NJ Pine Barrens National Reserve
Maritime Cultural Landscape

Iron, Timber, Ship Building,
Naval Stores, Agriculture
a Robust Coasting Trade

Rancocas Creek - Toms River - Mullica River - Great Egg Harbor River - Maurice River
Cohansey River

“Spirit and determination are reveled in words and deeds”

President Ronald Reagan

Wolf Eyes Sunrise
Rancocas Creek Water Trail

Hainesport

Citizen science is widely recognized as being critical to research and public engagement in preserving heritage. (Dickinson, 2012).

Identification and documentation by the kayaking community highlights the important contributions such recreational (kayaking) communities, groups and associations can offer to help identify and preserve NJ's cultural heritage. (Gall/Veit 2022)

Local outdoor and natural history organizations make critically important contributions to citizen science – the creation and dissemination of scientific knowledge. (McKinley 2015)

As quoted by the Editors in the introduction of Lucifer Came a Calling, a Field Reconnaissance of New Jersey's Rancocas Creek Phosphorus Works.

Reference: Bulletin of the Archeological Society of New Jersey, No 77, 2022. G Michael Gall, Editor Associate Editor Richard Veit,

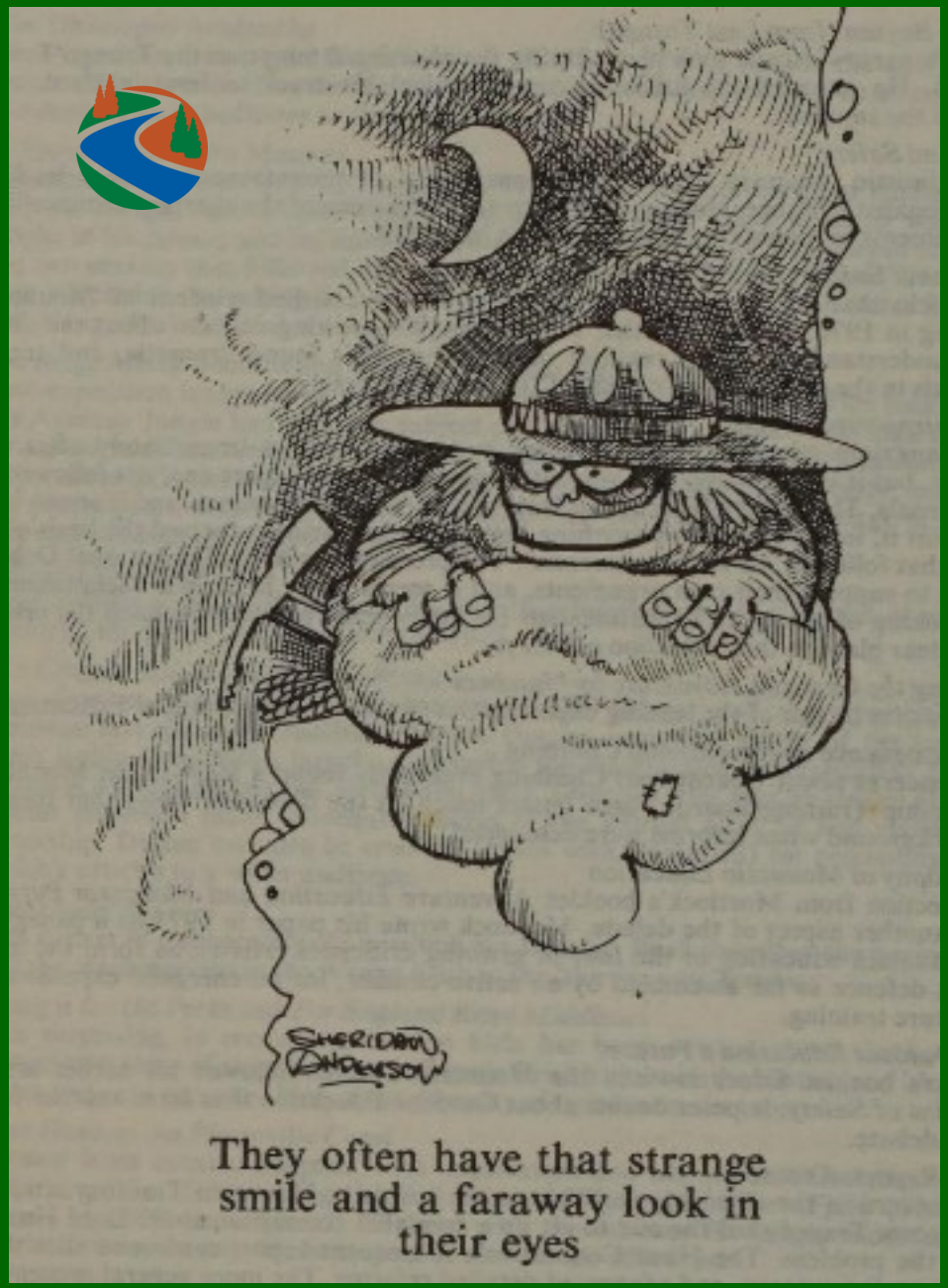
Acknowledgements and Conventional Wisdom

It takes many drops to make a water drop.

Its our pleasure to acknowledge a multi-faceted collaborative debt to many others. Chicken may he RIP, to the ole men and gracious ladies alike, a cast of 1001 professional educators, expert historians, naturally naturalists, willing buccaneers, alacritous swashbucklers and a fine tip of the hat to citizens.

It is our hope by illuminating the MCL's of NJ's Pine Barrens National Reserve that this "beta", this narrative, this atlas, provides a guide to enhancing public awareness and public access of the Pine Barrens National Reserve hidden past. The keystone of preservation that what is past, is now present so as to preserve is for our future.

As credit is given it is credit given to all whose generosity w time, wisdom and knowledge focused on a common goal that our heritage, its stories, its myth, fables and its mystery's is enjoyed and contributes to all.



The purpose of New Jersey's Pine Barrens National Reserve Maritime Cultural Landscape Atlas

is to enhance public awareness and understanding of New Jersey's Pine Barren's National Reserve

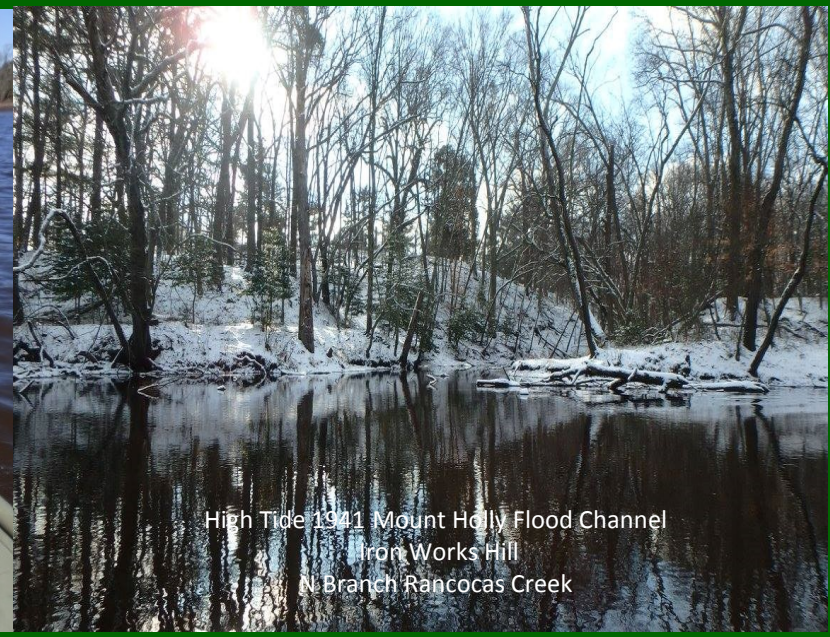
expansive maritime cultural landscapes (MCLs): past, present and future. Specifically the atlas highlights

the Pine Barrens National Reserve six (6) major waterways MCL's:

Rancocas Creek, Toms River, Mullica River, Great Egg Harbor River, Maurice River and the Cohansey River.

