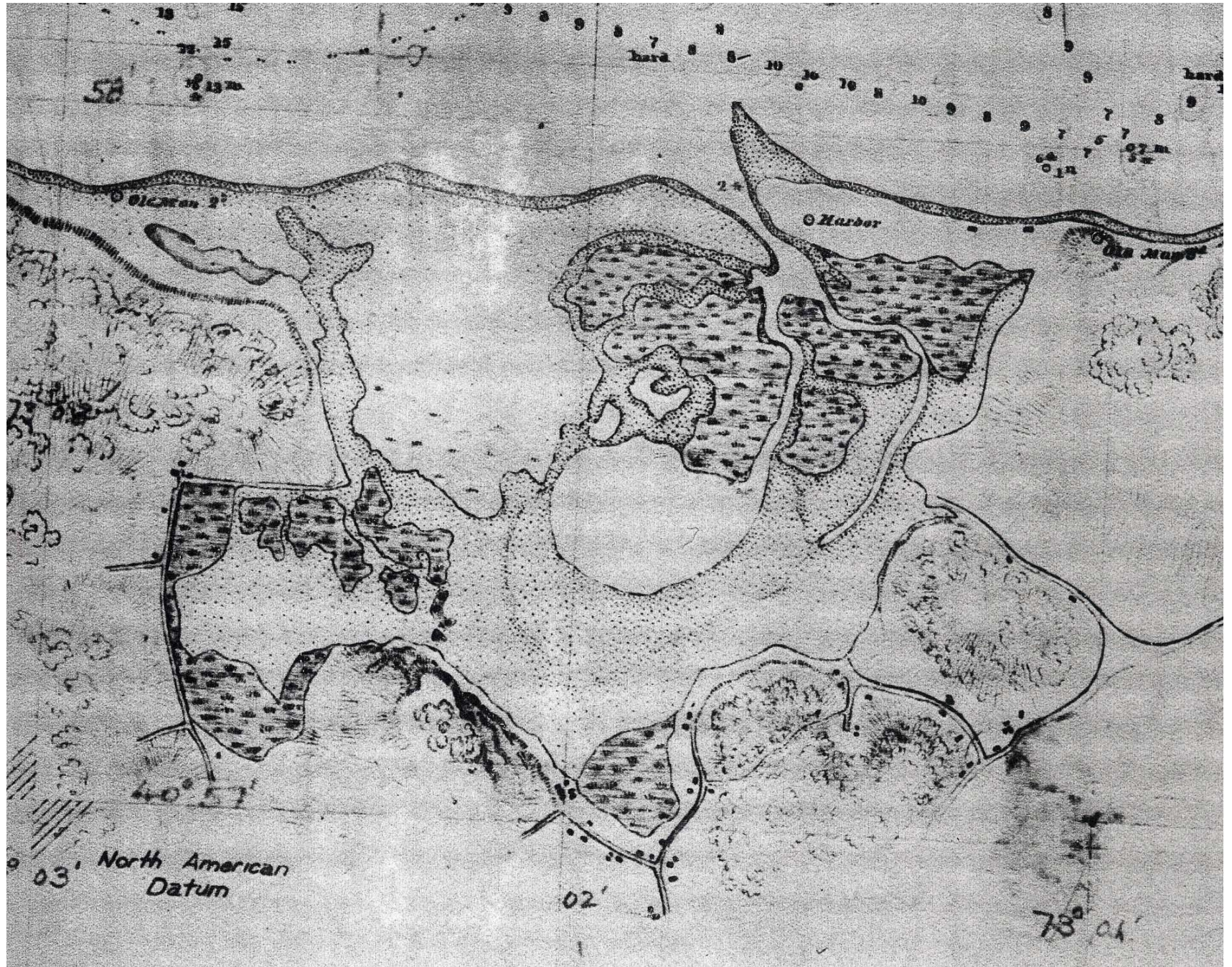


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