

**Beaches, Breaches & Bays:
A 400-year Overview
from Little Egg Harbor Inlet
to Great Egg Harbor Inlet**

Col. Richard Somers SAR Chapter

Feb. 13, 2025

1833 Gordon Map

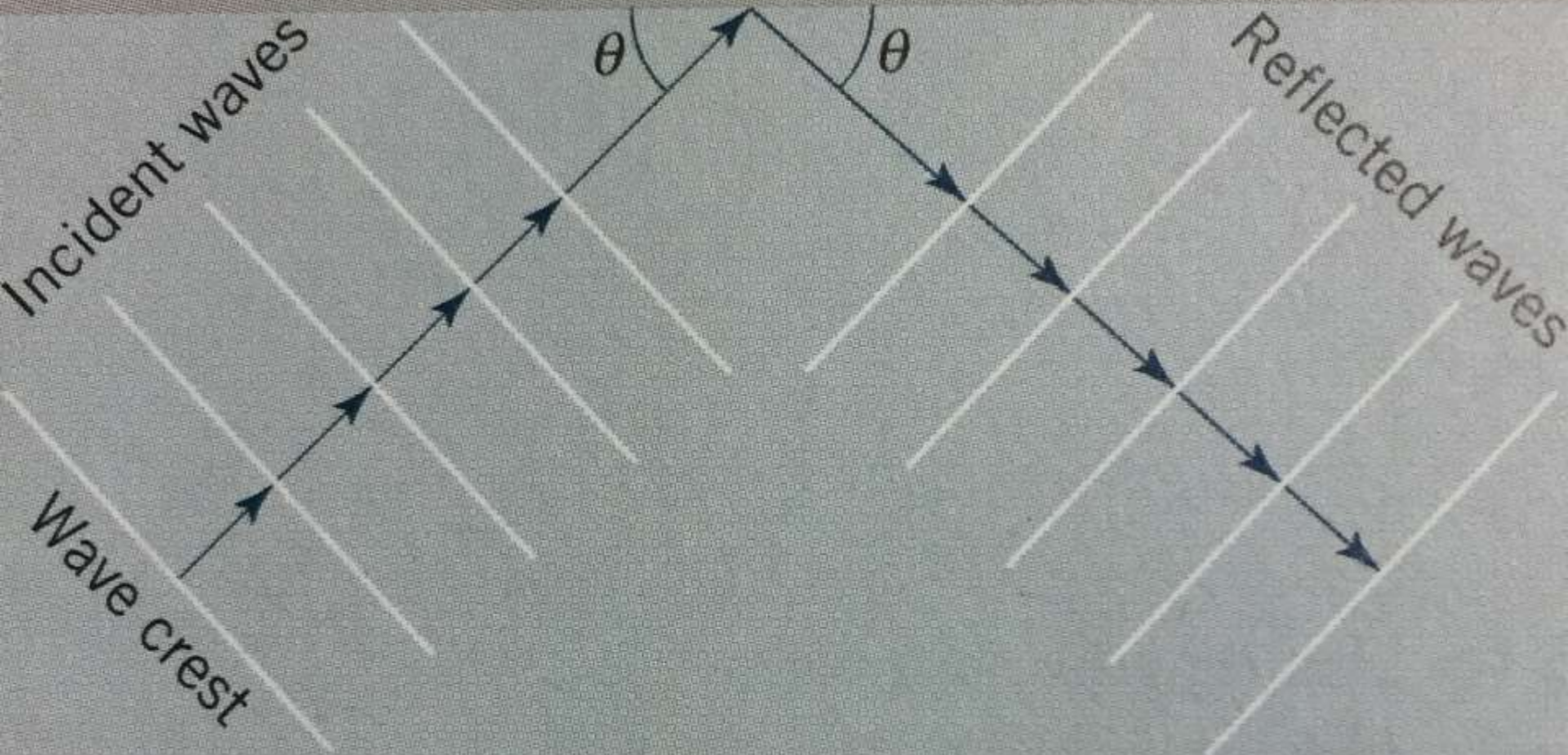


Please note the flood tide deltas that have formed both at New Inlet (yellow star) and at Old Brigantine Inlet (blue star) in the past by about 100 years or more. The one at Old Inlet (green star) is not drawn on this map but it existed, nonetheless, per 1841 USCS map.

1841 US Coastal Survey: damaged, but 1st to show delta islands at both inlets

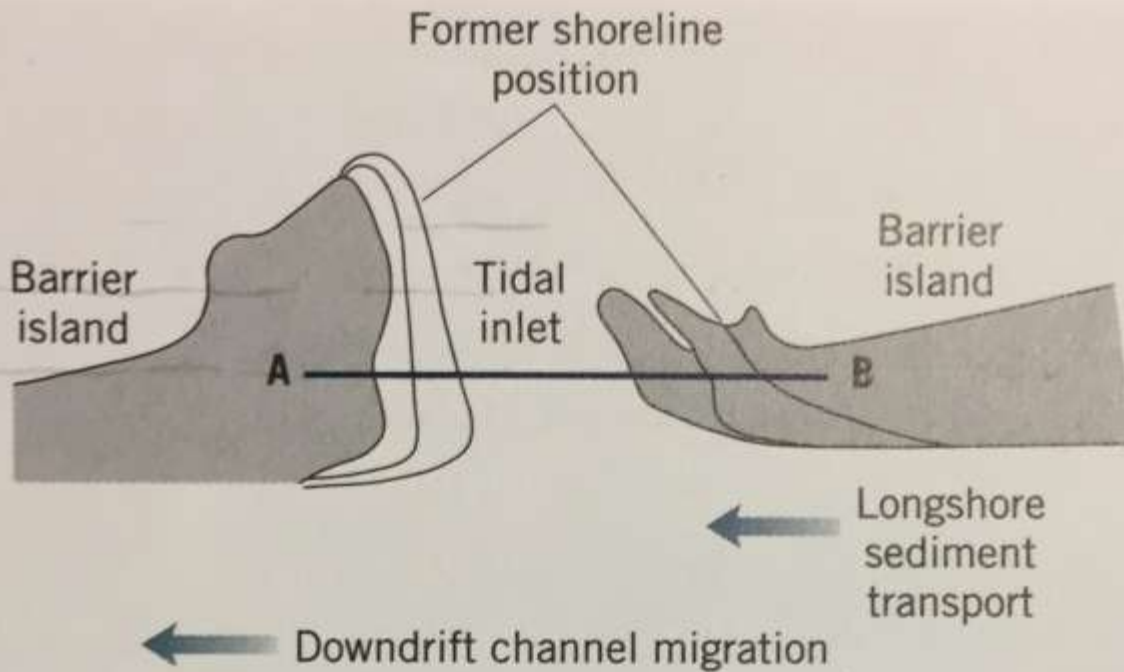


Long-shore Currents Move Inlets



The long-shore currents usually move south to north in the summer and north to south in the winter. They are usually stronger in the winter, so the net movement goes slightly south.

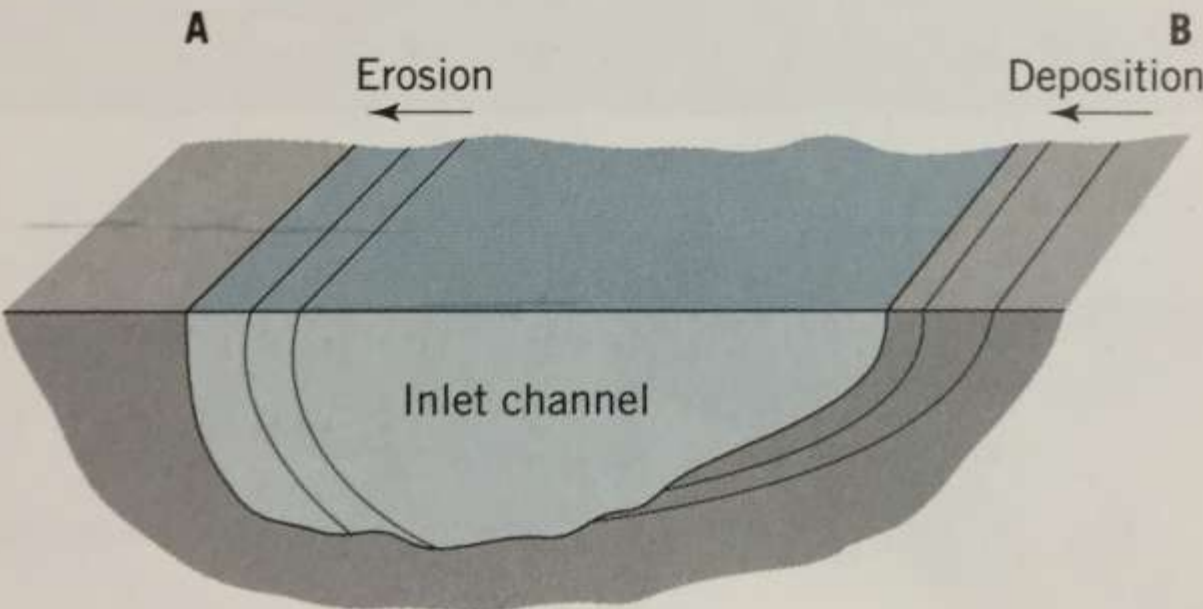
Inlet Movement Diagram



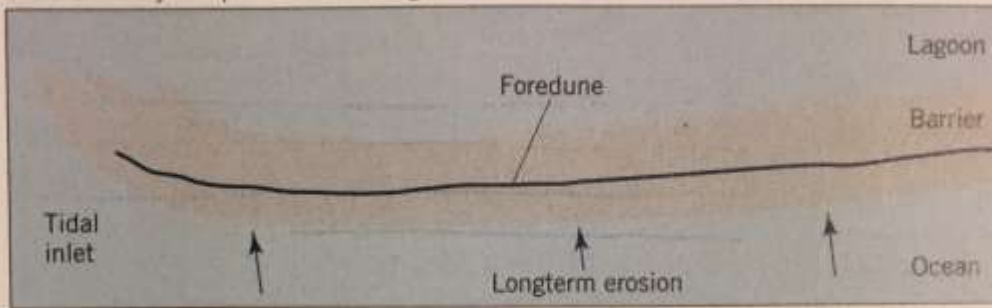
1. Long-shore current traveling B to A adds sand and length to the island at B in a curved-into-the-bay pattern.