N Branch Rancocas Creek Low Tide Timbuctoo
Note tide level mark on snags

Main Stem Rancocas Creek High Tide Centerton
Steve Nagiewicz Stockton University Sonar Survey

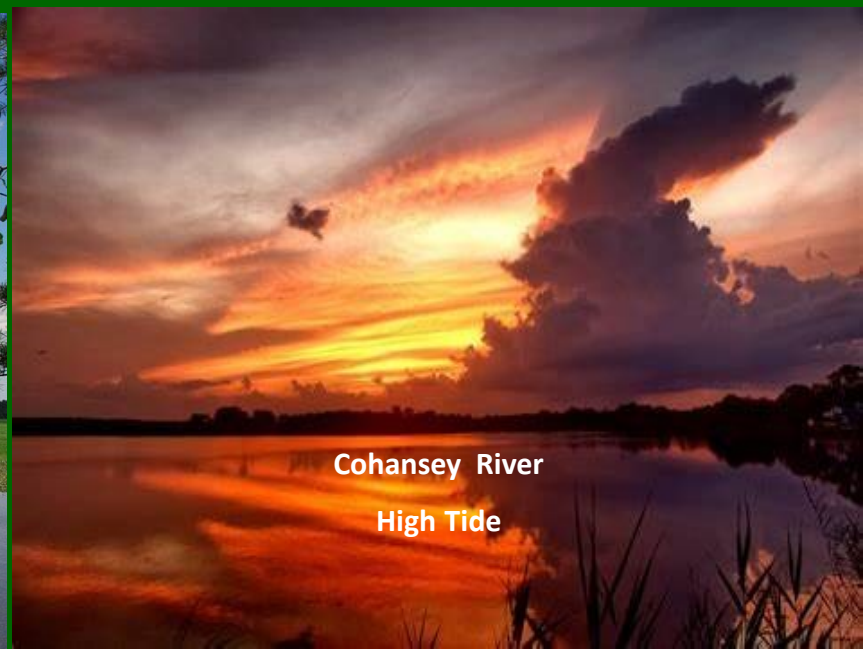


High Tide 1941 Mount Holly Flood Channel
Iron Works Hill
N Branch Rancocas Creek

Things, surviving objects – artifacts and memorabilia speak the truth beyond dispute. They tell a story.

E.M. Eller, Rear Admiral, USN (Ret.) - Director of Naval History

Enhanced Public Awareness - Promoting Regional Identity - Naturally, Our Heritage



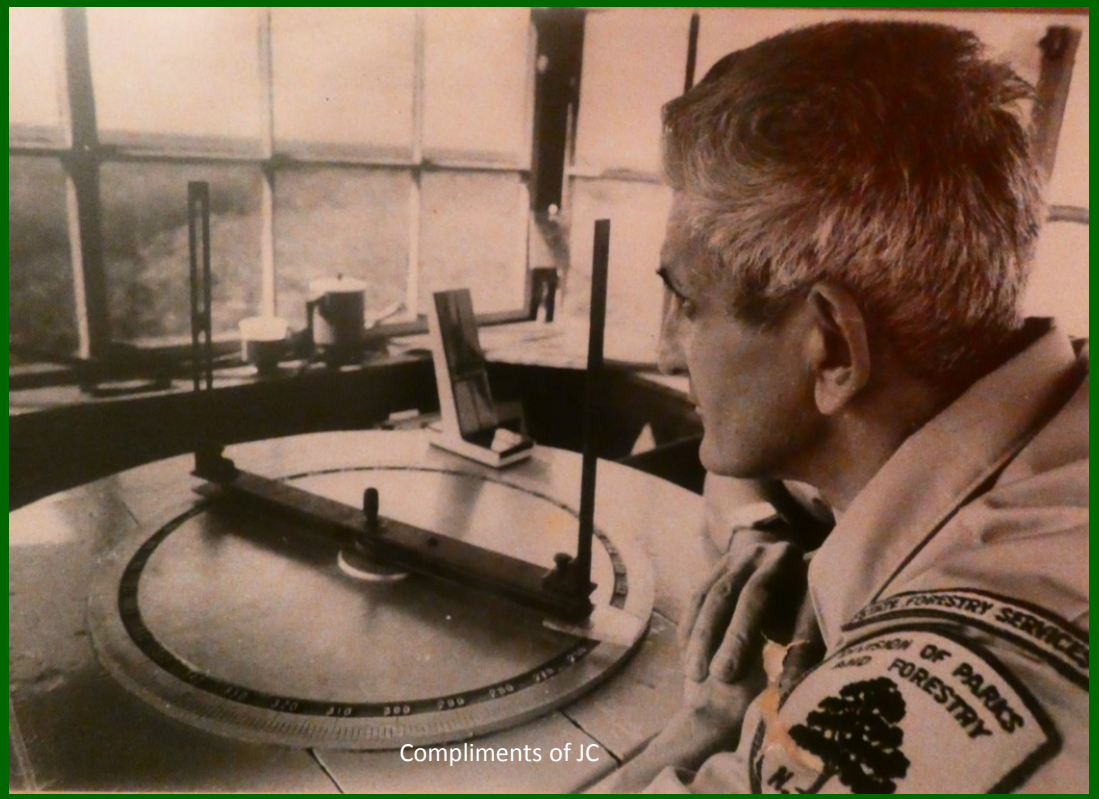
Azimuth of the Pine Barrens National Reserve Maritime Cultural Landscape

TABLE I

Rancocas Creek is the Only Watershed Listed Twice

Planning district name [1]	Natural/cultural contribution	Approximate size (acres)
1. Pine Plains and Environs	Internationally significant ecology. Game animal species important.	71, 686
2. Weymouth/Elwood Corridor, Central West Pinelands.	Connects northern and southern Pinelands ecologically significant, national level for plant species.	165, 375
3. Cedar Creek/Southern Ocean County Coastal	Largest area of white cedar; protects water quality in Barnegat Bay, and fisheries.	113, 152
4. Pomona Bogs/Lower Mullica	Contains rare, endangered, threatened species; historic sites on Mullica River.	37, 888
5. Dennis Creek/Cedar Swamp	National natural landmark; northern limit southern plant species; ethnic enclaves.	72, 192
6. Lower Egg Harbor River	Extensive marshes and public land; historic sites; protect water quality.	29, 696
7. Upper Reaches South Branch Rancocas watershed.	Archaeological shatterbelt; unique endemic species; northern limit southern species.	146, 432
8. South Bank Egg Harbor River	Connects districts 2, 6, 9; ethnic enclaves; protects drainage; undeveloped.	66, 560
9. Tuckahoe River	Minimal development; protects Egg Harbor drainage; ethnic enclaves.	76, 800
10. Wading River/Bass River/Great Bay	Completes Mullica drainage; significant wetlands with historic and archaeological sites. Protects shell fisheries.	93, 696
11. Upper Rancocas/Southern Toms River Western Ocean County.	Cedar swamps; under development pressure; historic and prehistoric sites. Protects water quality.	112, 947
12. Upper Egg Harbor River drainage	Protect water quality in river; botanically significant; endangered and threatened species.	81, 920
13. Upper Wading River drainage	Spectacular aquatic ecosystem; protected by cranberry growers at present.	41, 984
Total acres		1, 110, 322

[1] Excludes Hammonton Town and an area of historical significance in southern Ocean County; includes all Federal, State, county, and municipally owned lands.



