South Coast Habitat Restoration Project: Measuring Restoration on a Large Scale

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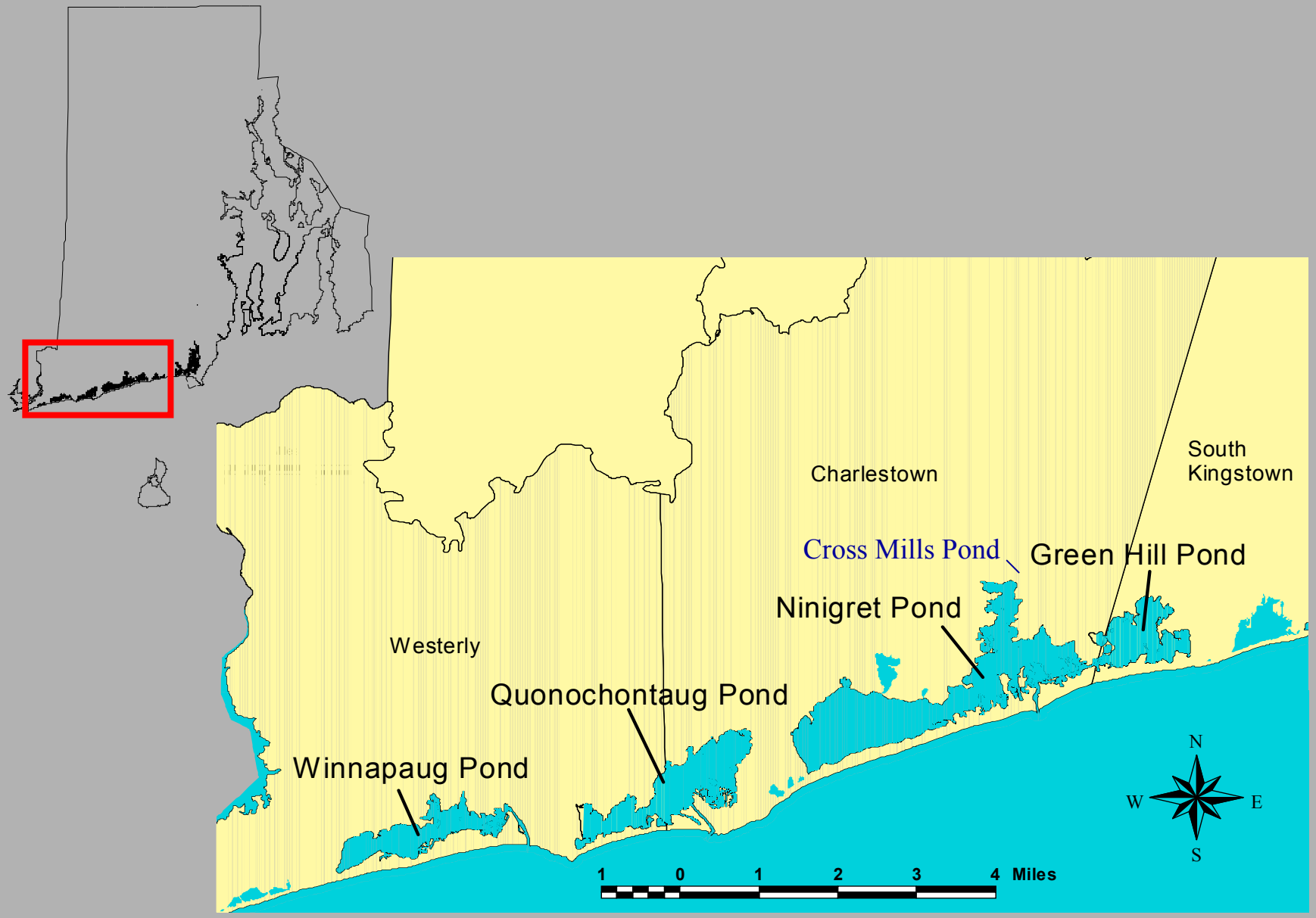
