PAUL S. SARBANES ECOSYSTEM RESTORATION PROJECT AT POPLAR ISLAND:

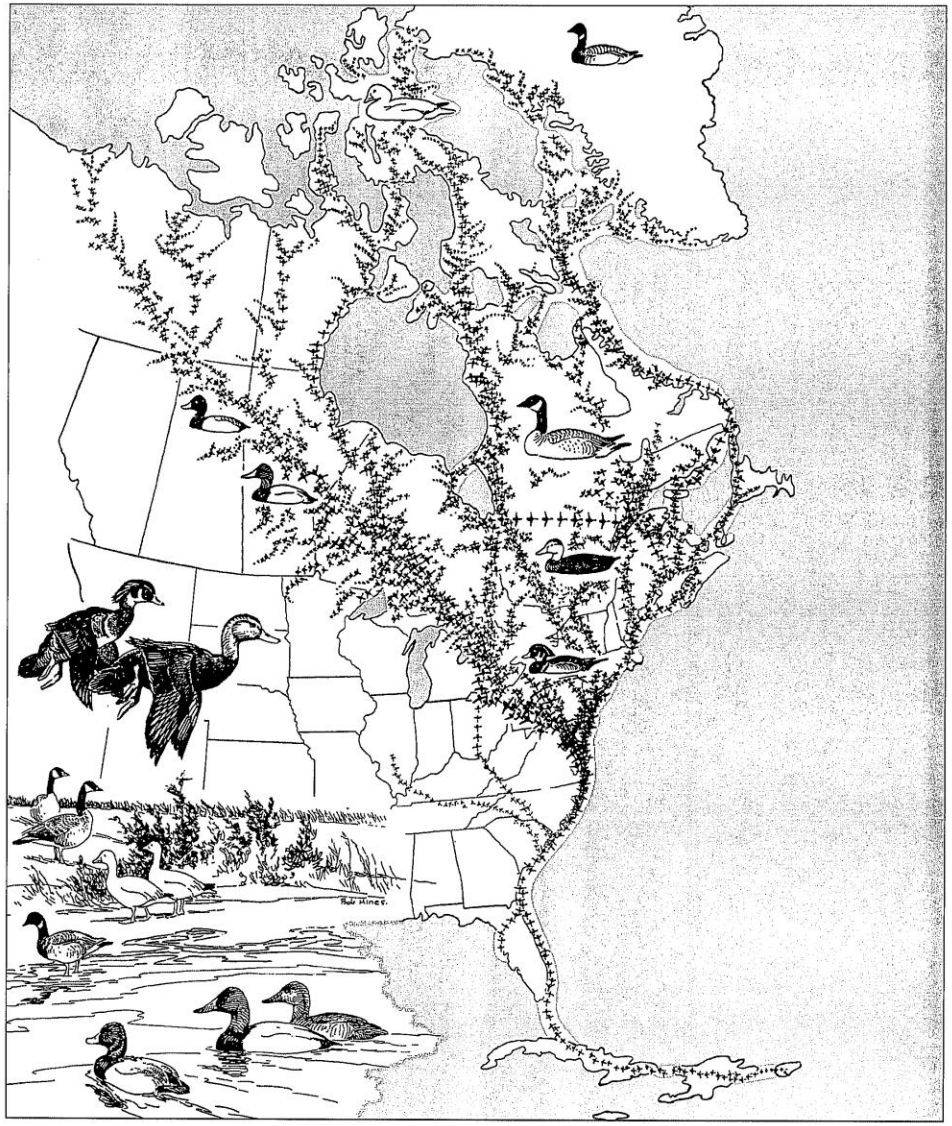
Kevin Brennan
U.S. Army Corps of Engineers, Baltimore District