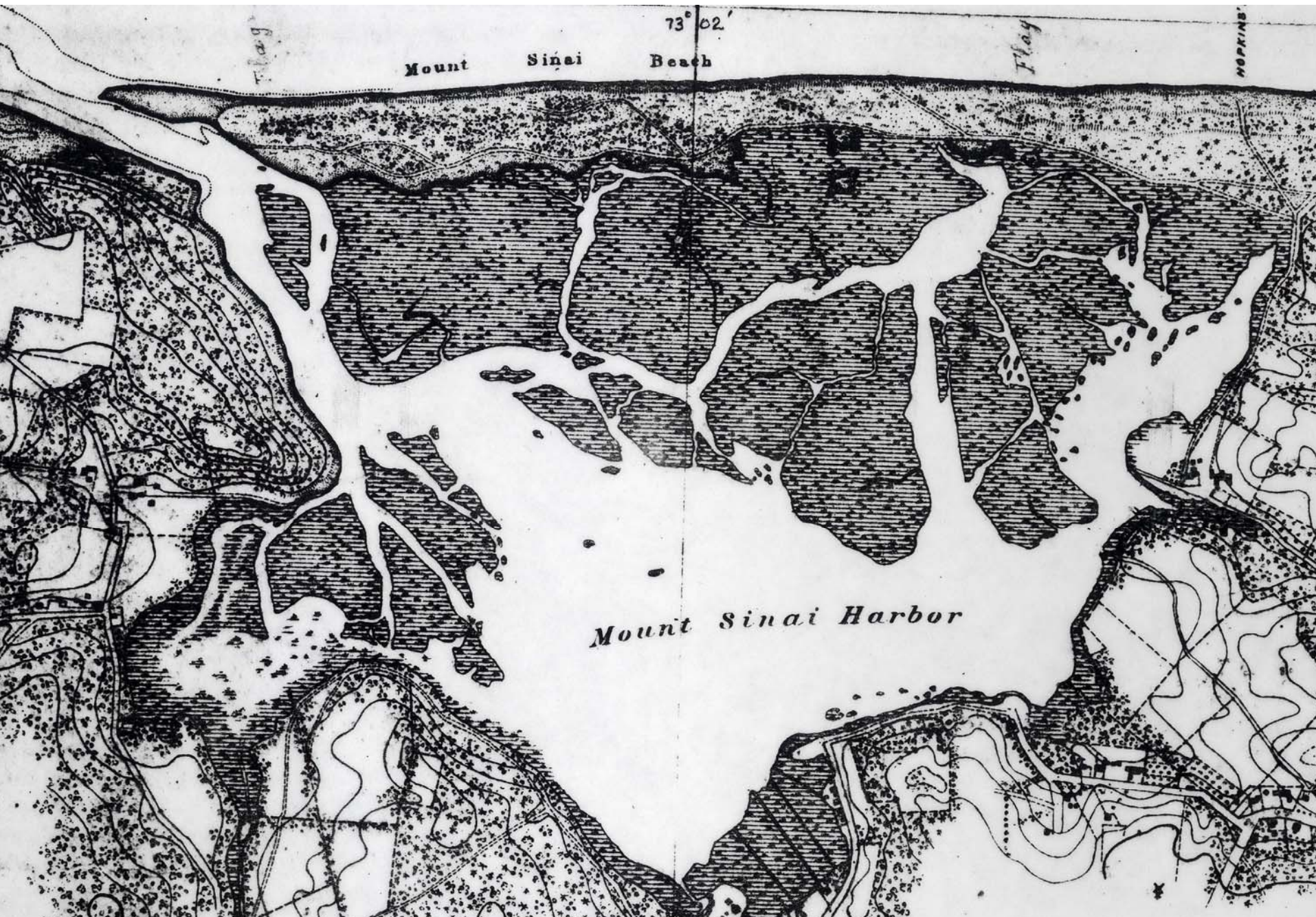