2. Similar long-shore current cut away at the island and shortens it at A in a curved-into-the-bay pattern.

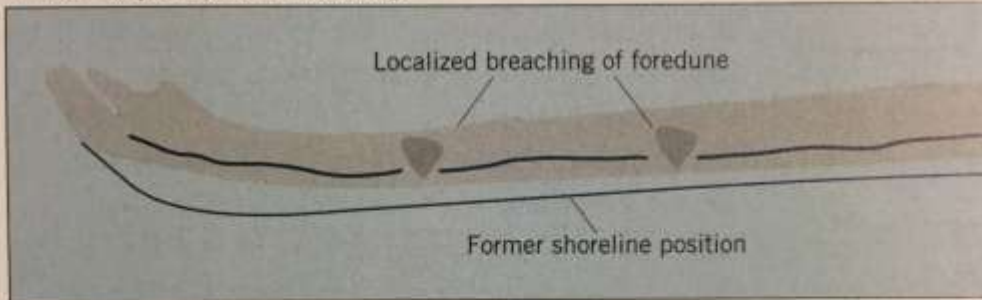
3. As this progress at sequential inlets the islands move in the same direction as the long-shore current over years.



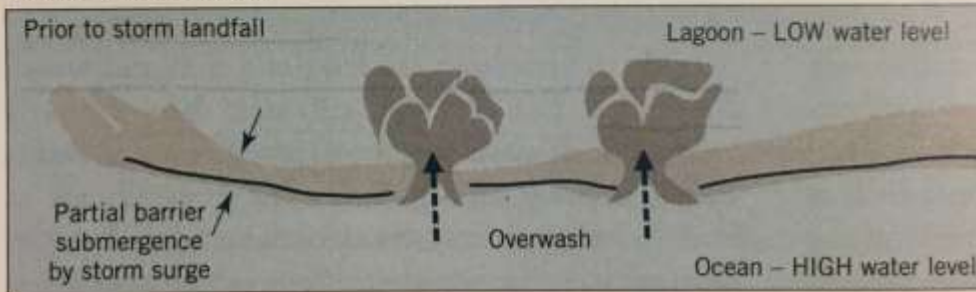
Time 1 ~20 years prior to breaching



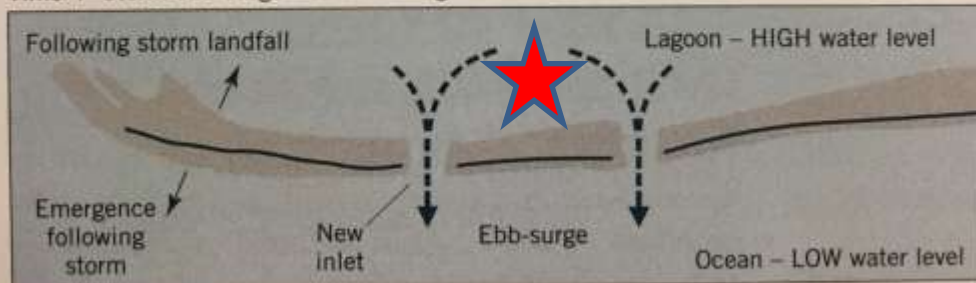
Time 2 ~2 years prior to breaching



Time 3 Storm overwash



Time 4 Storm ebb-surge and breaching



Inlet Creation Diagram

Step 1: long-term erosion or foredune over 20+ years.

Step 2: localized breaching of foredune over 2-3 years before storm.

Step 3: partial barrier submergence by a storm (nor'easter or hurricane) and overwash cutting through dunes. High water build up in estuary and river valley.

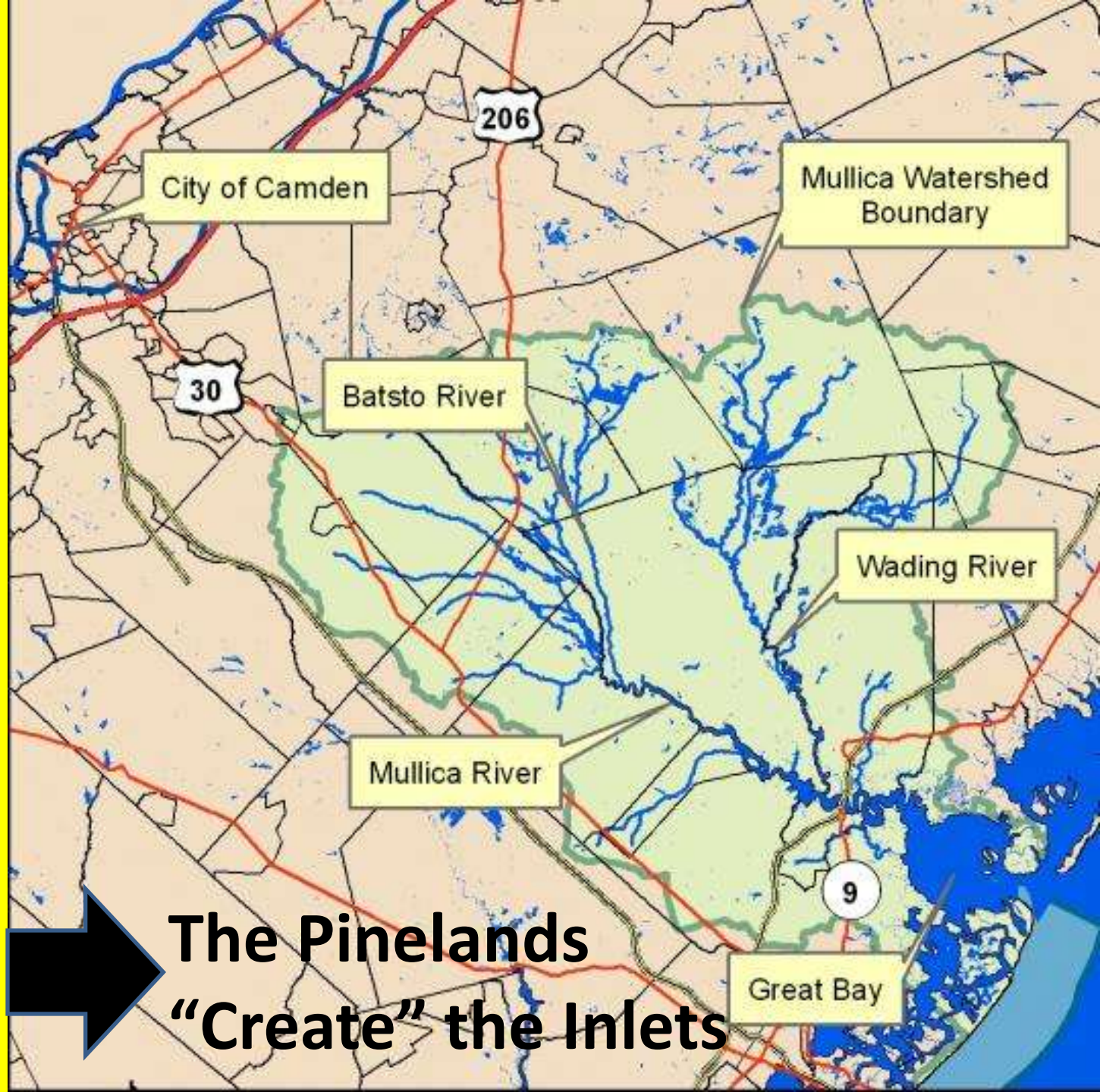
Step 4: new inlet cut out by high velocity and high-volume, ebb-surge as tide drops and river alley and estuary empty.

Note: the new inlet reduces the water available to keep nearby older inlets open.

Richard A. Davis Jr. and Duncan M. FitzGerald. Beaches and Coasts. Victoria, AU: Blackwell Science, Ltd, 2004.