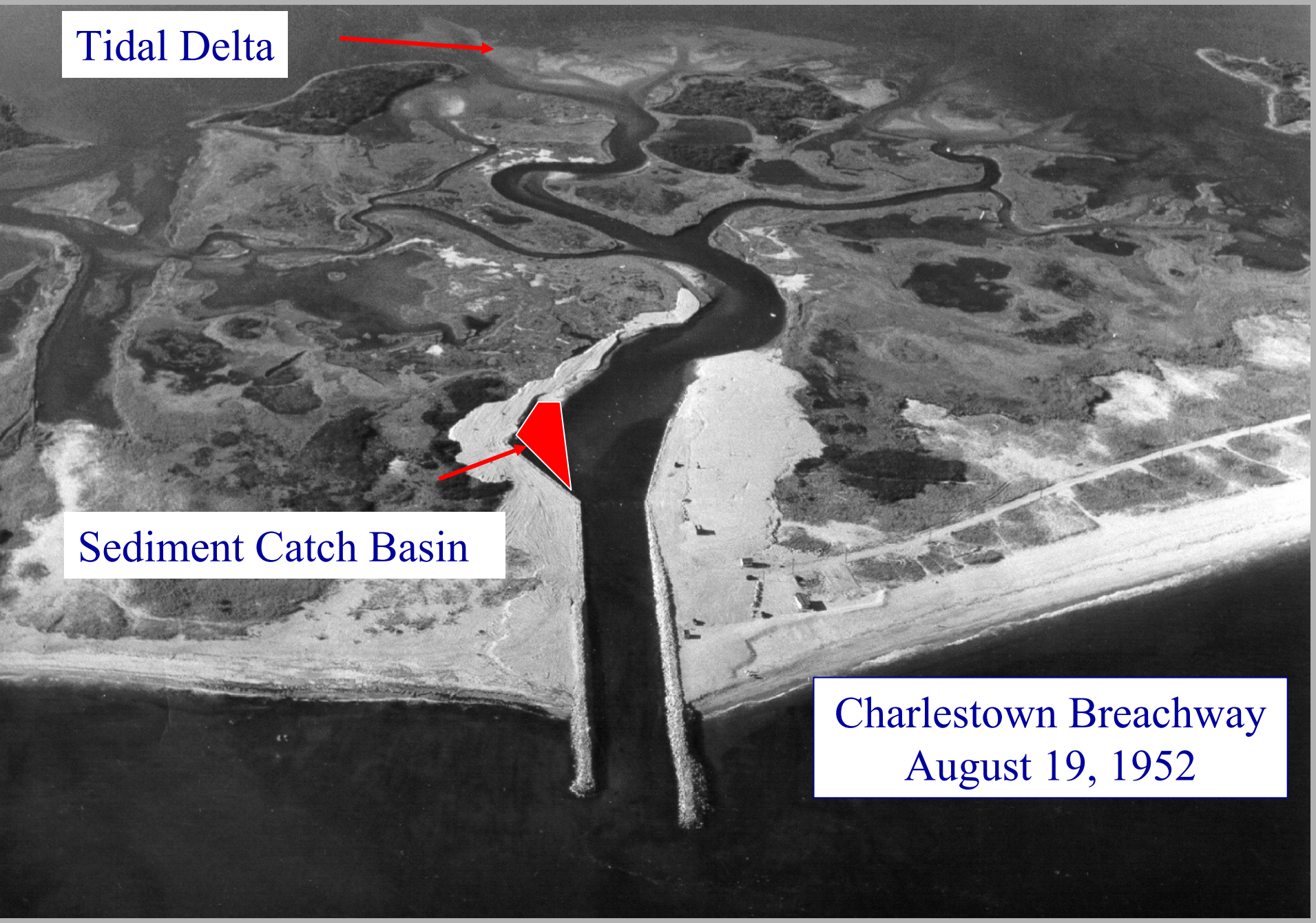
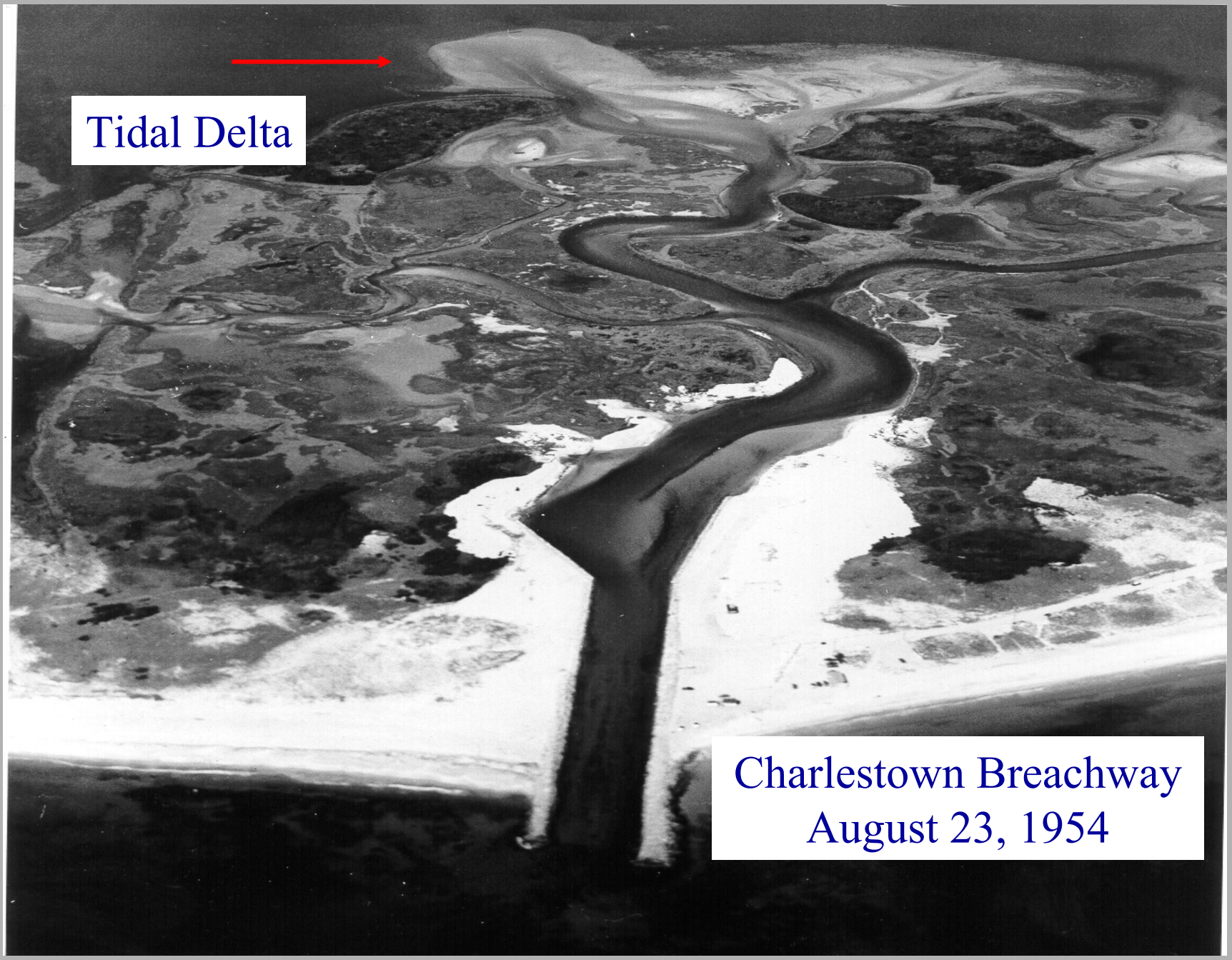
CRMC