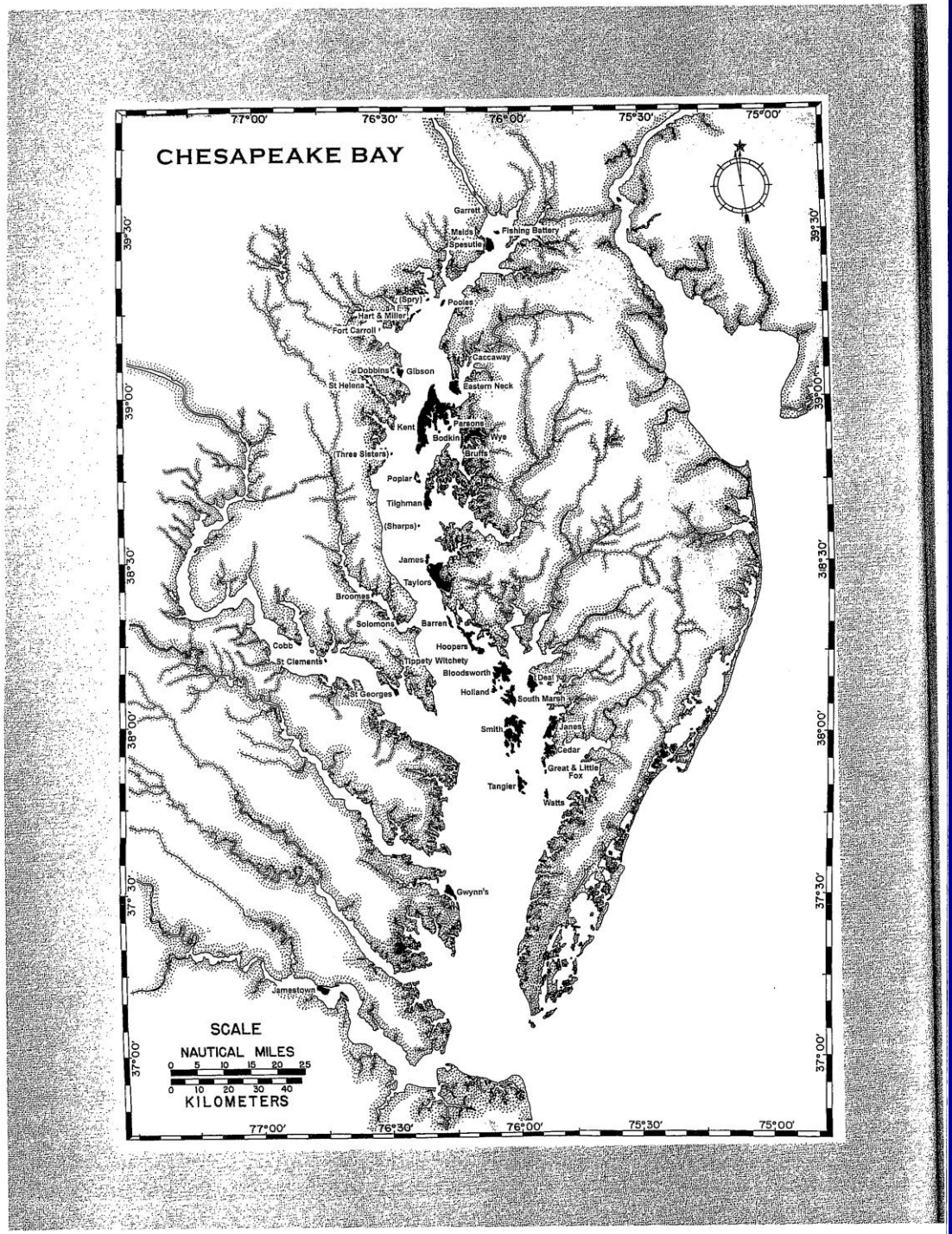
Project Delivery Team

- Maryland Port Administration (MPA)
- US Environmental Protection Agency (USEPA), Region 3
- US Fish and Wildlife Service (USFWS)
- National Marine Fisheries Service (NMFS)
- National Oceanic and Atmospheric Administration (NOAA)
- Maryland Department of Natural Resources (MDNR)
- Maryland Department of the Environment (MDE)
- Maryland Geological Survey (MGS)
- Maryland Environmental Service (MES)
- University of Maryland Center for Environmental Science (UMCES)

U.S. Fish & Wildlife Service

Atlantic Flyway




CHESAPEAKE BAY
77°00'
76°30'
76°00'
75°30'
75°00'
39°30'
39°00'
38°30'
38°00'
37°30'
37°00'
Garrett
Maids
Spesutie
Fishing Battery
Pooles
(Spry)
Hart & Miller
Fort Carroll
Dobbins
Gibson
St Helena
Causeway
Eastern Neck
Kent
Parsons
Bodkin
Wye
Bruffs
(Three Sisters)
Poplar
Tilghman
(Sharps)
James
Taylors
Broomes
Solomons
Barren
Hoopers
Cobb
St Clements
Tipsity Witchety
Bloodsworth
Deal
Holland
South Marsh
St Georges
Smith
James
Cedar
Great & Little Fox
Tangier
Watts
Gwynn's
Jamestown
SCALE
NAUTICAL MILES
0 5 10 15 20 25
0 10 20 30 40
KILOMETERS