MULLICA RIVER WATER SHED

- 561 sq. miles
- Imagine the huge capacity!!!!
- A big storm may add up to 5' more water in the river and stream area
- Tidal & wind discharge often simultaneous
- Inlets are cut out & ebb tide deltas are created in the ocean

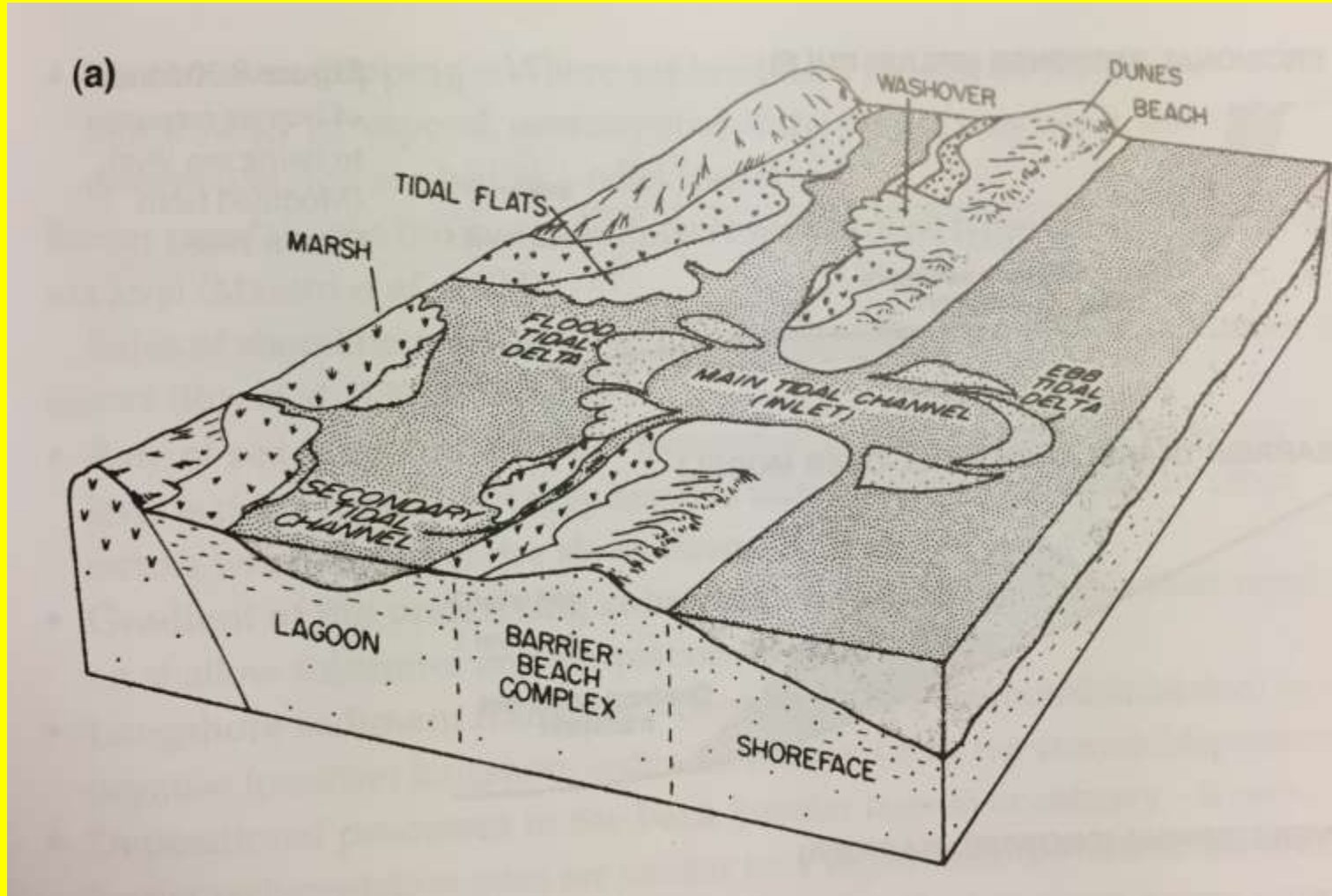


**The Pinelands
"Create" the Inlets**

Ebb Tide and Flood Tide Delta Formation: very similar to the present LEH Inlet

So, it may be reasonably assumed that if one finds a flood-tide delta behind a barrier island, there was once an inlet in that location 75-150 years, or earlier.

However, it may also be seen that aging modifies these deltas to some extent via compression .



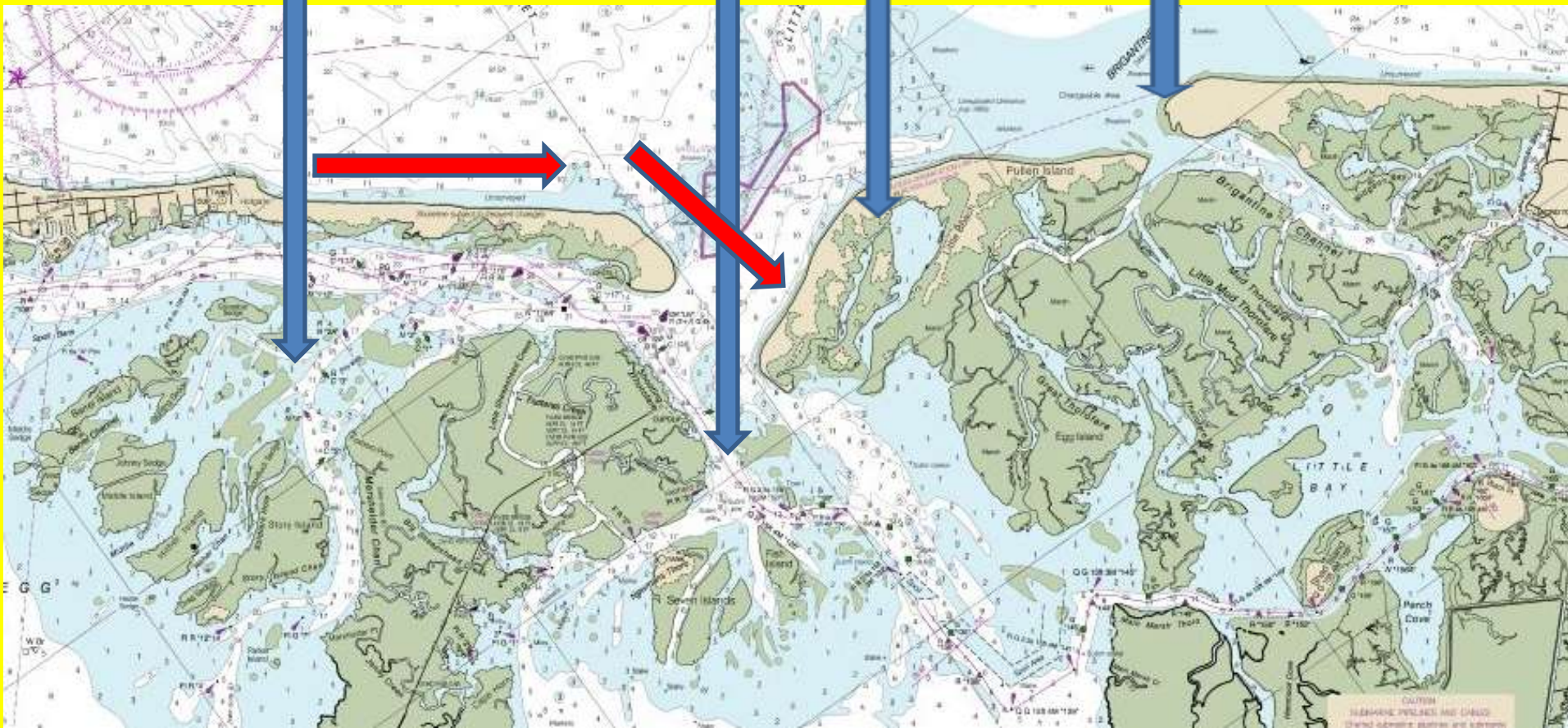
Example: 2017 NOAA Coastal Waterway Map: section showing delta at Holgate & LEH

OLD LEH

NEW LEH

OLD BRIGANTINE

NEW (WRECK) INLET



1795 Lewis Map: shows some typical inlet migration



Please note!

1. LEH still north of Great Bay.
2. Little Beach & Tuckers Island are one with Brig. Inlet south. The island again appears in GEH Inlet.
3. The red star is at Chestnut Neck. In 1778 the Brits entered at LEH (a.k.a. Old Inlet, Holgate), rowed south to Great Bay, across it and up the Mullica River to attack Chestnut Neck. There was a look-out fort just behind LEH Inlet on Fox Burrows point called Fort Tucker (a.k.a. Mud Fort.)
4. They also attacked through Absecon & GEH Inlets.

1833 Gordon Map: Pinelands + Mullica + a storm in 1800 = New Inlet at LEH



Please note!

1. Fort at Fox Burrows behind Old Inlet at the red star.
2. New Inlet is open and wide with a flood tide delta behind it at the yellow star.
3. There is a similar flood tide delta behind Old Inlet at the green star not shown on this map (see next slide).
4. Tucker's Island is fully formed.
5. There is a relic of Old Brig. Inlet south of New Inlet with a flood tide delta behind it at the blue star.
6. A new Brig. Inlet is ready to open at the lower edge of the map.
7. Old Inlet will open up in early 1900s as Beach Haven Inlet and close again.