Watersheds of NJ Pinelands Ecosystems

As Listed and Acknowledged in the

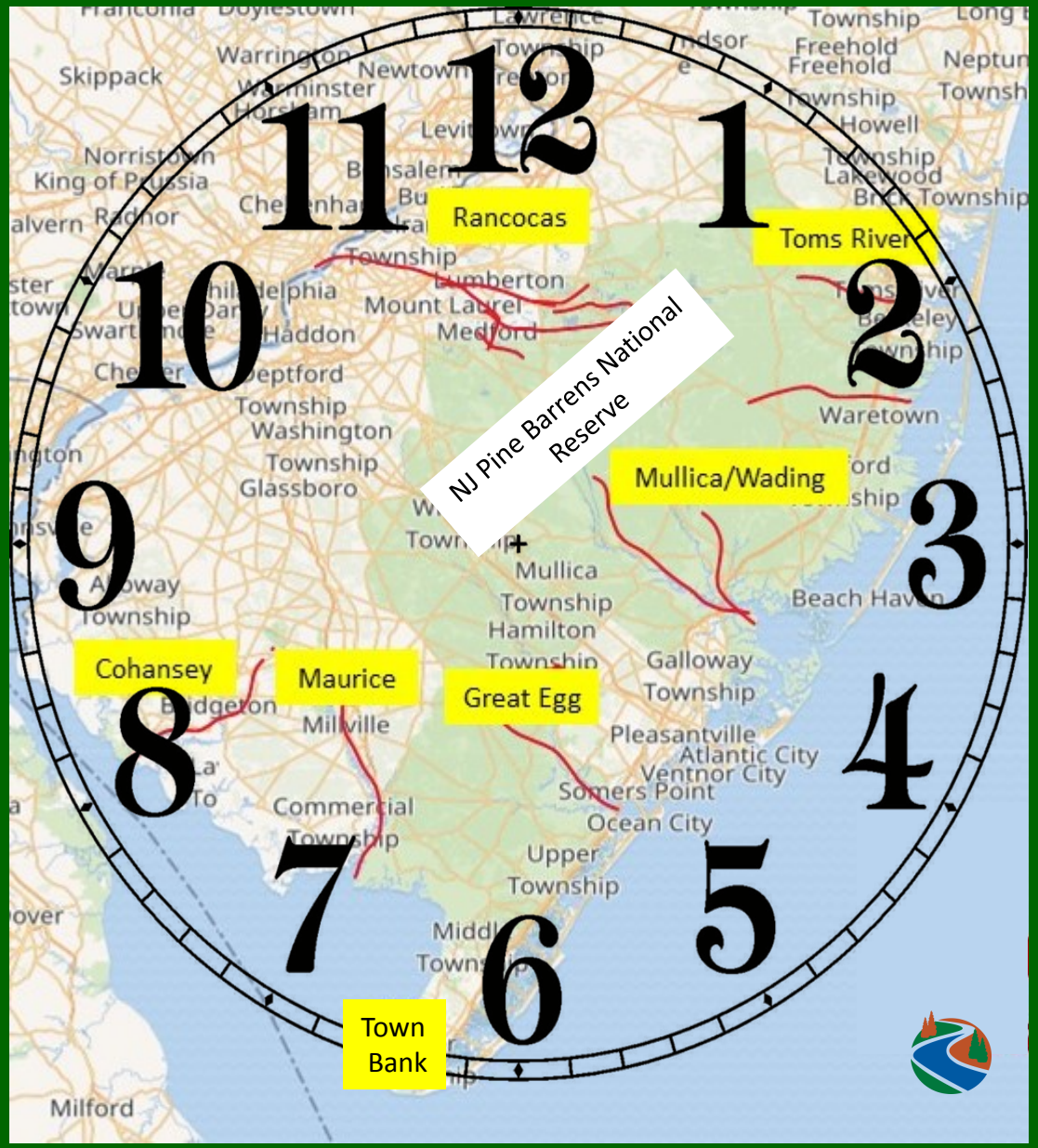
Pinelands Preservation Act

General Layout of the NJ Pine Barrens Maritime Cultural Landscapes (MCLs) Atlas

This atlas introduces the maritime cultural landscapes of NJ's Pine Barrens National Reserve 6 major rivers. They all share the common landscape of flowing into navigable tidal waters. It's suggested to view these waters locations as though the lens of a clock.

Three sperarte sections features how people lived, interacted and commercialized NJ's Pine Barrens National Reserve's maritime landscapes. Pages 7 – 39 tells this story.

Remaining sections of the 450 page Atlas is a practical guide, that provides information, maps, charts, photos, reports, published articles and archival material, on NJ's Pine Barren's National Reserve maritime cultural landscapes.



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High Tide – Forks of the Rancocas Creek

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Maurice, Cohansey, Tuckerton River Freight Statistics 1920

What is a Maritime Cultural Landscape?

Westerdhal (1998) defines maritime cultural landscape as: 'the archaeological concept combining sea and land as the maritime cultural landscape. It means that the starting point for the subject of maritime archaeology is maritime culture

High Tide. N Branch Rancocas Creek Water Trail. Mount Holly Flood Channel. Passing 1890's Power House

Three Themes of the Pine Barrens Maritime Cultural Landscapes

a. Relationship of People to the tides, oceans

b. How societies are shaped by tides, oceans.

c. Humans experiences w waterways form the maritime system,

from inland (hinterland) waters to the tides and oceans.

High Tide. N Branch Rancocas Creek, Pier at the Canning Factory. Mount Holly. Hugh Campbell Artist
142 miles from the Delaware Capes

Contents of the NJ Pine Barrens Maritime Cultural Landscapes

Rancocas Creek, Toms River, Mullica River, Great Egg Harbor River, Maurice River, and Cohansey River

Pine Barrens navigable waters

Tidal landscapes and communities

Coastal, intertidal, and inland maritime sites

Inland water connections to tidewaters

Ship building

Past, present and future

Pine Barrens maritime assets

Natural resources

Sailing evolution to power

Commerce

Underground railroad

Transformative multi-use recreation

Other

High Tide - N Branch - Rancocas Creek Water Trail – Timbuctoo Heritage Area Way Point

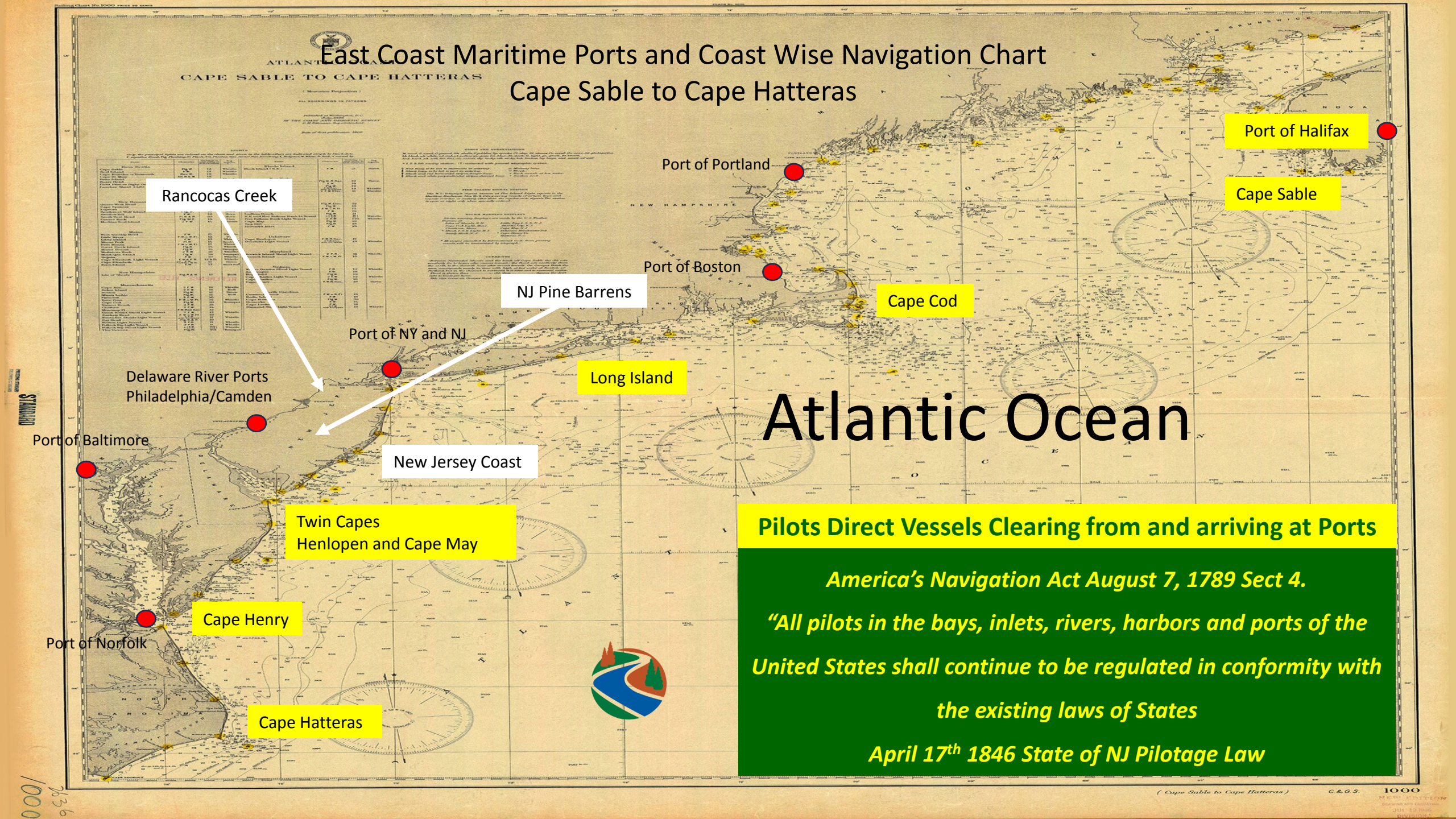
The point is not who gets there first, but how to draw upon the expertise, knowledge, thoughts and contributions each participant makes .