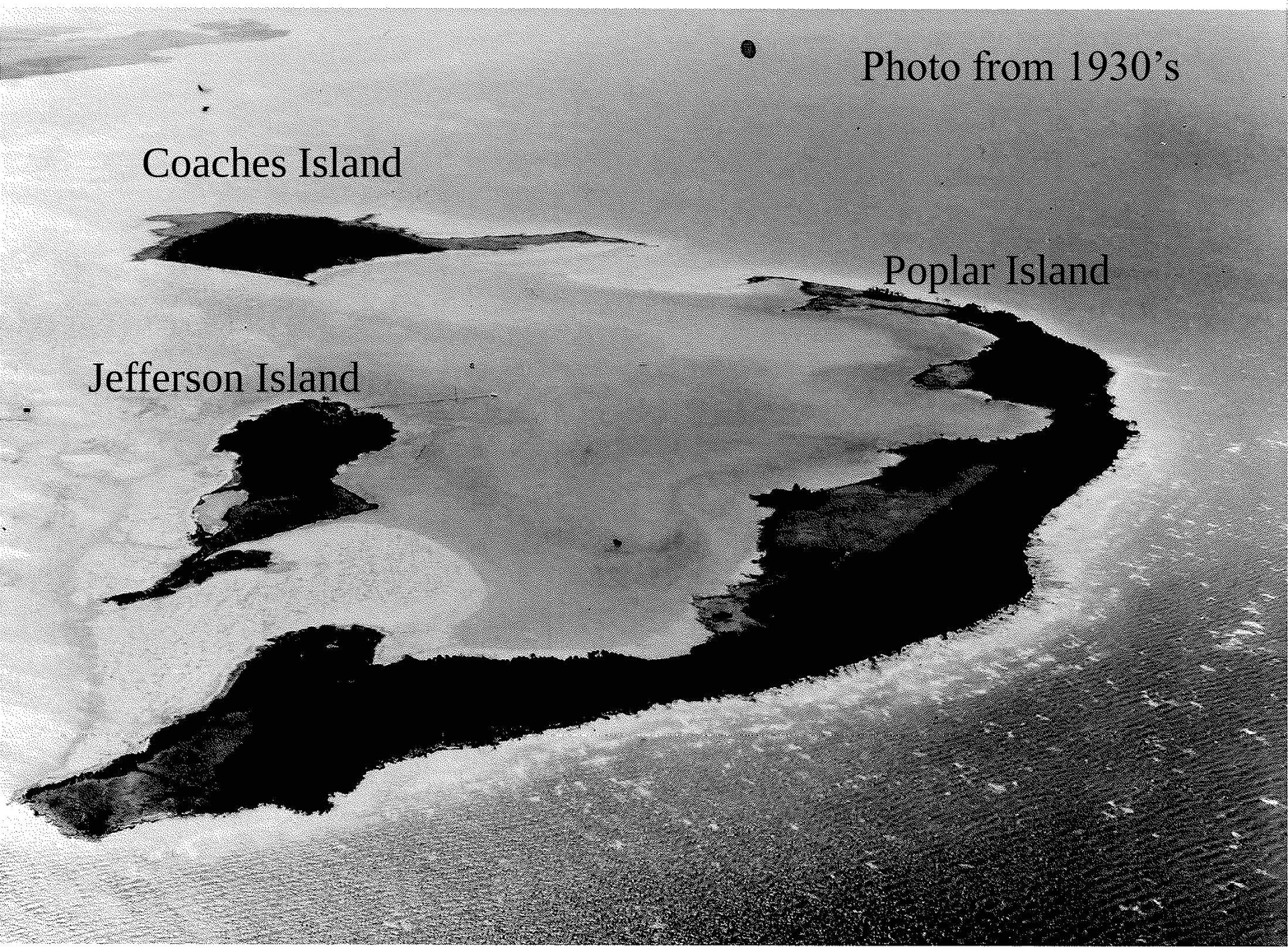