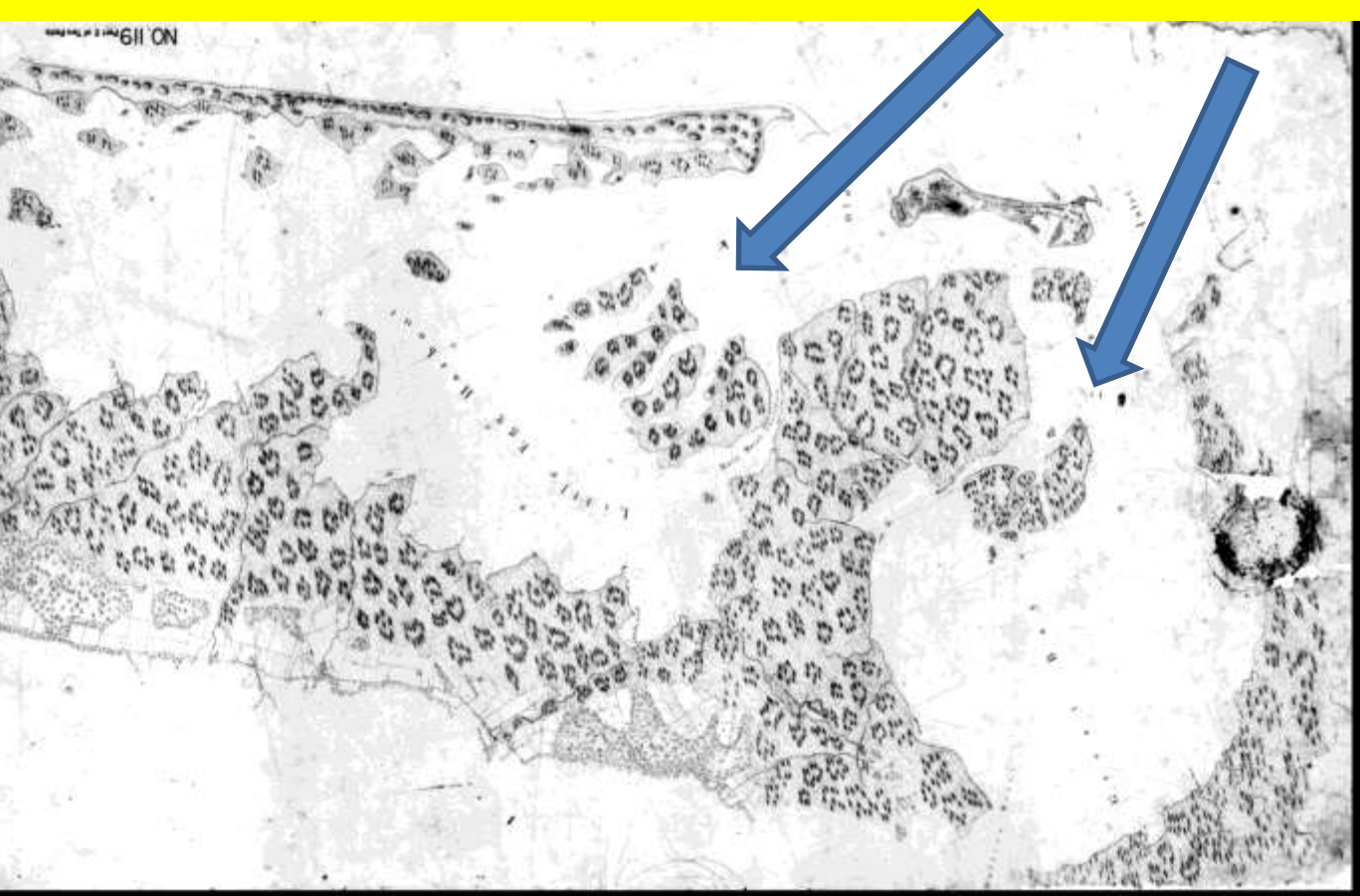
So Now Let's Focus on Little Egg



Note: Geo. Sur. Of NJ from the 1905 Annual Report of the NJ State Geologist.

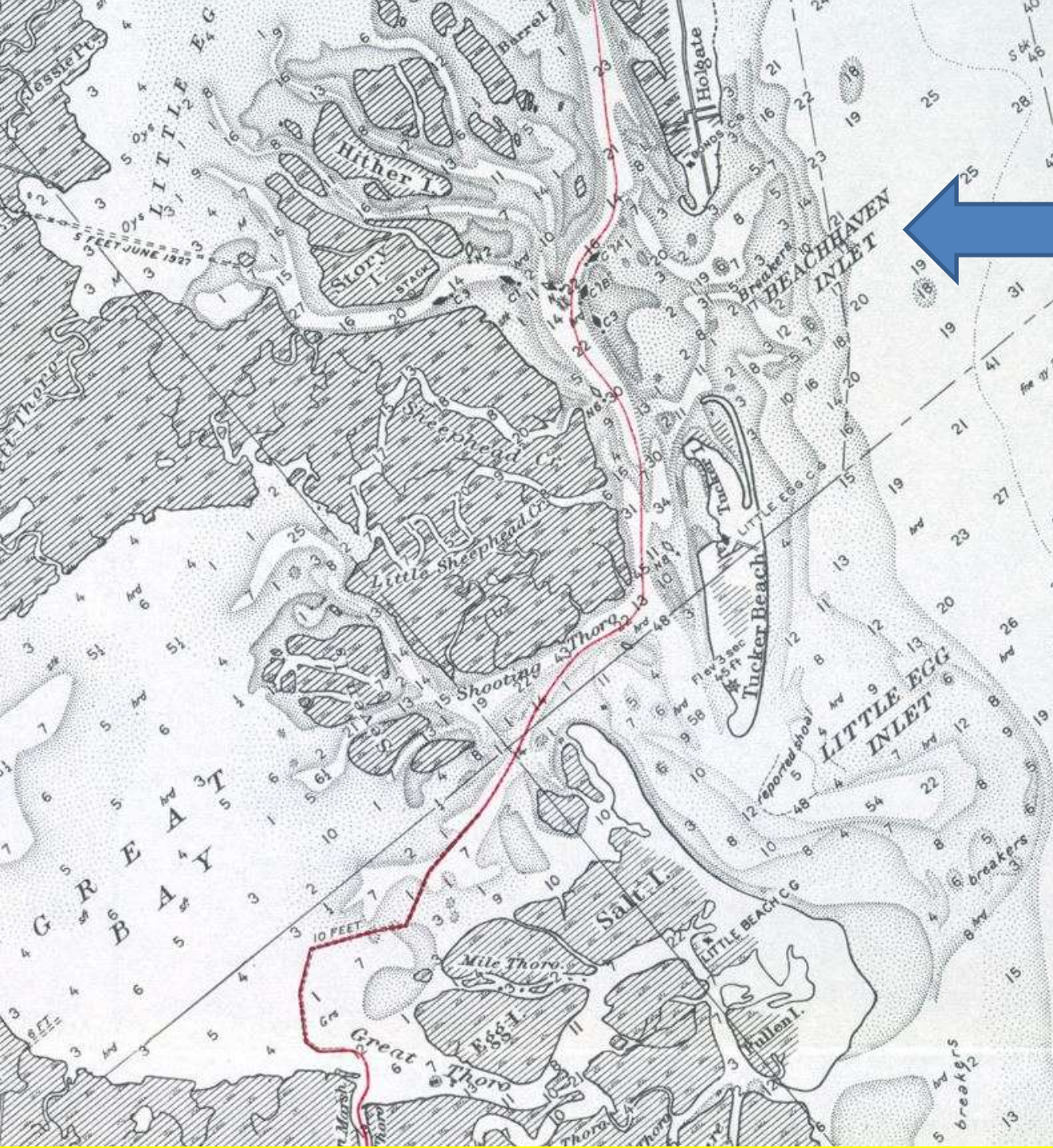
- 1. There are 3 sets of flood-tide delta islands.**
- 2. The Milhannow Shoal was broken in about 1800 by New Inlet.**
- 3. New Inlet's opening was caused by the closing of Old Brig. Inlet prior to 1800, prob. in 1770's per Brandt Giberson.**

1841 US Coastal Survey: 1st to show delta islands at both LEH inlets



LEH Inlet History:

1. New Inlet probably open before 1600 based on delta location and inlet size.
2. 1600-1800 – only Old Inlet open. Brig closes.
3. 1800 – New Inlet opens but Old Inlet also stays open until.
4. Old Inlet reopens about 1935 as Beach Haven Inlet and later closes.
5. New Inlet is again heavily shoaled today.



**1929
Beach
Haven
Inlet
at the
location
of Old
Inlet**

**1812 –
moving north
to a middle
postion**





Brigantine Inlet closed in 1835 and opened again in 1840, but look what's happened at Atlantic City or Absecon Inlet! Quarter's Inlet & Peter's Beach have appeared.