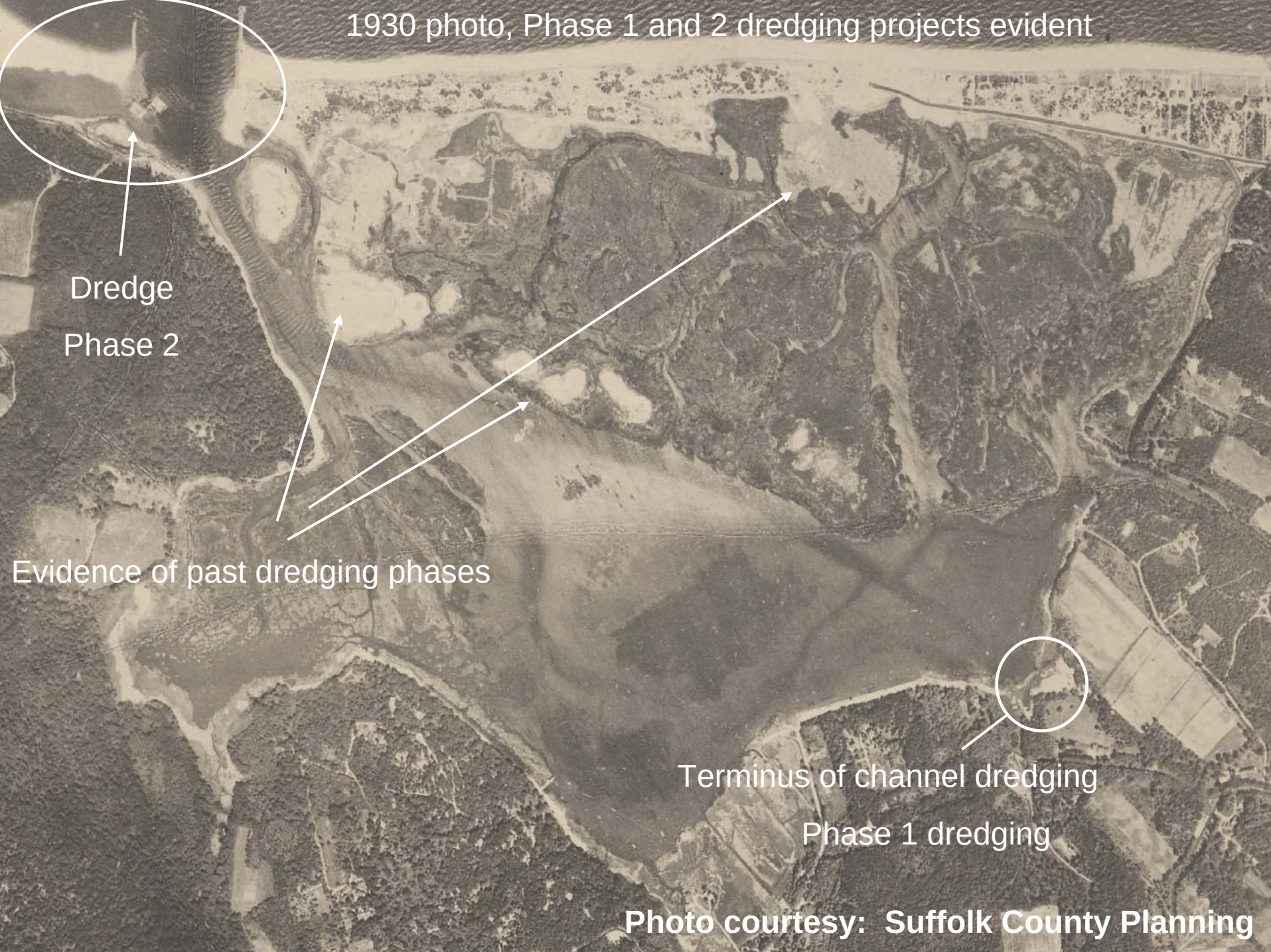
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Circa 1885