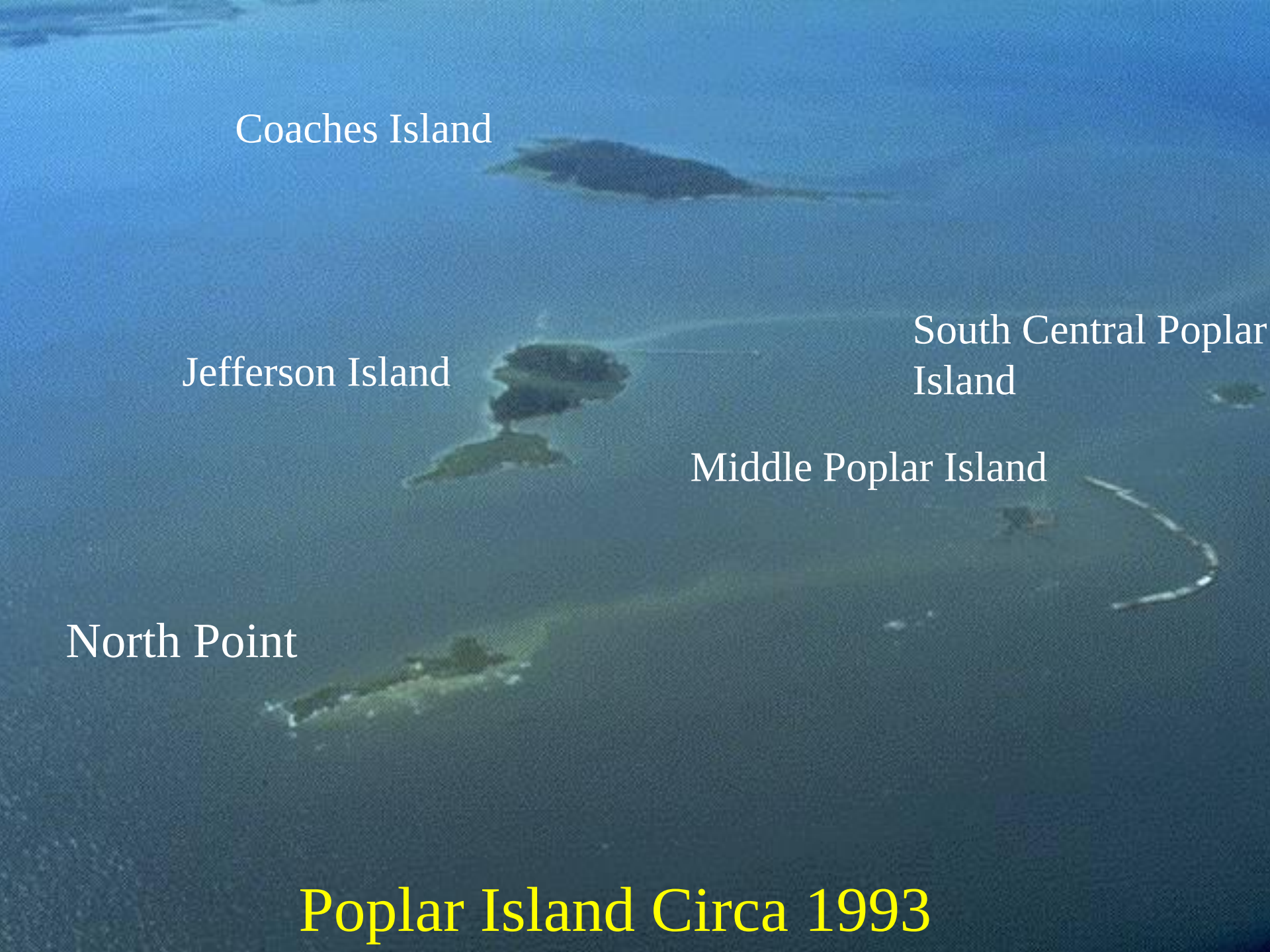