1870 USCG Map

Notes:

1. Littoral drift arrow.
2. Location of closed Old Inlet marked.
3. Tucker's Beach enveloping Tucker's Island.
4. Anchoring Island moved back toward the bay.
5. Mark's Thorofare at location of Old Brig Inlet, a.k.a. earlier as John Gandy Inlet and Shell Gut.
6. Brigantine Inlet north and barely open.

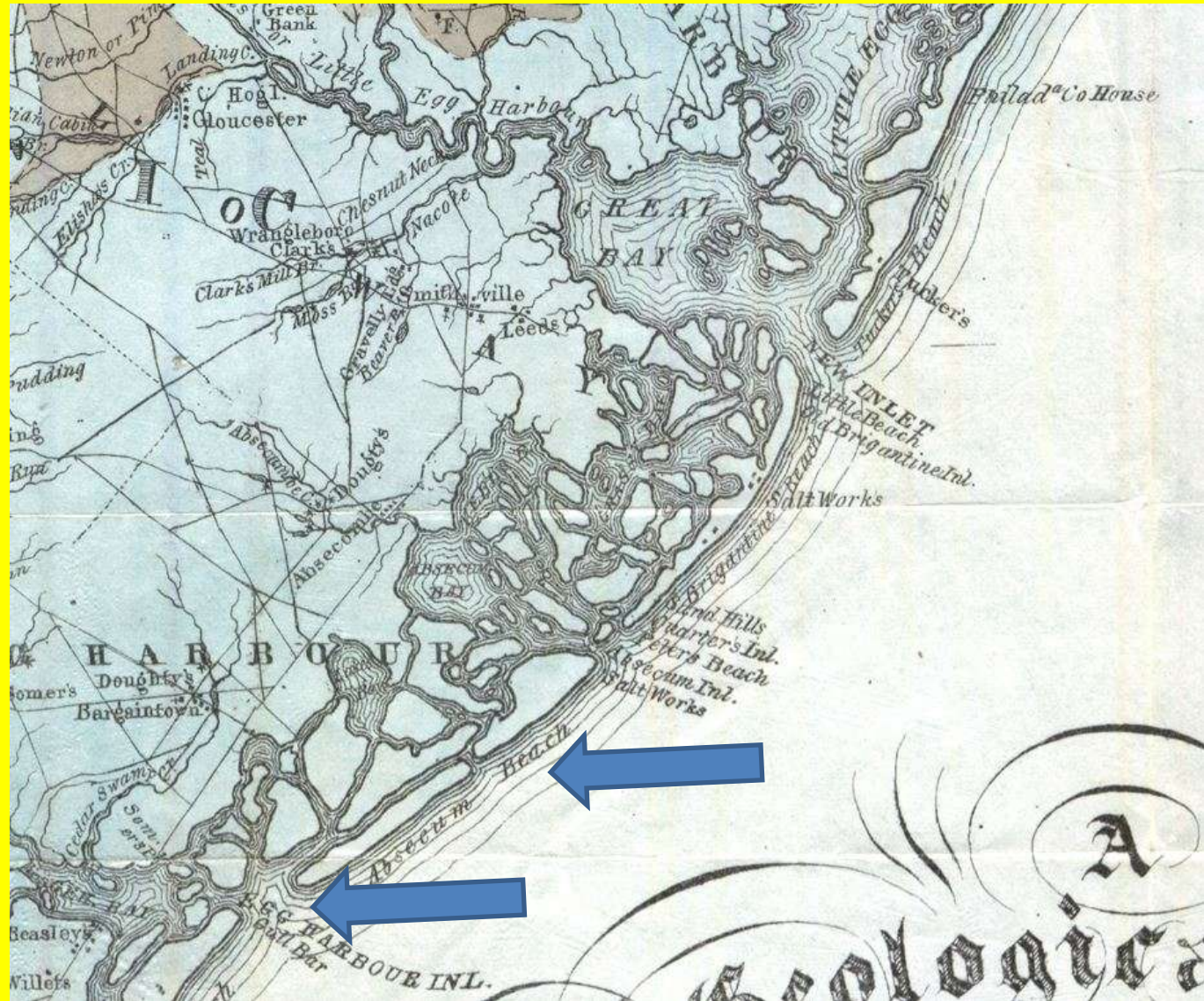
Note the "ebb tide delta/shoal" forming.

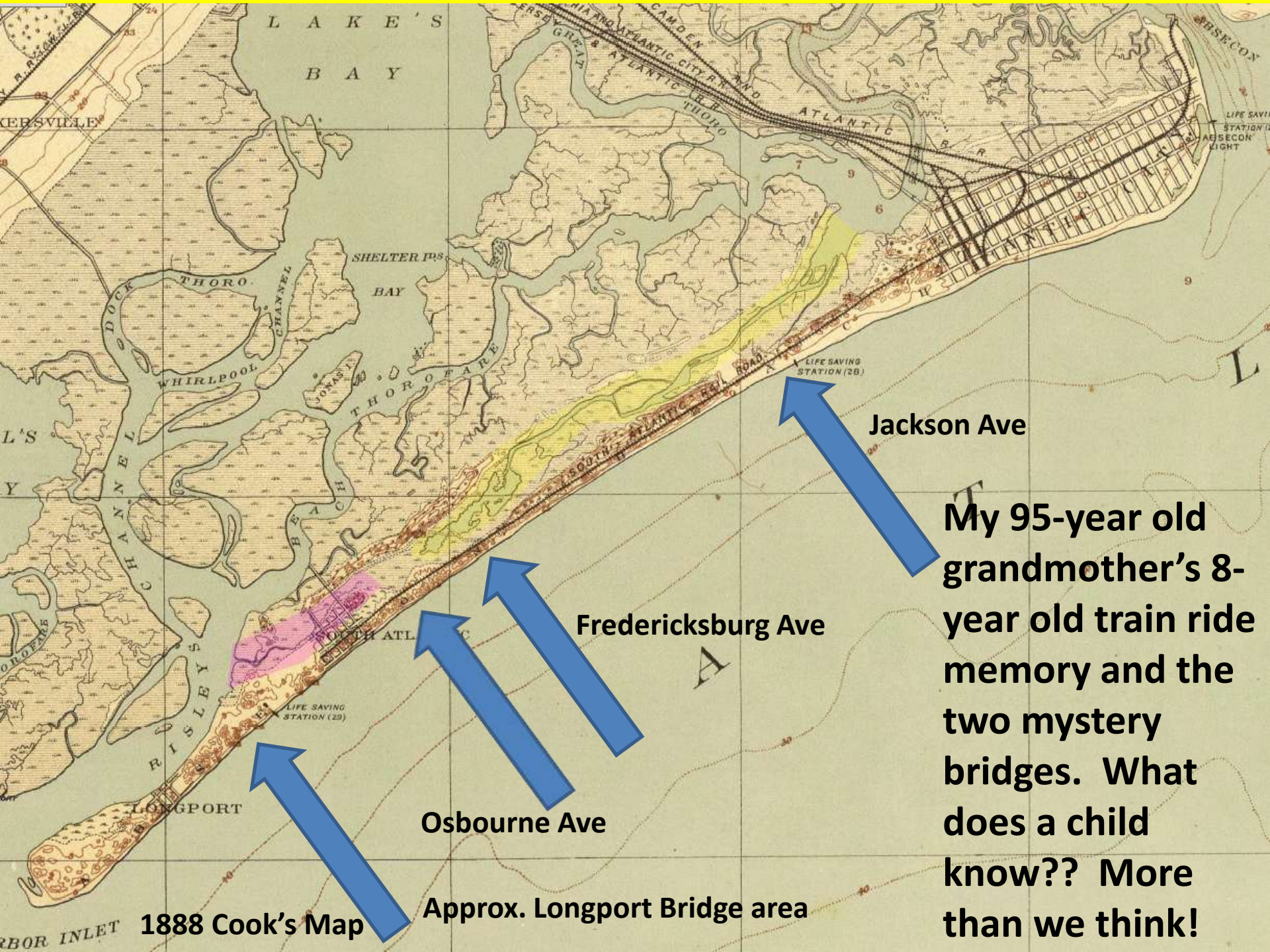


Now Let's Move to Absecon Island on the 1839 Roger's Map

Note:

1. Dry Inlet at present Jackson Ave.
2. Back Bay connects all the way to Longport.
3. Island in the middle of Great Egg Harbor Inlet.