(ref: A Planned Approach to a Healthy Community - Coalition Building - 2021)

Photo credit #ks337pohoto

Timbuctoo High Tide
North Branch - Rancocas Creek Water Trail

East Coast Maritime Ports and Coast Wise Navigation Chart
Cape Sable to Cape Hatteras



Pilots Direct Vessels Clearing from and arriving at Ports

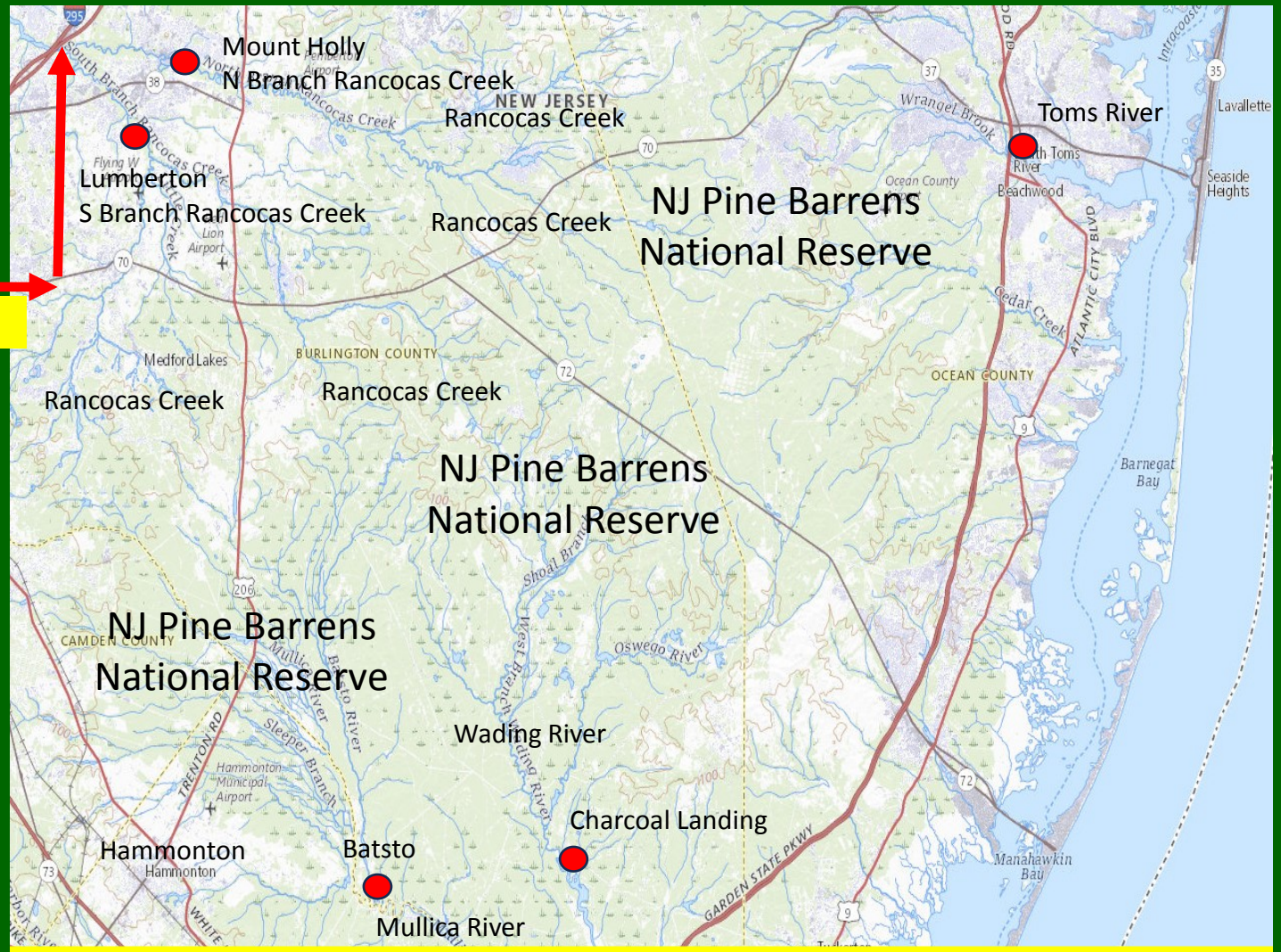
America's Navigation Act August 7, 1789 Sect 4.

"All pilots in the bays, inlets, rivers, harbors and ports of the United States shall continue to be regulated in conformity with the existing laws of States

April 17th 1846 State of NJ Pilotage Law

Trenton
Delaware River
Rancocas Creek
Delaware River Harbor
Philadelphia
Camden
Port of Wilmington
Port of Salem
C & D Canal
Delaware River
Cohansey River
Maurice River
Port Norris
Delaware Bay
Cape May

The Forks of the Rancocas Creek



By 1800 NJ Pine Barrens supplied the timber for 10% of all vessels built in the Delaware River Ports of Philadelphia/Camden

Reference: NJPB Comprehensive Management Plan

Delaware Bay - Delaware River - Delaware River Harbor
Rancocas Creek - Mount Holly - NJ Pine Barrens National Reserve

BREAKWATER HARBOR, DELAWARE
OCTOBER 2023
Times and Heights of High and Low Waters

Day	Time h.m.	Height ft.	Height cm
1 Su	0050	6.3	192
	0736	0.1	3
	1315	6.5	198
	2008	0.2	6
2 M	0139	6.1	186
	0820	0.2	6
	1402	6.5	198
	2059	0.4	12
3 Tu	0228	5.8	177
	0904	0.4	12
	1450	6.3	192
	2150	0.6	18
4 W	0319	5.5	168
	0949	0.7	21
	1540	6.1	186
	2243	0.8	24
5 Th	0414	5.3	162
	1037	0.9	27
	1633	5.9	180
	2337	0.9	27
6 F ◑	0511	5.1	155
	1129	1.0	30
	1731	5.8	177
7 Sa	0032	1.0	30
	0610	5.0	152
	1225	1.1	34
	1830	5.7	174
8 Su	0126	0.9	27
	0709	5.0	152
	1321	1.0	30
	1929	5.7	174
9 M	0219	0.8	24
	0805	5.1	155
	1416	0.9	27
	2024	5.8	177
10 Tu	0308	0.7	21
	0857	5.3	162
	1510	0.8	24
	2114	5.8	177
11 W	0355	0.6	18
	0944	5.5	168
	1601	0.7	21
	2200	5.9	180
12 Th	0438	0.5	15
	1027	5.6	171
	1649	0.6	18
	2241	5.8	177
13 F	0519	0.4	12
	1105	5.7	174
	1735	0.5	15
	2319	5.7	174
14 Sa ●	0556	0.4	12
	1140	5.8	177
	1819	0.5	15
	2355	5.6	171
15 Su	0632	0.5	15
	1212	5.8	177
	1901	0.6	18
16 M	0029	5.4	165
	0705	0.6	18
	1242	5.9	180
	1944	0.7	21
17 Tu	0103	5.3	162
	0737	0.6	18
	1313	6.0	183
	2027	0.8	24
18 W	0140	5.1	155
	0810	0.7	21
	1349	6.0	183
	2113	0.9	27
19 Th	0222	5.0	152
	0849	0.8	24
	1434	6.0	183
	2206	1.0	30
20 F	0313	4.9	149
	0940	0.9	27
	1527	5.9	180
	2305	1.1	34
21 Sa	0414	4.8	146
	1046	0.9	27
	1632	5.8	177
22 Su ◐	0007	1.1	34
	0524	4.8	146
	1159	0.9	27
	1746	5.7	174
23 M	0109	0.9	27
	0636	5.0	152
	1311	0.8	24
	1900	5.8	177
24 Tu	0209	0.7	21
	0743	5.2	158
	1418	0.6	18
	2008	5.9	180
25 W	0305	0.4	12
	0844	5.6	171
	1521	0.4	12
	2108	6.1	186
26 Th	0358	0.2	6
	0939	6.0	183
	1620	0.2	6
	2202	6.1	186
27 F	0448	0.0	0
	1030	6.2	189
	1715	0.0	0
	2252	6.1	186
28 Sa ○	0536	-0.1	-3
	1118	6.4	195
	1808	-0.1	-3
	2340	6.0	183
29 Su	0622	-0.1	-3
	1203	6.5	198
	1859	0.0	0
30 M	0027	5.8	177
	0706	0.0	0
	1248	6.4	195
	1948	0.1	3
31 Tu	0115	5.6	171
	0749	0.2	6
	1333	6.3	192
	2037	0.3	9

Time meridian 75° W.
0000 is midnight.
1200 is noon.
Heights are referred to mean lower low water which is the chart datum of soundings.

DAYLIGHT SAVING TIME

Times ARE adjusted for DST.