Photo from 1930's
Coaches Island
Poplar Island
Jefferson Island

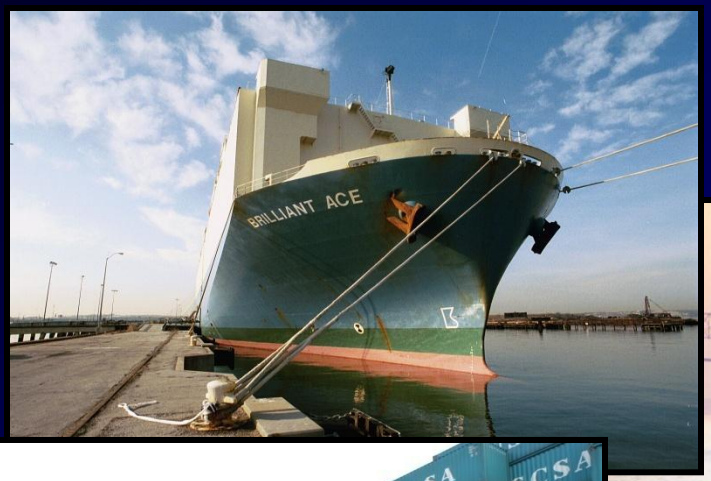


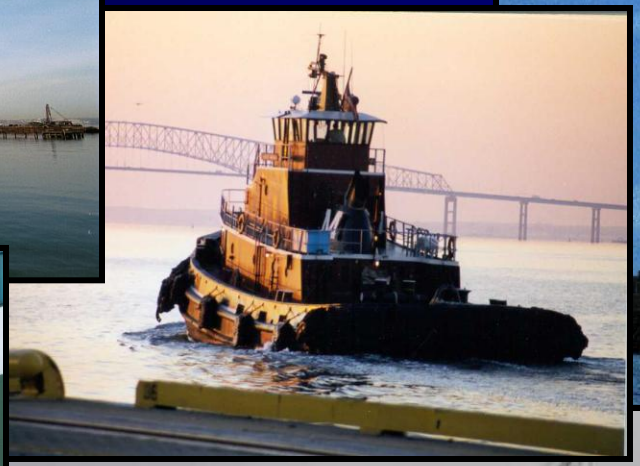
Poplar Island Circa 1993

Paul S. Sarbanes Ecosystem Restoration Project at Poplar Island

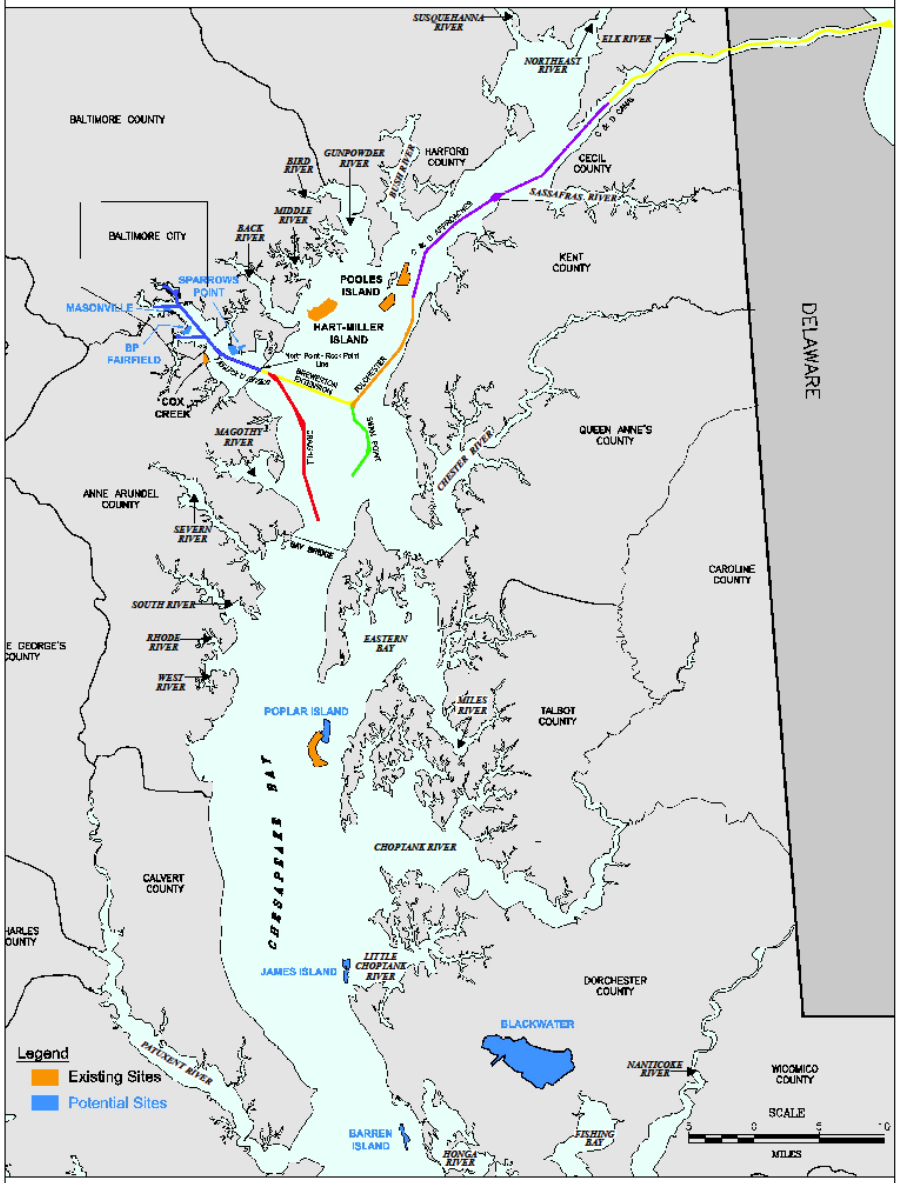
- Size: 1,715 acres
- Capacity: 68 million cubic yards
- Cost: $667 million
- Uplands: 840 acres
- Tidal marsh: 737 acres
- Open-water Embayment: 138 acres
- 80% low marsh
  20% high marsh
- Open Water Embayment: 138 acres