1888 Cook's Map

Approx. Longport Bridge area

Jackson Ave

Fredericksburg Ave

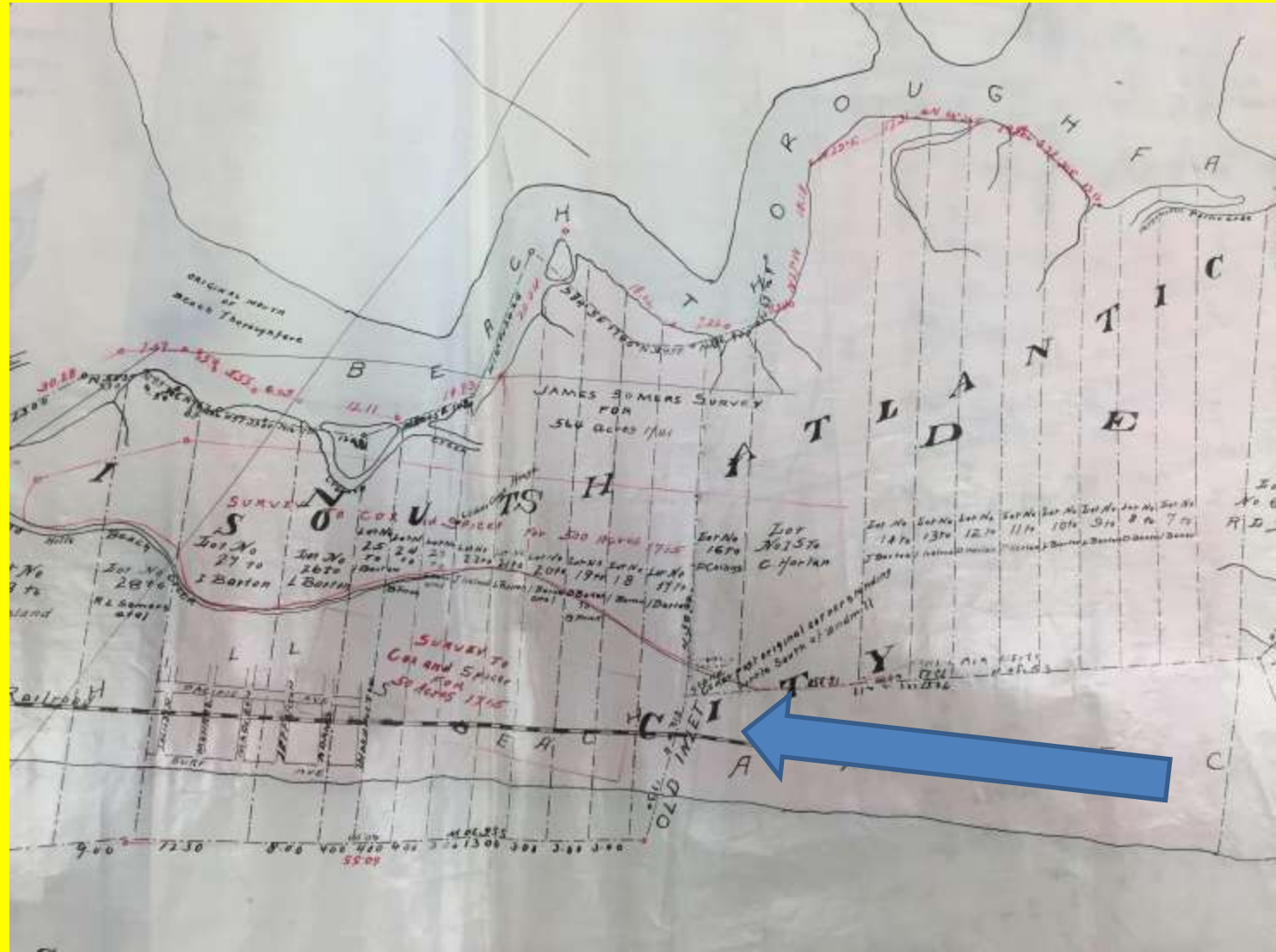
Osbourne Ave

My 95-year old grandmother's 8-year old train ride memory and the two mystery bridges. What does a child know?? More than we think!

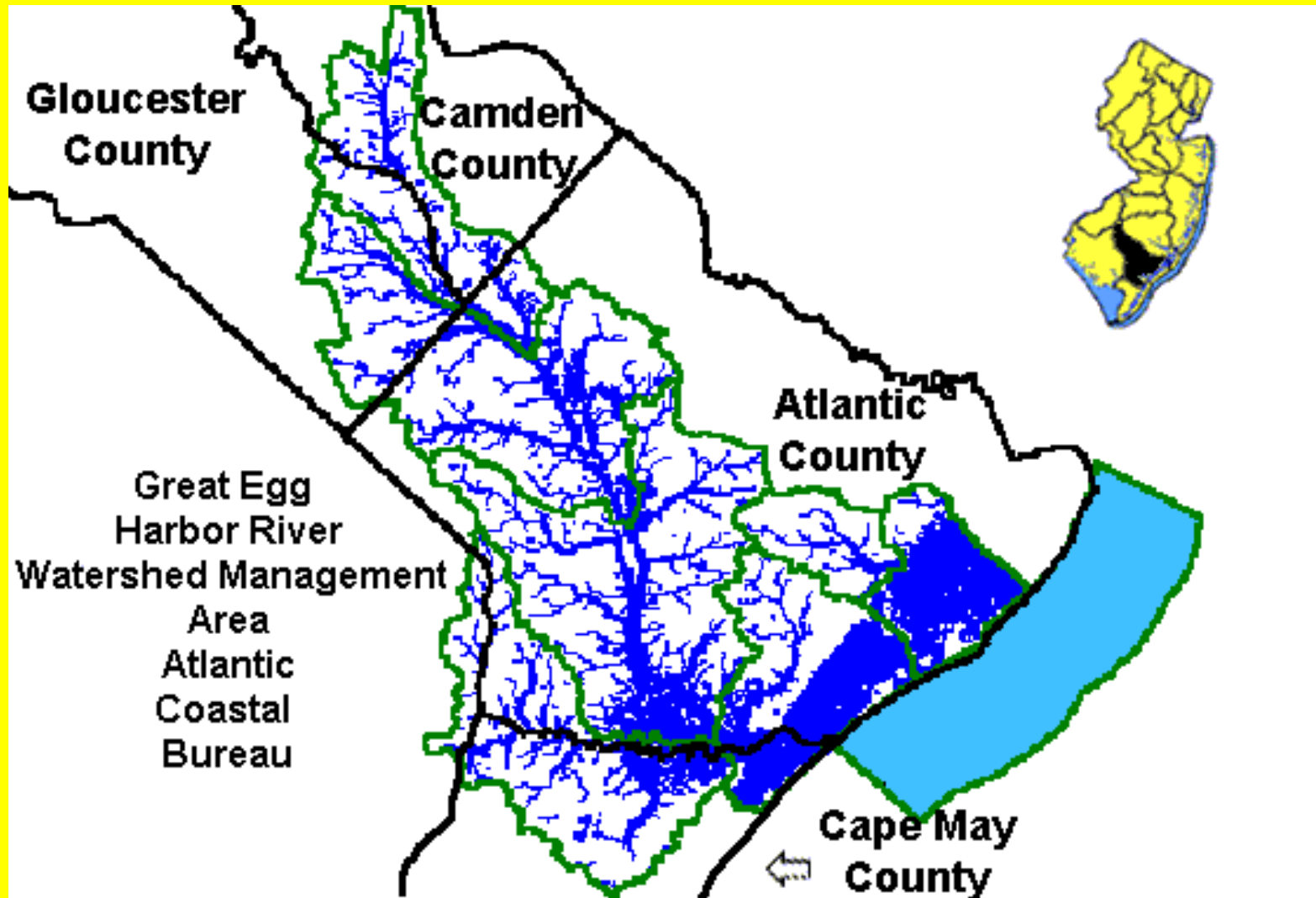
Osbourne Ave – Margate

The Early 1700's

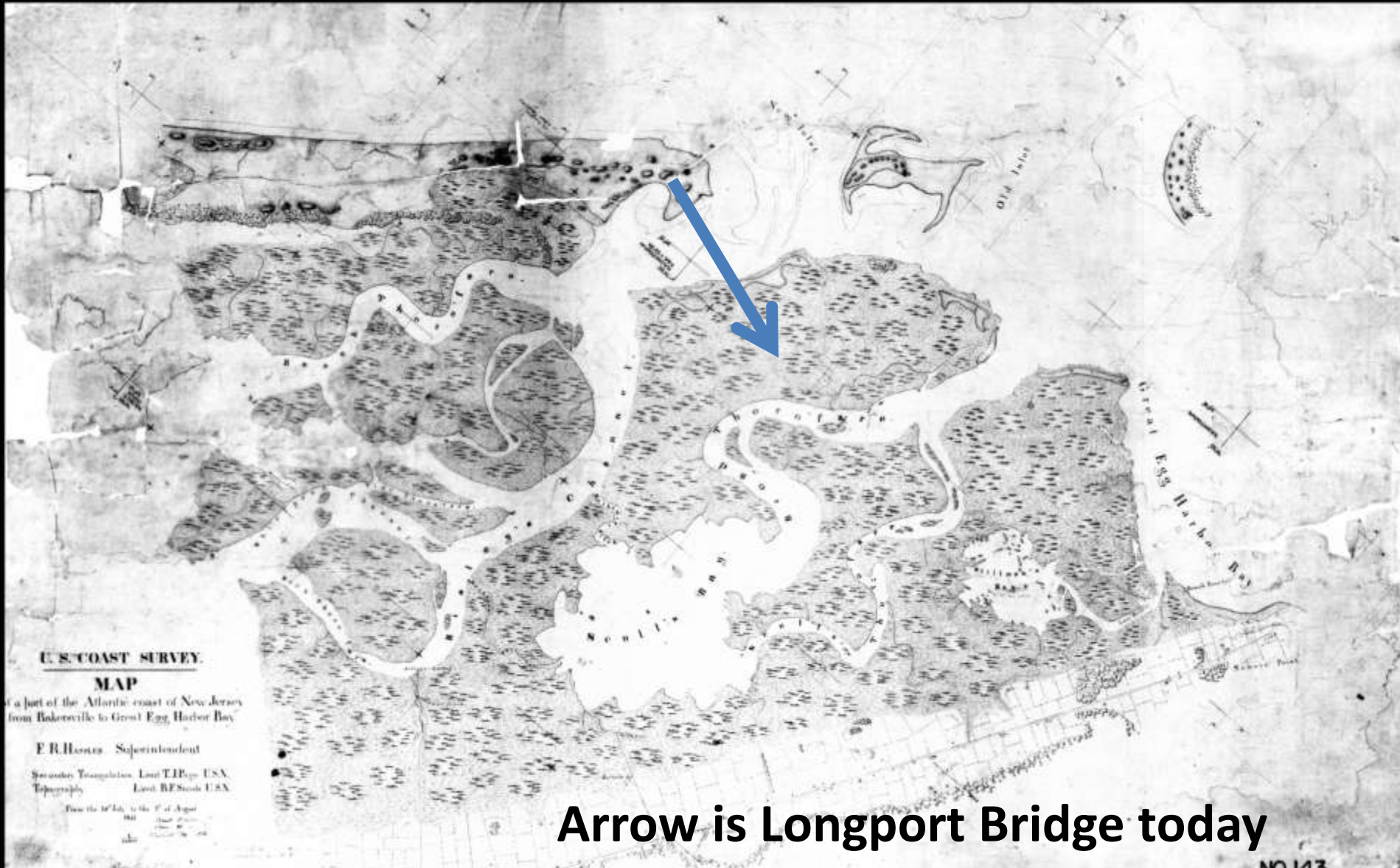
My “un-researched” thoughts about why certain streets flood but are not necessarily lower than the adjacent streets.