DELAWARE BAY ENTRANCE
OCTOBER 2023
F-Flood, Dir. 327° True E-Ebb, Dir. 147° True

Day	Slack Water Time h.m.	Maximum Current Time h.m.	Maximum Current Vel. knots
1 Su		0254	1.8E
	0548	0842	1.9F
	1200	1530	1.8E
	1824	2112	1.7F
2 M	0018	0342	1.6E
	0630	0930	1.8F
	1242	1618	1.6E
	1918	2200	1.5F
3 Tu	0106	0424	1.3E
	0712	1012	1.6F
	1330	1706	1.4E
	2012	2254	1.2F
4 W	0154	0500	1.1E
	0748	1100	1.4F
	1418	1800	1.2E
	2112	2348	1.0F
5 Th	0236	0554	0.9E
	0836	1154	1.2F
	1506	1854	1.0E
	2212		
6 F ◑	0330	0042	0.8F
	0924	0642	0.7E
	1606	1248	1.0F
	2324	2000	0.8E
7 Sa	0430	0142	0.6F
	1024	0748	0.6E
	1718	1348	0.9F
		2100	0.8E
8 Su	0030	0248	0.6F
	0542	0854	0.6E
	1136	1454	0.9F
	1824	2200	0.8E
9 M	0124	0354	0.7F
	0642	1000	0.7E
	1242	1600	0.9F
	1924	2254	0.9E
10 Tu	0212	0448	0.8F
	0742	1054	0.8E
	1342	1654	1.0F
	2018	2336	1.0E
11 W	0254	0536	0.9F
	0836	1142	1.0E
	1436	1742	1.1F
	2100		
12 Th	0330	0018	1.1E
	0918	0612	1.1F
	1530	1230	1.1E
	2142	1824	1.2F
13 F	0400	0100	1.2E
	1000	0654	1.2F
	1612	1318	1.3E
	2218	1906	1.2F
14 Sa ●	0430	0136	1.3E
	1042	0730	1.3F
	1654	1400	1.4E
	2300	1948	1.3F
15 Su	0454	0212	1.3E
	1112	0800	1.4F
	1736	1442	1.5E
	2336	2030	1.3F
16 M	0530	0254	1.3E
	1148	0836	1.5F
	1818	1518	1.5E
		2106	1.3F
17 Tu	0012	0324	1.2E
	0600	0912	1.6F
	1224	1600	1.5E
	1900	2148	1.2F
18 W	0048	0400	1.2E
	0642	0948	1.6F
	1306	1642	1.5E
	1942	2230	1.2F
19 Th	0130	0442	1.1E
	0724	1036	1.6F
	1348	1730	1.4E
	2030	2318	1.2F
20 F	0218	0536	1.1E
	0812	1124	1.5F
	1442	1824	1.4E
	2124		
21 Sa	0312	0012	1.1F
	0912	0636	1.1E
	1536	1224	1.5F
	2224	1924	1.4E
22 Su ◐	0412	0112	1.2F
	1018	0736	1.1E
	1642	1324	1.5F
	2324	2024	1.4E
23 M	0518	0212	1.3F
	1124	0848	1.2E
	1748	1430	1.6F
		2130	1.5E
24 Tu	0024	0312	1.4F
	0624	0948	1.3E
	1230	1536	1.6F
	1848	2224	1.6E
25 W	0124	0412	1.6F
	0724	1048	1.5E
	1336	1636	1.7F
	1948	2318	1.7E
26 Th	0212	0506	1.7F
	0818	1148	1.7E
	1436	1730	1.8F
	2042		
27 F	0306	0012	1.7E
	0912	0554	1.9F
	1536	1242	1.8E
	2136	1824	1.8F
28 Sa ○	0348	0100	1.7E
	1000	0642	1.9F
	1630	1330	1.8E
	2224	1918	1.8F
29 Su	0436	0142	1.6E
	1048	0730	1.9F
	1724	1418	1.8E
	2312	2006	1.7F
30 M	0512	0230	1.5E
	1130	0818	1.8F
	1812	1506	1.7E
	2354	2054	1.5F
31 Tu	0554	0312	1.3E
	1218	0900	1.7F
	1900	1554	1.5E
		2142	1.3F

Time meridian 75° W.
0000 is midnight.
1200 is noon.

DAYLIGHT SAVING TIME

Times ARE adjusted for DST.

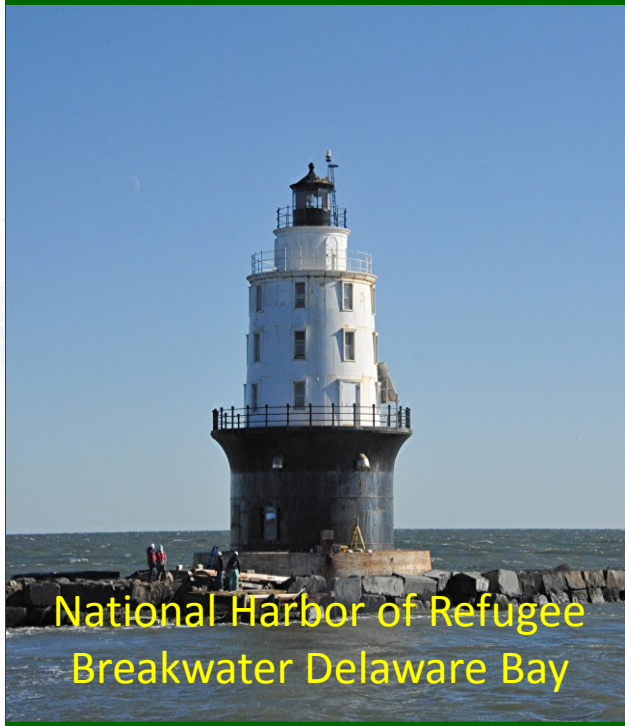
1916 Rancocas Creek

SAND DREDGE "INDEPENDENCE" OF THE HAINESPORT MINING & TRANSPO... CO.