1930 photo, Phase 1 and 2 dredging projects evident

Dredge
Phase 2

Evidence of past dredging phases

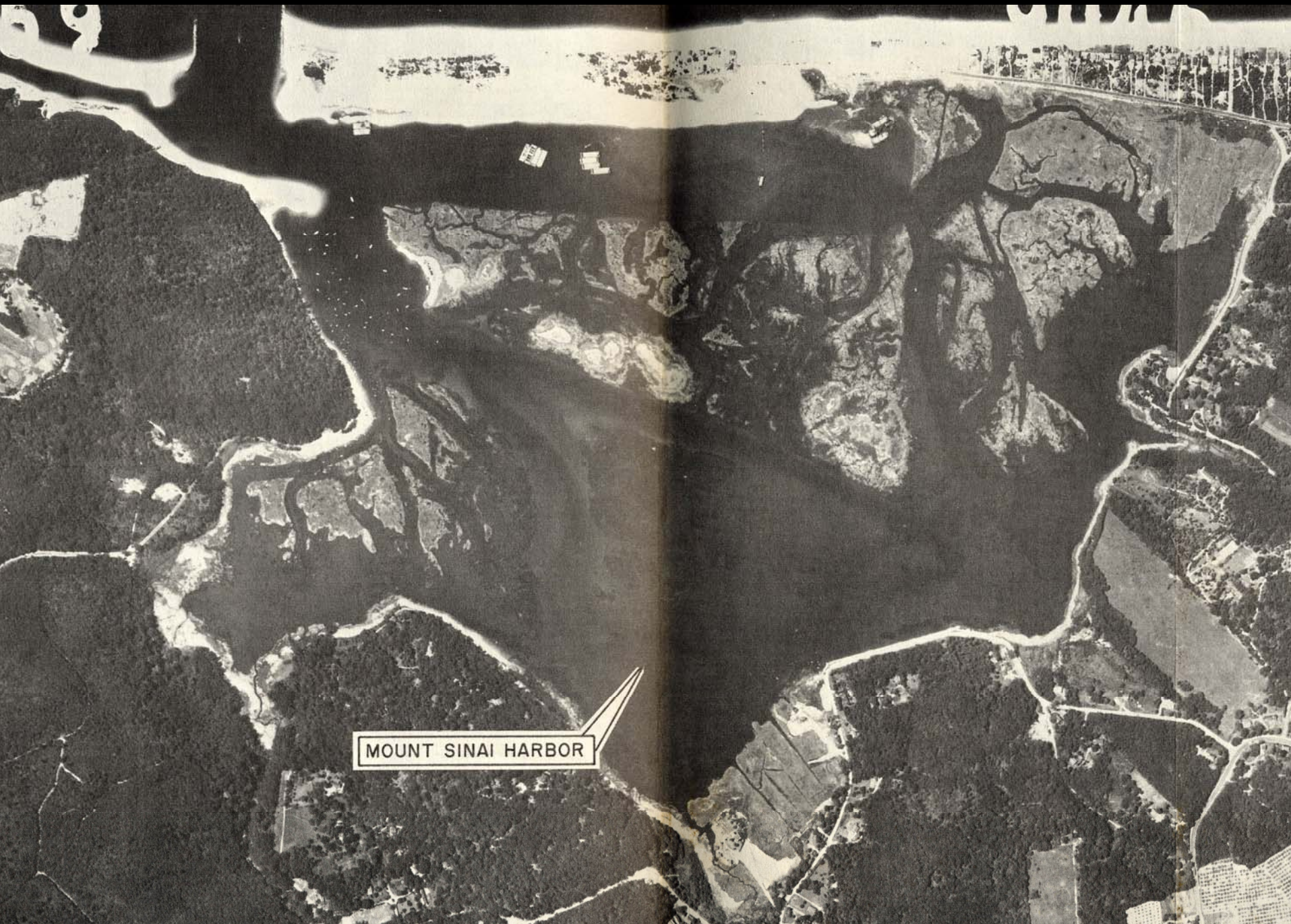
Terminus of channel dredging
Phase 1 dredging

Photo courtesy: Suffolk County Planning

1954 photo showing dredged inlet and re-adjustment as well as flood tide delta dredged