Dredging is a Critical Component of a Safe, Efficient, and Competitive Port

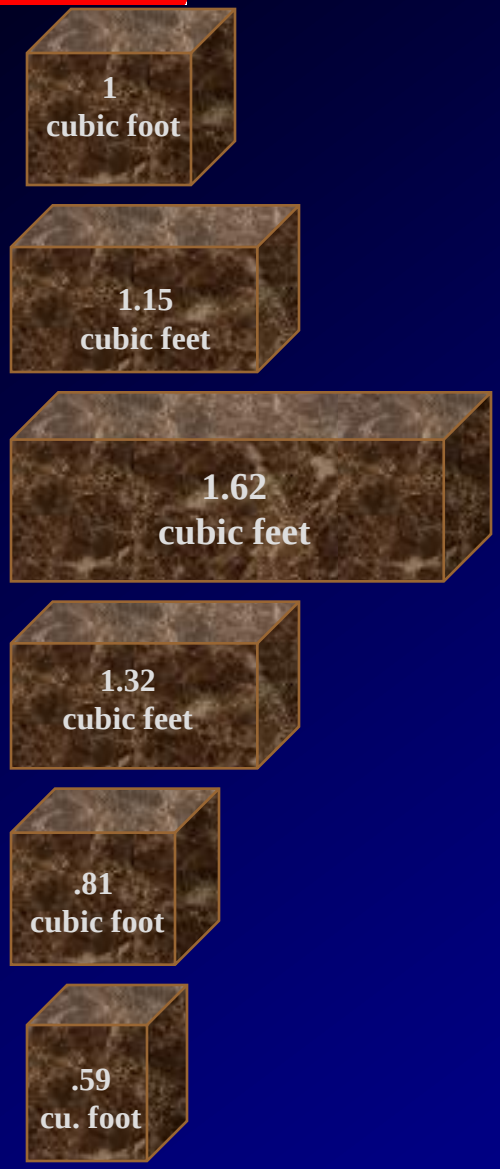




Baltimore Harbor and Channels



Importance of Proper Dewatering



Volume In-Situ Before Dredging
(85% Water)

Volume After Dredging (Clamshell)
(87% Water)

Volume At Deposition in Placement Site
(91% Water)

Volume In Site 2 Months After Placement
(Decanting, Drying, Consolidation)
(89% Water)

Volume After 12 Months in Site
(Exceeds Length of Typical Drying Season)
(82% Water)

Volume After 2 to 3 Years and
1 to 2 Additional Placement Lifts
(75% Water)