October 2023

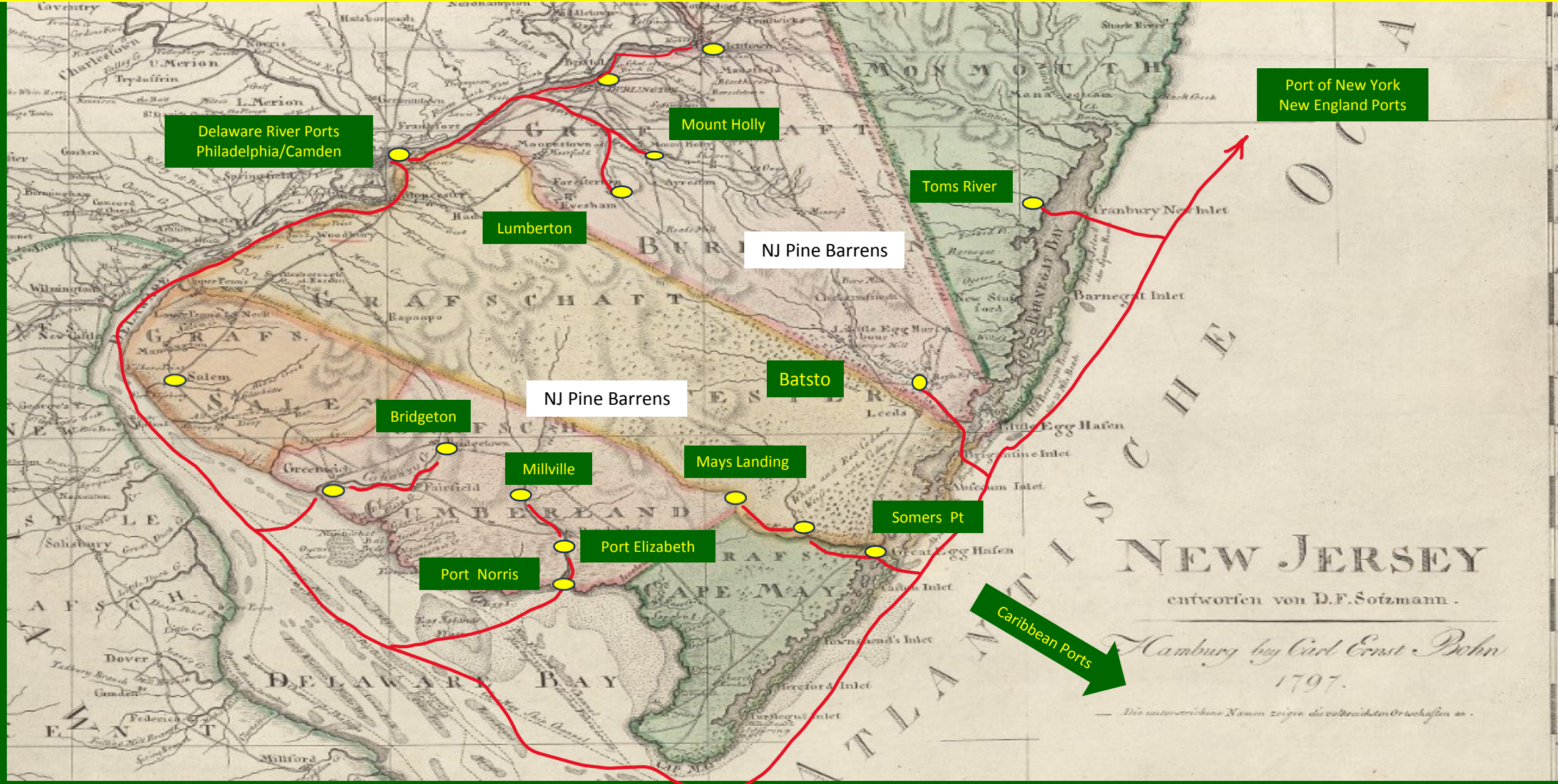
Tides and Currents Delaware River

As Published by the Pilots Association of the Bay and River Delaware



National Harbor of Refugee
Breakwater Delaware Bay

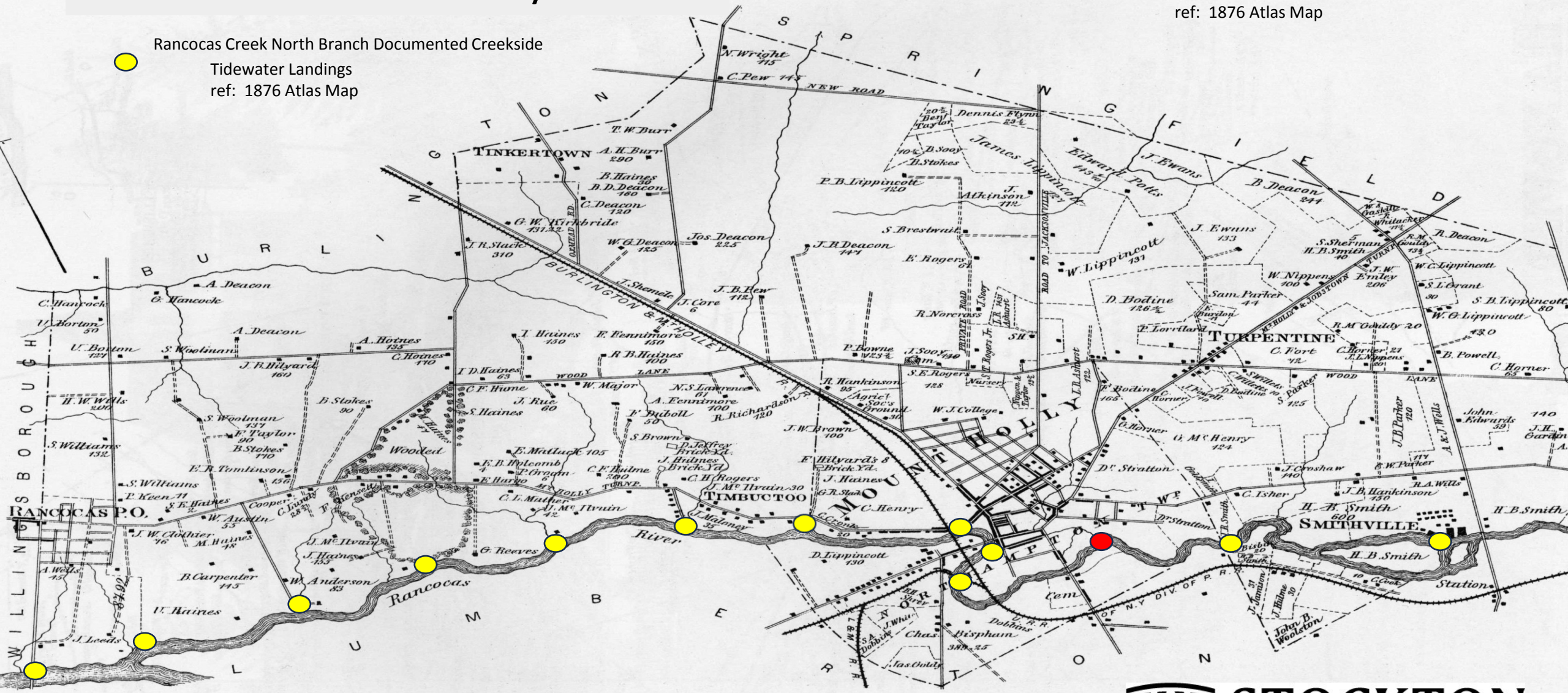
Pine Barrens Maritime Ports and Coast Wise Trade Routes



Almost 400 years of Maritime Trade & History

Rancocas Creek North Branch Documented Creekside Tidewater Landings
ref: 1876 Atlas Map

Rancocas Creek North Branch Head of Tide
ref: 1876 Atlas Map



STOCKTON UNIVERSITY

1884 Commercial Statistics Barge Movements Rancocas Creek to/from Port of Camden Philadelphia Harbor Delaware River

J.J. Allen and Sons (Texas Works)	12,000 tons fertilizer barged per year (2 - 4 barge movements weekly) Phosphorus
J.W. Paxson & Company	777 sand barges (100-300 tons each) year Removed/mined 100,000 tons of sand per year
J. W. Heuling (Centerton)	Recvd 3,000,000 feet of lumber, 500,000 shingles, 2,000 tons of coal and 500,000 plaster lathes
Mount Holly	3 saw mills/lumber yards, 1 grist mill, 2 foundry's, 1 canning factory, 5 shoe factory's, 4 carriage builders, 1 match (phosphorus) factory, 3 agriculture warehouses

Note Channel Lights 2022

Rancocas Creek Almost 400 years of Maritime Trade & History

Texas Phosphorus Works Centerton Main Stem Rancocas Creek. Here bone black from Port of Camden was barged into the site on a tethered tugboat. Sulfuric acid barges allowed this slurry to be manufactured into phosphorus. Over 800 tons per month of phosphorous was barged from the Rancocas Creek to Port of Philadelphia 1872 - 1890's