June 8, 1959



MOUNT SINAI HARBOR

March 23, 1962



MOUNT SINAI HARBOR

April 21, 1966



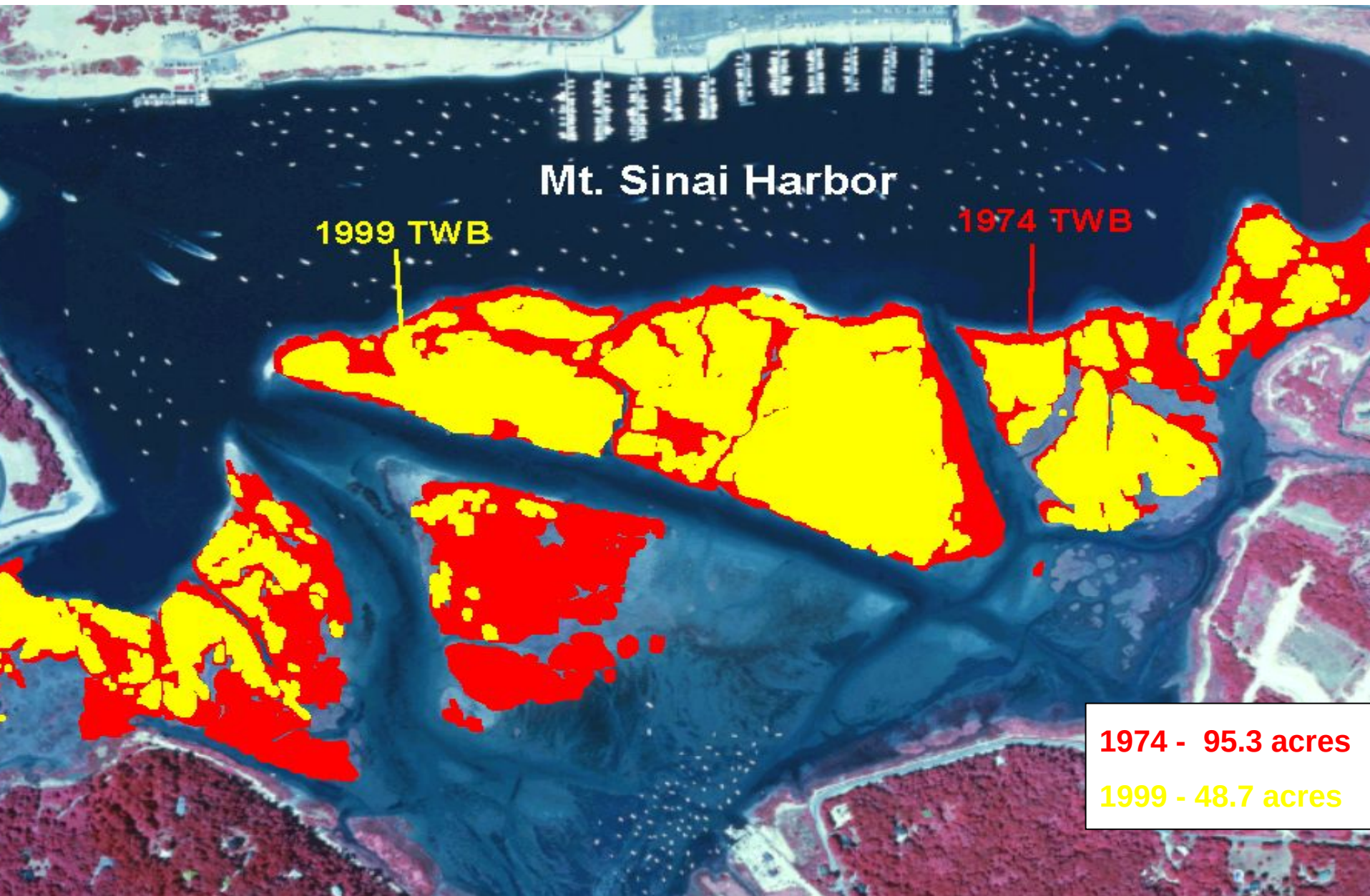
MOUNT SINAI HARBOR

1974 NYS Tidal Wetlands Inventory Infrared image



1974 - 1999 MT. Sinai Harbor Digital (GIS) Comparison

46.67 acres loss = 48.96% loss / 25 years = 1.86 acres/yr



Direct and Indirect effects of the dredging

Dredging and filing of the marsh > 1000 linear ft of marsh; 120 acres

Harbor depths of 20-40 feet; 5 million cubic yards

Suspension of silts and organic materials, increased turbidity

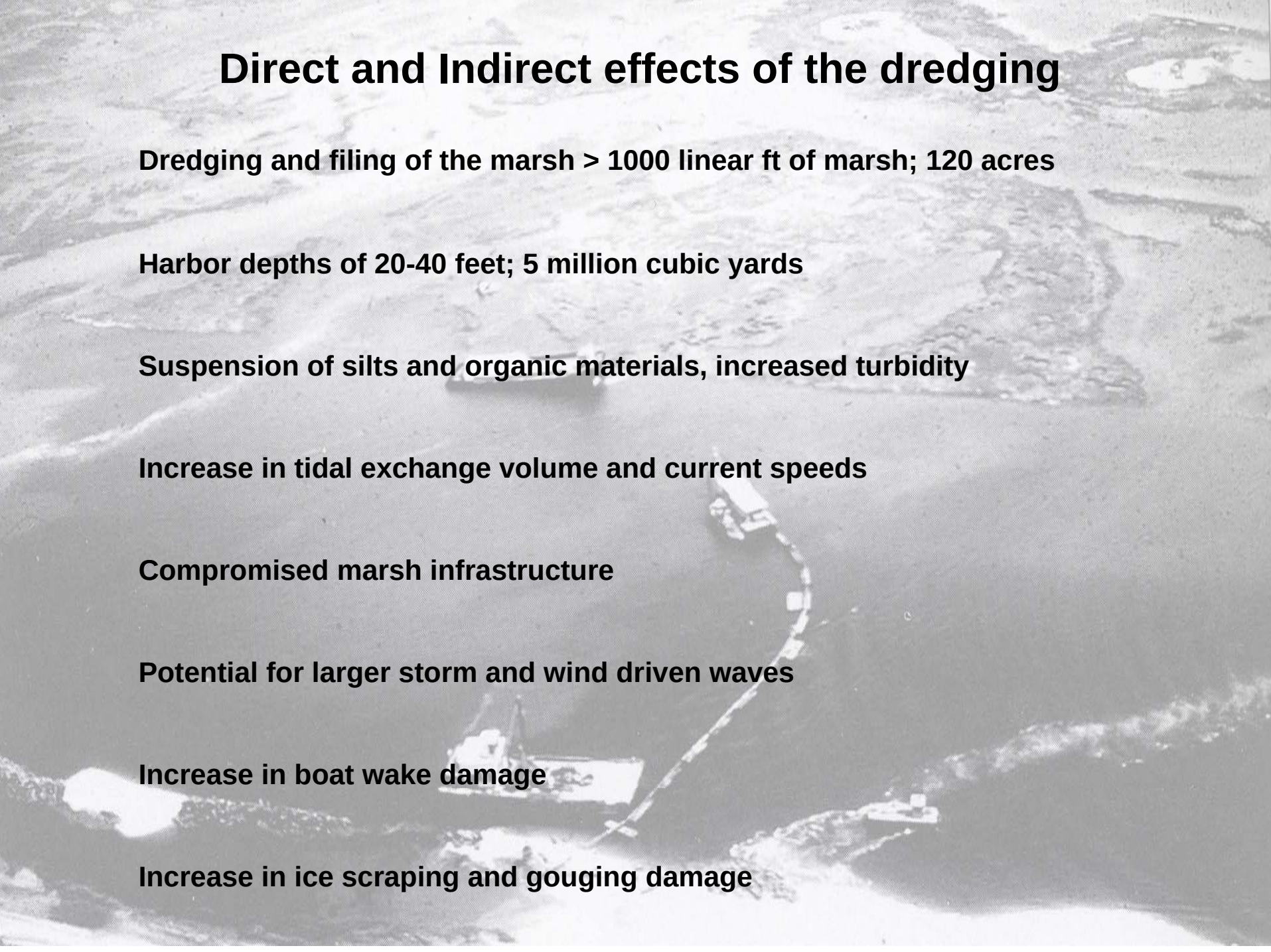
Increase in tidal exchange volume and current speeds

Compromised marsh infrastructure

Potential for larger storm and wind driven waves

Increase in boat wake damage

Increase in ice scraping and gouging damage



Strategies

Need to take an ecosystem-based management approach, considering the following issues/ variables:

Watershed development past and present

Historic impacts

Current conditions

Trends, floral and faunal species diversity, species profiles, invasives

Develop detailed hydrodynamic model of the harbor

Come to mutually agreed upon histo-ecological condition of restoration.



Photo: Courtesy of Tony Taormina

Acknowledgements

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