Coastal Resources Management Council


Charlestown
South Kingstown
Cross Mills Pond
Green Hill Pond
Ninigret Pond
Westerly
Quonochontaug Pond
Winnapaug Pond
N
W
E
S
1 0 1 2 3 4 Miles

Charlestown Breachway
September 25, 1950


Tidal Delta
Sediment Catch Basin
Charlestown Breachway
August 19, 1952


Tidal Delta
Charlestown Breachway
August 23, 1954

Tidal
Delta
Charlestown Breachway
July 1999

75-80
80-85
72-75
75-80
63-72
75-80
63-72
1939
51-63
51-63
80-85
63-72
39-51
1939
80-85
85-92
0
1000
3000ft
0
500
1000m

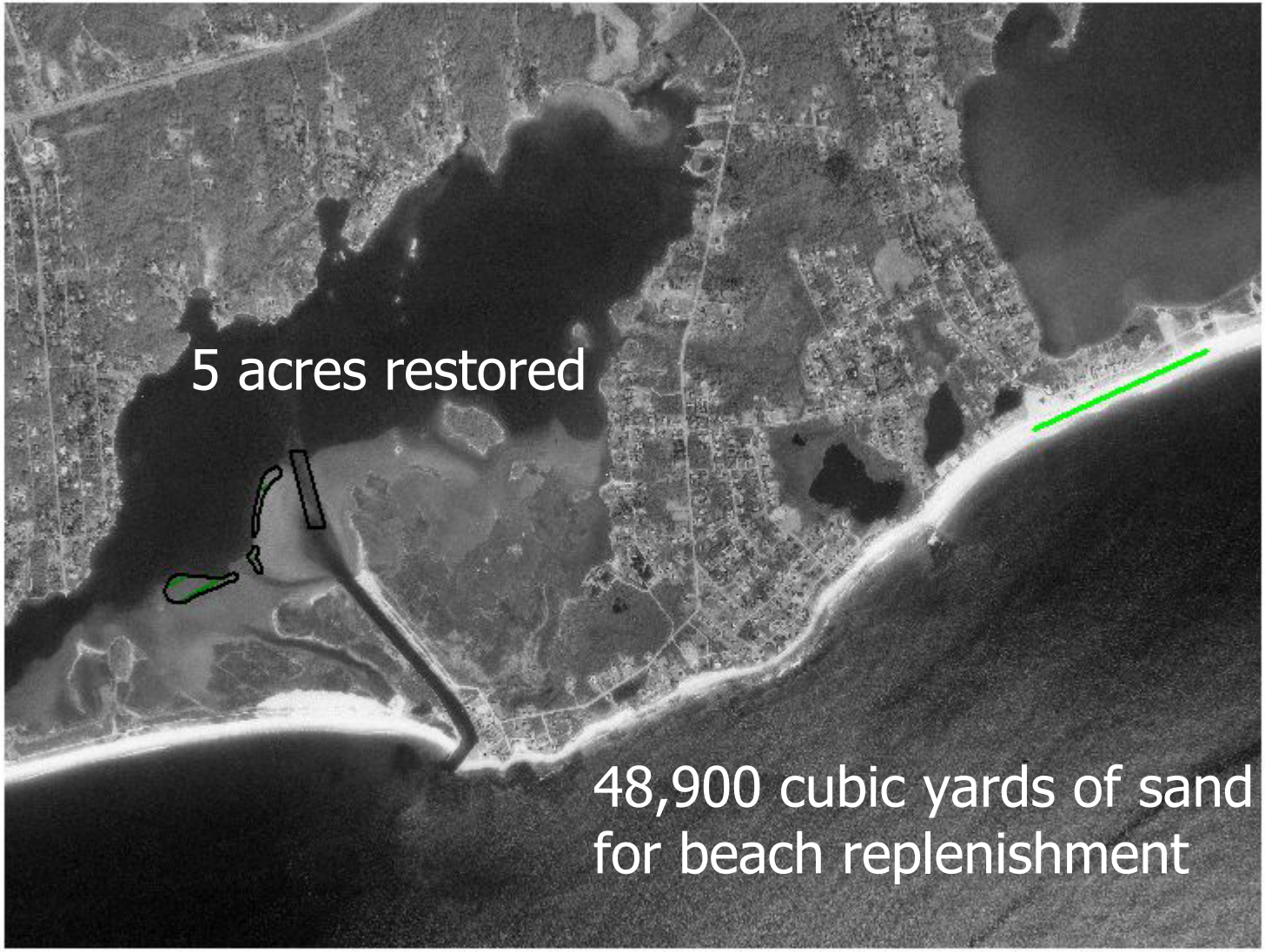
South Shore Habitat Restoration

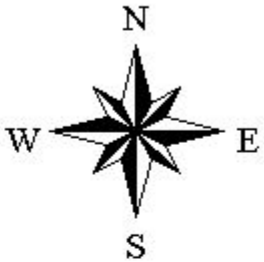
- Dredge areas of three coastal pond tidal deltas and restore eelgrass habitats which existed prior to establishment of manmade breachways.
- Restore anadromous fish passage ways to Cross Mills Pond which existed prior to manmade obstructions.
- Apply a systems approach to sediment management

40 acres restored
eelgrass habitat
156,700 cubic yards of sand
for beach replenishment
0
1000
3000ft

Eelgrass Restoration Sites
Sedimentation Basin
Potential Disposal Areas
Potential Dewatering Sites