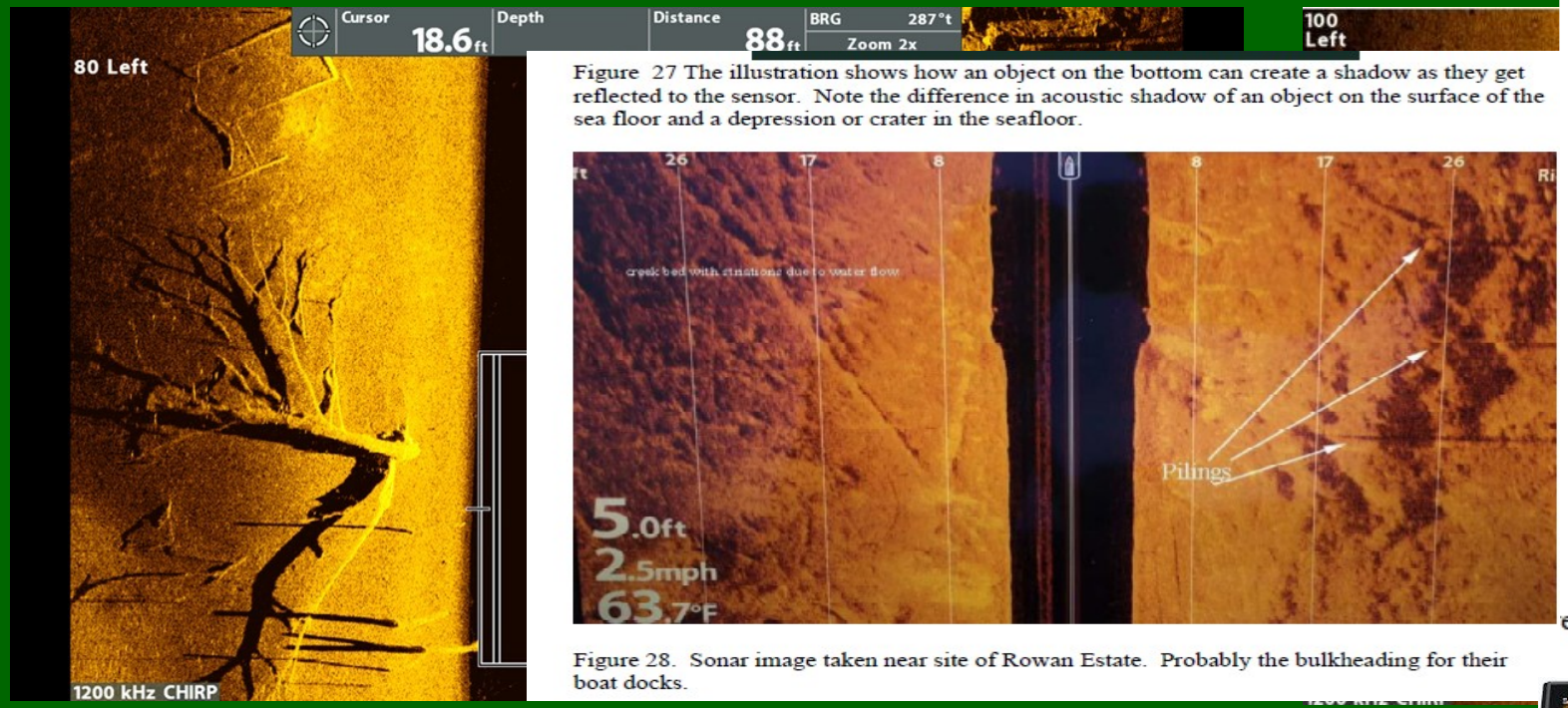
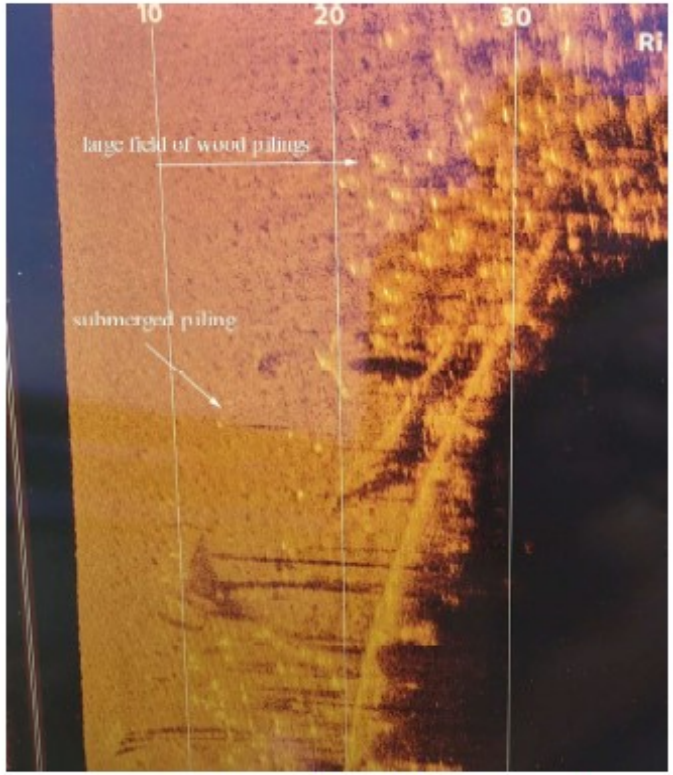
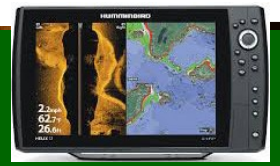


Figure 27 The illustration shows how an object on the bottom can create a shadow as they get reflected to the sensor. Note the difference in acoustic shadow of an object on the surface of the sea floor and a depression or crater in the seafloor.

Figure 28. Sonar image taken near site of Rowan Estate. Probably the bulkheading for their boat docks.



e 26 Sonar image of phosphorus plant bulkheading and piers or docks



HUMMINBIRD

STOCKTON UNIVERSITY

Interpretation

- Photograph
- Archival Research
- Student Site mapping
- Sonar imaging of creek
- Final Report

- Timeframe: April - July

STOCKTON UNIVERSITY

The Rancocas Creek Maritime Cultural Survey Final Report

Stephen Nagiewicz, Adjunct Professor, Stockton University
Student Researchers: Elizabeth Klein, Christina Price, Jessica Baroni, Nick Lang, Cassidy Vincent, Rachelle Falls and Travis Nagiewicz Special thanks to Sonar Expert and friend, Vince Capone for technical help.

Figure 1 Rancocas Creek. Areas of interest – Marine History

Introduction

Rancocas Creek can trace its history back to early Dutch Explorers who provided on of the first charts of the area in 1620. We now know that nomadic Indian Tribes like the Lenape have left traces of their presences back as far as 100,000 ago just after the melting of the Wisconsin Glaciation covering most of North America at that time. The sediment run-off

Figure 2. Small animal tracks along the creek are common to find.

from the glaciers melting made the alluvial plains of New Jersey. Rancocas Creek flows into the Delaware River not too far upstream from Philadelphia, making it an important transport of food, goods and people. Many of the first towns in New Jersey are located along its main stem and Northern and Southern Branches. The headwater travel down from western Ocean County and

NJ Pine Barrens National Reserve Tidal Waterways

New Jersey’s Pine Barren watersheds drain into New Jersey's tidewaters.

Rancocas Creek drains west from the Pine Barrens into the Delaware Rivers tidal estuary. Toms River flows east across Barnegat Bay Watershed into the Atlantic Ocean. Mullica River runs east into NJ’s Great Bay then into the Atlantic Ocean. Great Egg Harbor River streams into Great Egg Harbor then east into the Atlantic Ocean. Maurice and the Cohansey Rivers course into the Delaware Bay.

Rancocas Creek’s 360 square mile watershed, 60 year long clarion call, a bell-weather of grass root advocacy that questions, confronts and challenges conventional wisdom that for the greater good New Jersey’s Rancocas Creek should be designated a National Water Trail.

N Branch Rancocas Creek Low Tide Timbuctoo

Mark Thomas, Founder Rancocas Conservancy Rancocas Creek Ambassador

From Pine Barrens Natural Resources to Maritime Tidal Landings to Markets

NJ Pine Barrens geography influences the movement of people, freight, and information and these relationships to pine barrens tidal rivers and creeks to markets. Maritime cultural landscapes focus on the origin, destination, extent, nature, and purpose of mobility to reach markets.

Historic

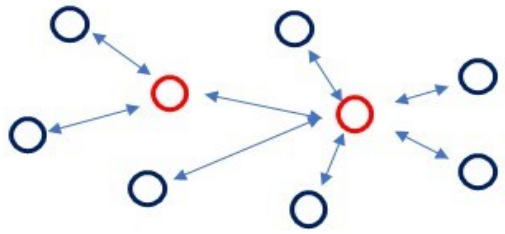
Social

Political

Economic

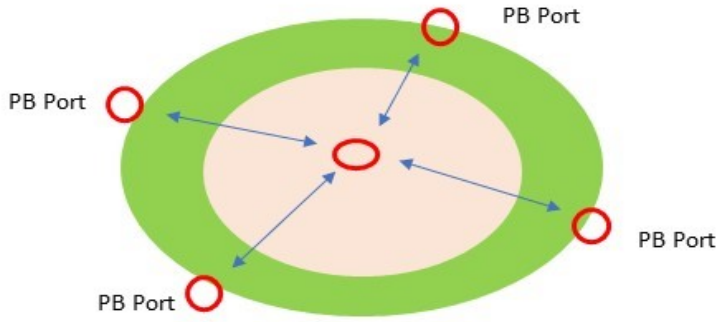
Environmental

NJ Pine Barrens natural resources from resource to local community and markets



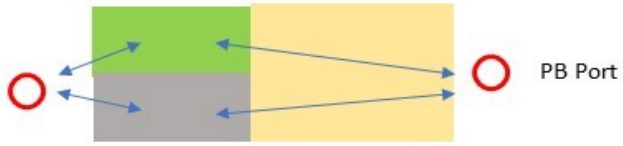
Local community other markets via waterway

Local community and Local markets



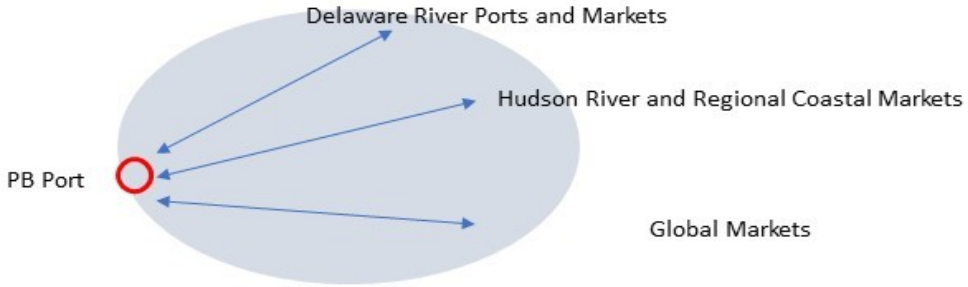
Market access via Tidal Rivers and Creeks

Local community to regional markets to PB Ports via overland routes.