Great Egg Harbor River Watershed

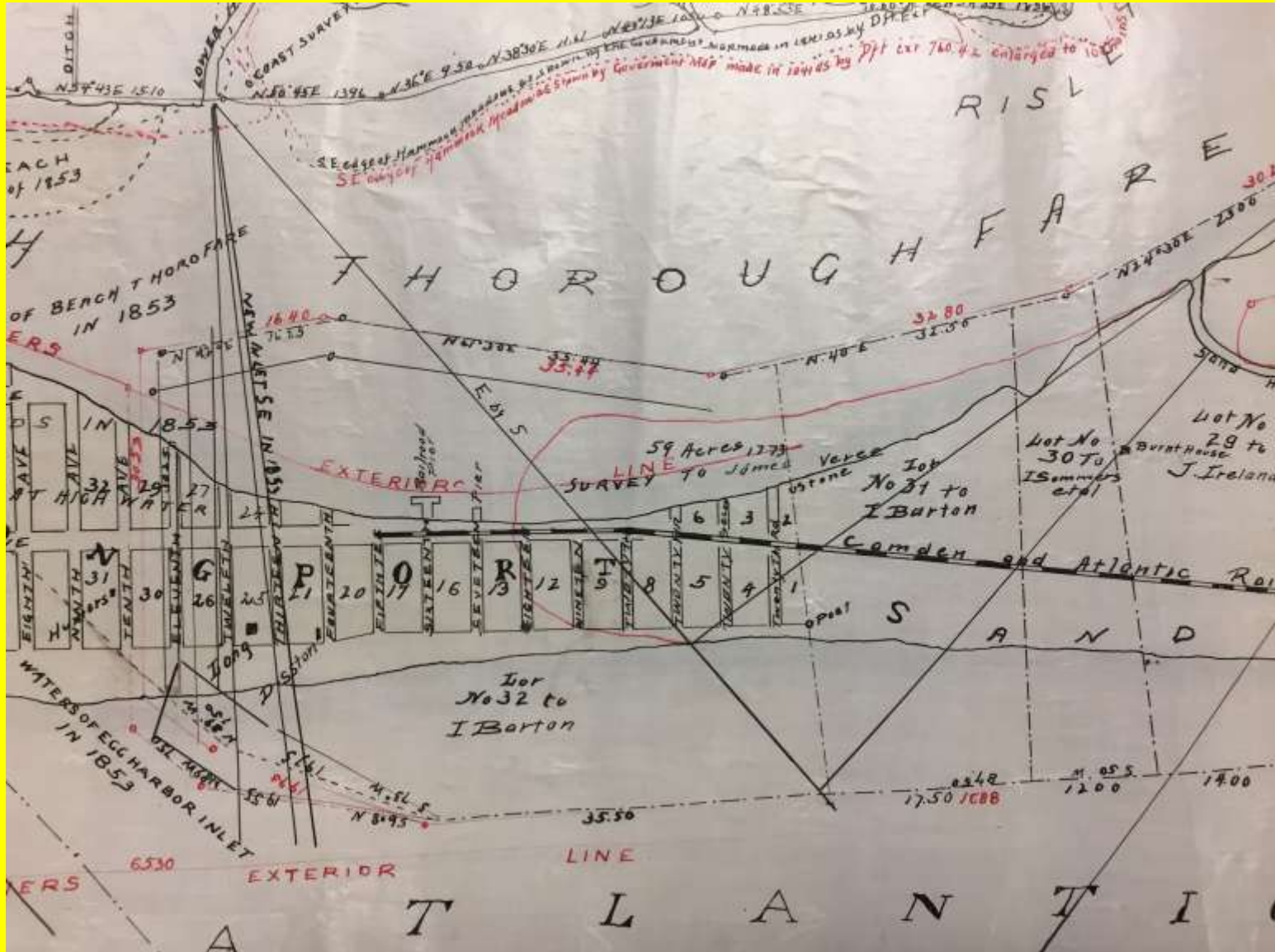


In 1841, Great Egg Harbor Inlet

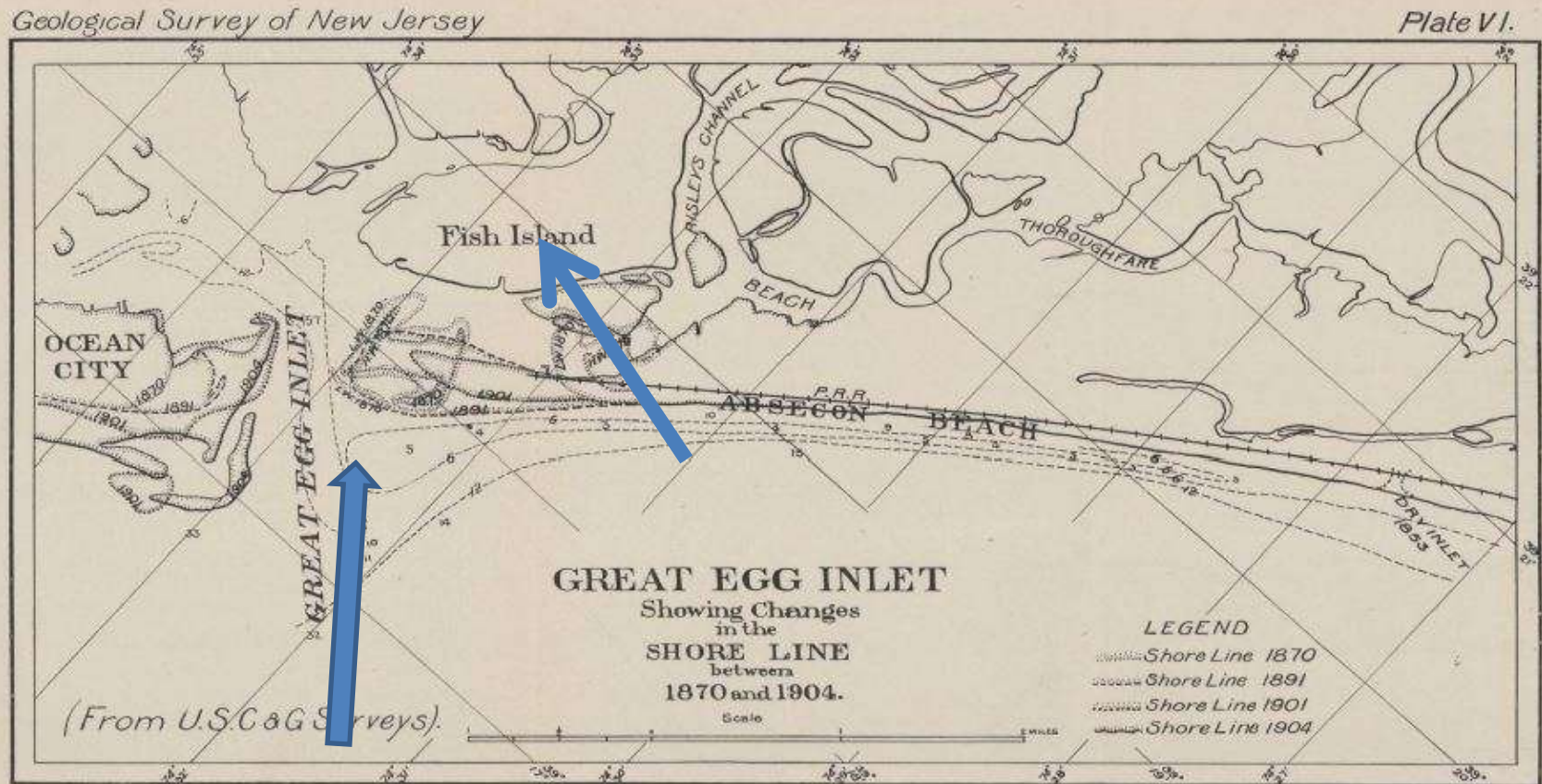


Arrow is Longport Bridge today

1887 Map – Inlet at 18th Street



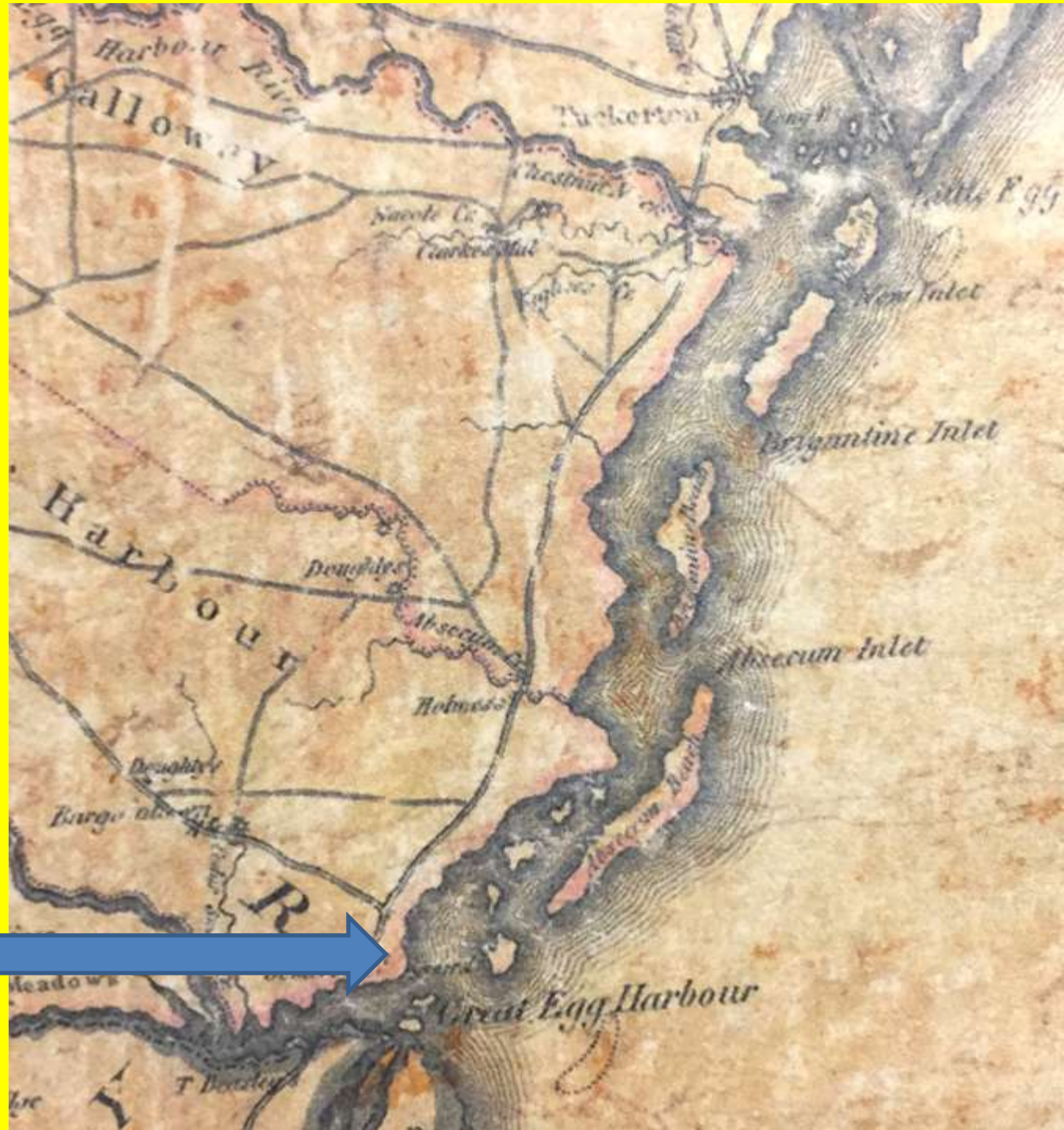
The Moving Longport Point



Thin Arrow: Longport Bridge today.

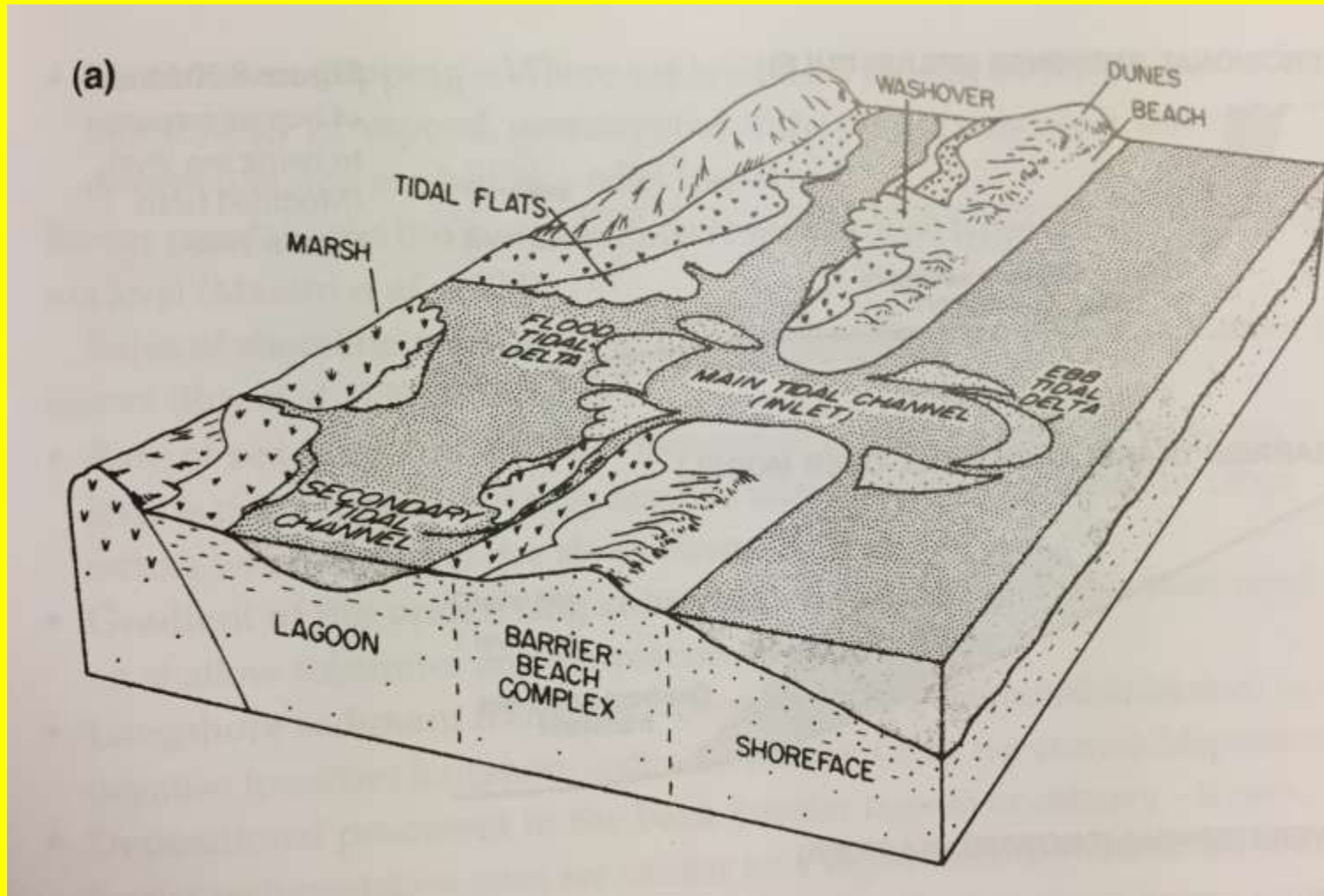
Thick Arrow: three fish factories in the late 1800s

**What is
different
about GEH
Inlet in
1812 and
today?**



Ebb Tide and Flood Tide Delta Formation: the story of the GEH & LEH Inlets

So, it may be reasonably assumed that if one finds a flood-tide delta behind a barrier island, there was once an inlet in that location 75-150 years or more earlier. However, it may also be seen that aging modifies these deltas to some extent via compression .



**Thank you for coming and
thinking through this with me.
If you think of any additions or
corrections, please contact me
at normangoos@gmail.com.**

Rev. Norm Goos (happily retired 😊)

Librarian, Atl. County Hist. Society

County Historian – County of Atlantic

Past-President, Sons of the American Revolution Chapter