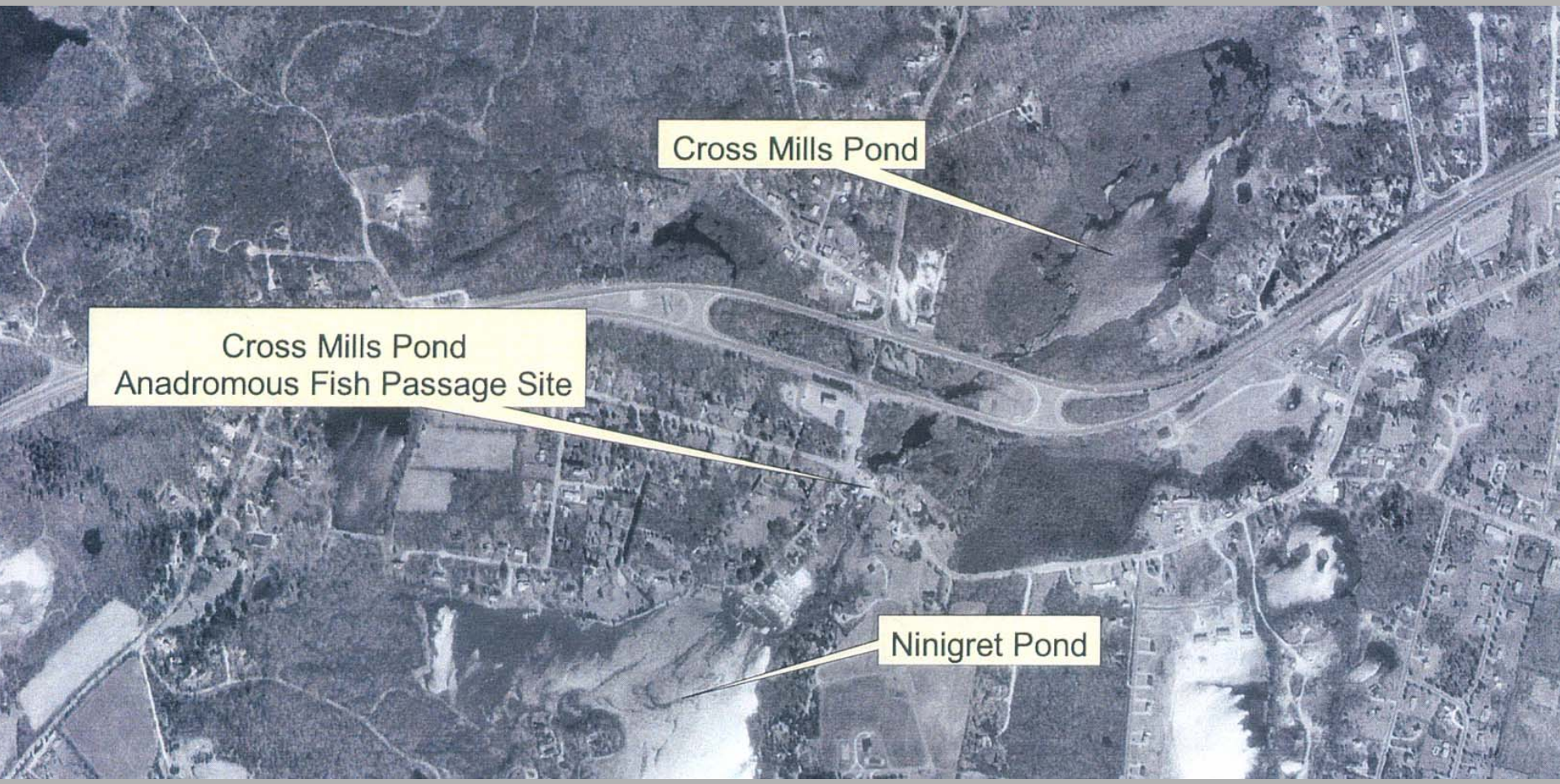
Rhode Island South Coast
Feasibility Study
Winnapaug Pond





Eelgrass Restoration Sites
Sedimentation Basin
Potential Disposal Areas
Potential Dewatering Sites

Rhode Island South Coas
Feasibility Study
Quonochontaug Pond



20 acres restored
spawning habitat

Four Phases

- Reconnaissance Study
  - Completed June 1998
- Final Feasibility Study and Environmental Assessment
  - Completed June 2002

Four Phases (cont.)

- Construction
  - Ninigret Pond eelgrass restoration
    - Plans and Specifications completed 2004
    - Dredging - fall 2004/spring 2005
    - Eelgrass seeding and transplants – summer 2005
    - Monitoring until summer 2007
  - Cross Mills Pond anadronomous fish passage
    - Plans and Specifications completed 2004
    - Construction fall 2004

Eelgrass seeds

Photo credit Thomas Freeman
SAVE THE BAY

Four Phases (cont.)

- Construction
  - Winnapaug Pond
    - Construction completed in summer 2006
    - Monitoring completed in summer 2008
  - Quonochontaug Pond
    - Construction completed in summer 2007
    - Monitoring completed in summer 2009

Beach Replenishment

- Total amount of sediment removed from the flood tidal delta:
  - Ninigret Pond – 156,700 cubic yards
  - Quonochontaug Pond – 48,900 cubic yards
  - Winnapaug Pond – 75,100 cubic yards

Four Phases (cont.)

- Operation and Maintenance
  - Sedimentation basins expected to need dredging every five years to maintain project
  - CRMC is pursuing purchase of a dredge with the ACOE and Congressional representatives through the Water Resources Development Act and OSPAR Funds.

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CRMC

COASTAL RESOURCES MANAGEMENT COUNCIL

www.crmc.state.ri.gov

US Army Corps of Engineers

New England District