CAT
CATERPILLAR

Wetland Cell Development Timeline

Dredge material inflow (years 1-4)

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Crust management (years 1-4)

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Channel excavation (years 4-5)

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Marsh plain grading (year 5)

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Tidal inlet construction (year 5)

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Planting (year 6)


Least Tern

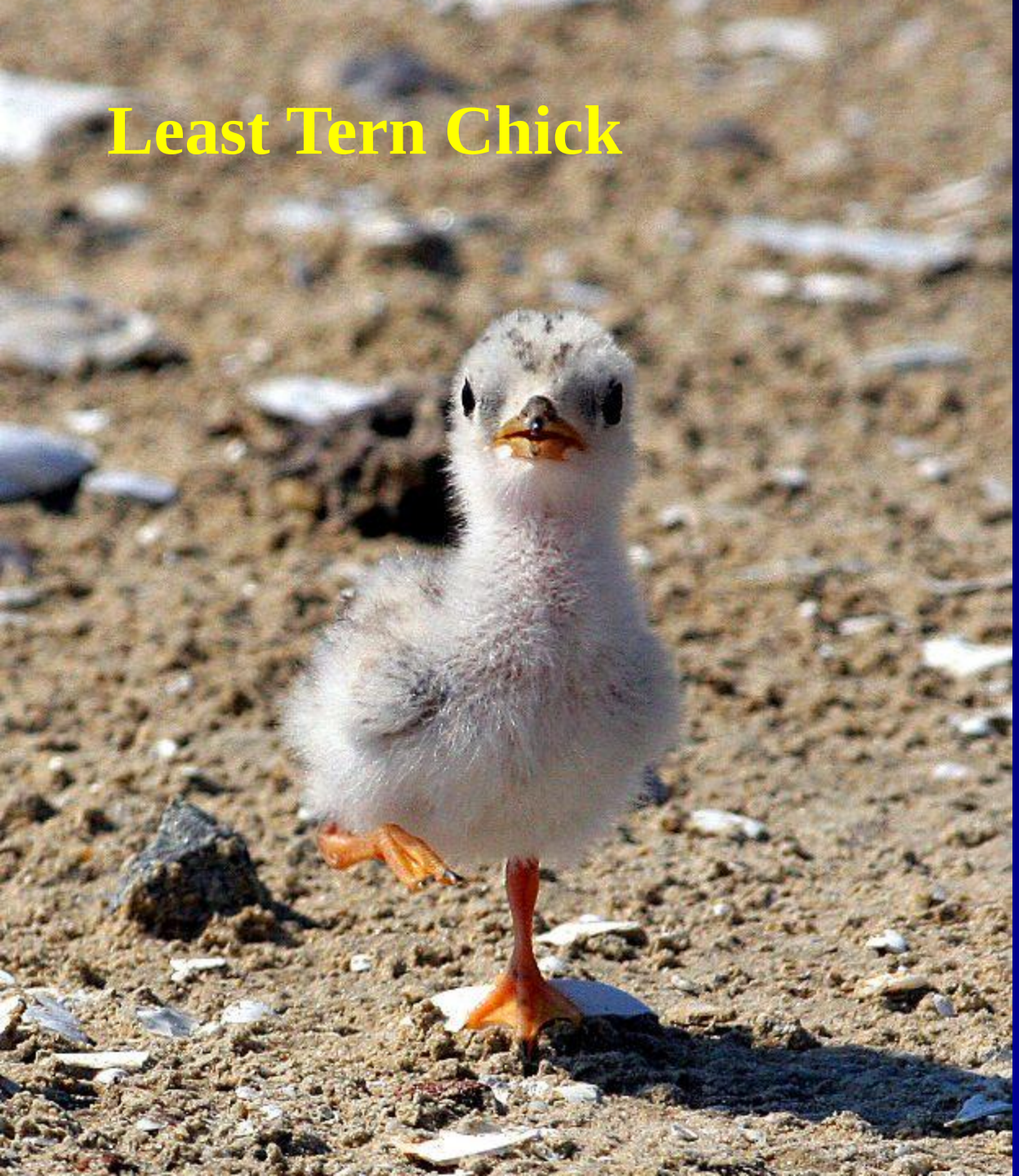
American Oyster Catcher

rred Owl

Black Skimmer

American Avocets


658 Hatchlings in 2010



Questions?