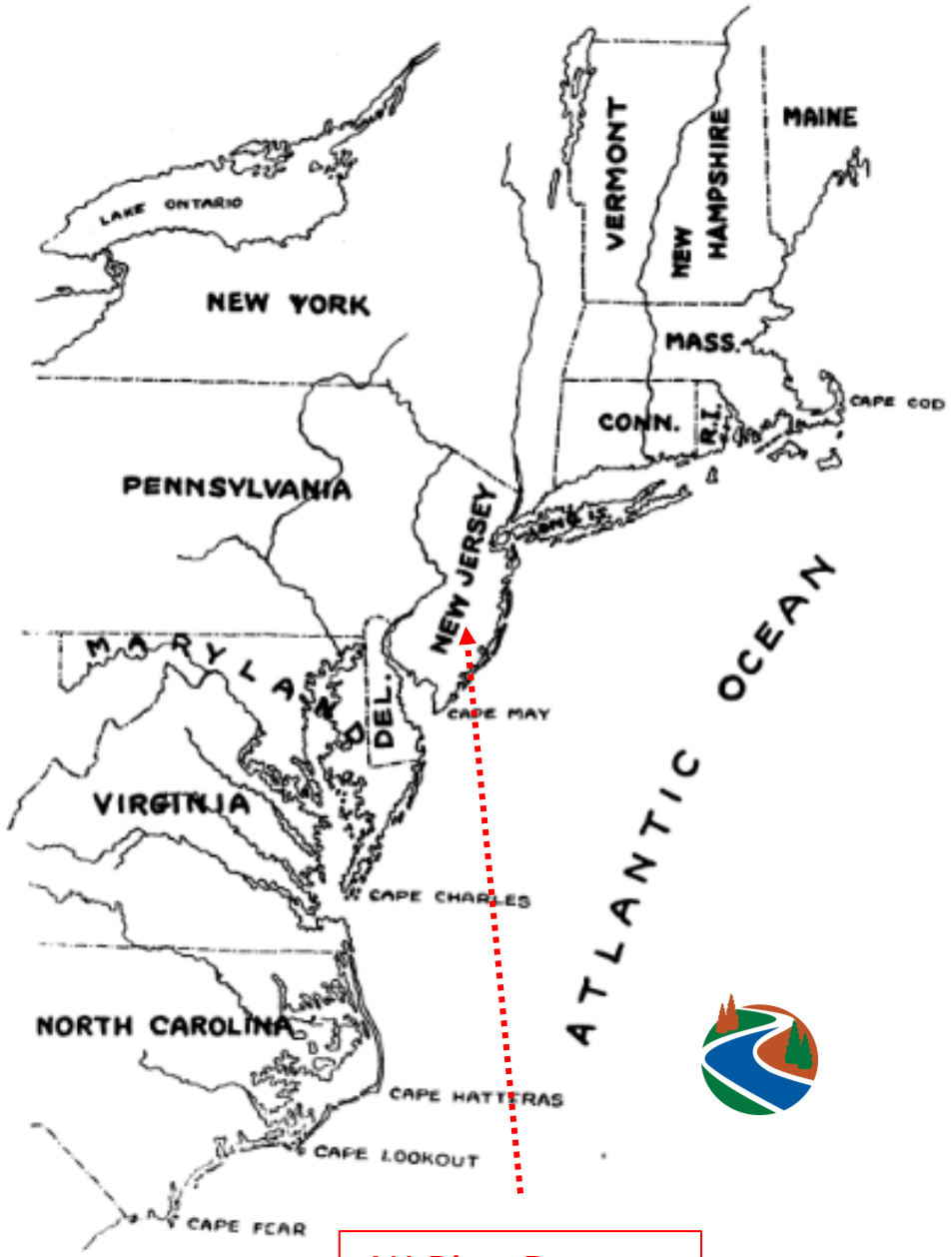
At times both overland and water routes

Local community to Regional and Global Markets



Market access via Coastwise and Ocean routes

NJ Pine Barrens National Reserve, America's First National Reserve



NJ Pine Barrens

Pine Barrens Pattern of Settlement

Three Phases of Human Settlement in the Pine Barrens:

1. Before 1840's - Coastal, tidewater and non-tidewater orientated settlement. Fishing, Whaling, Lumbering, Hunting and Gathering

2. After 1840's - Railroads influence settlement.

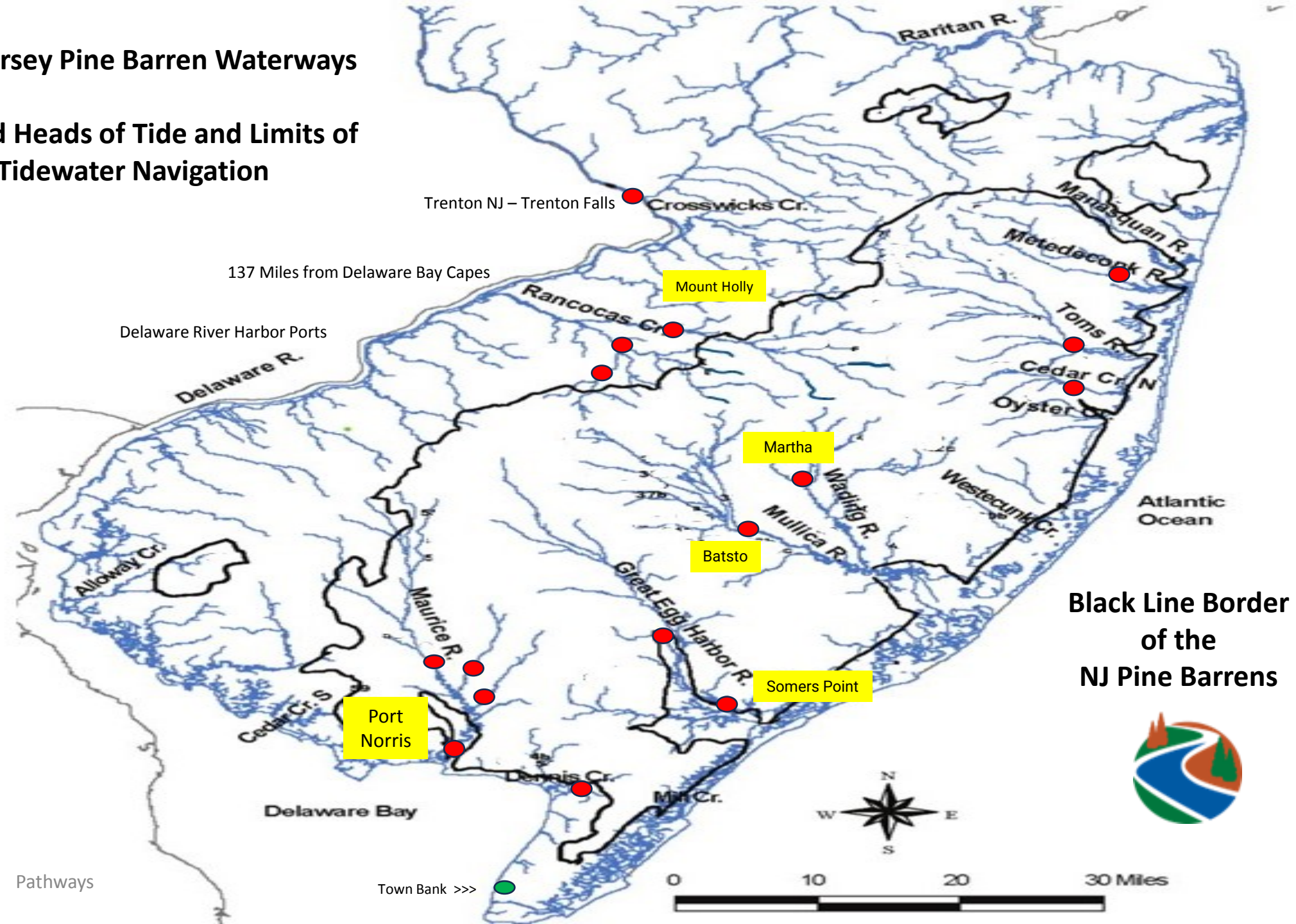
3. After mid 1900's - Highways and suburbanization.

The first two phases of NJPB settlement evolved directly from historic land use tied to harvest of available natural resources.

Reference NJPB Master Use Management Plan

New Jersey Pine Barren Waterways

Marked Heads of Tide and Limits of Tidewater Navigation

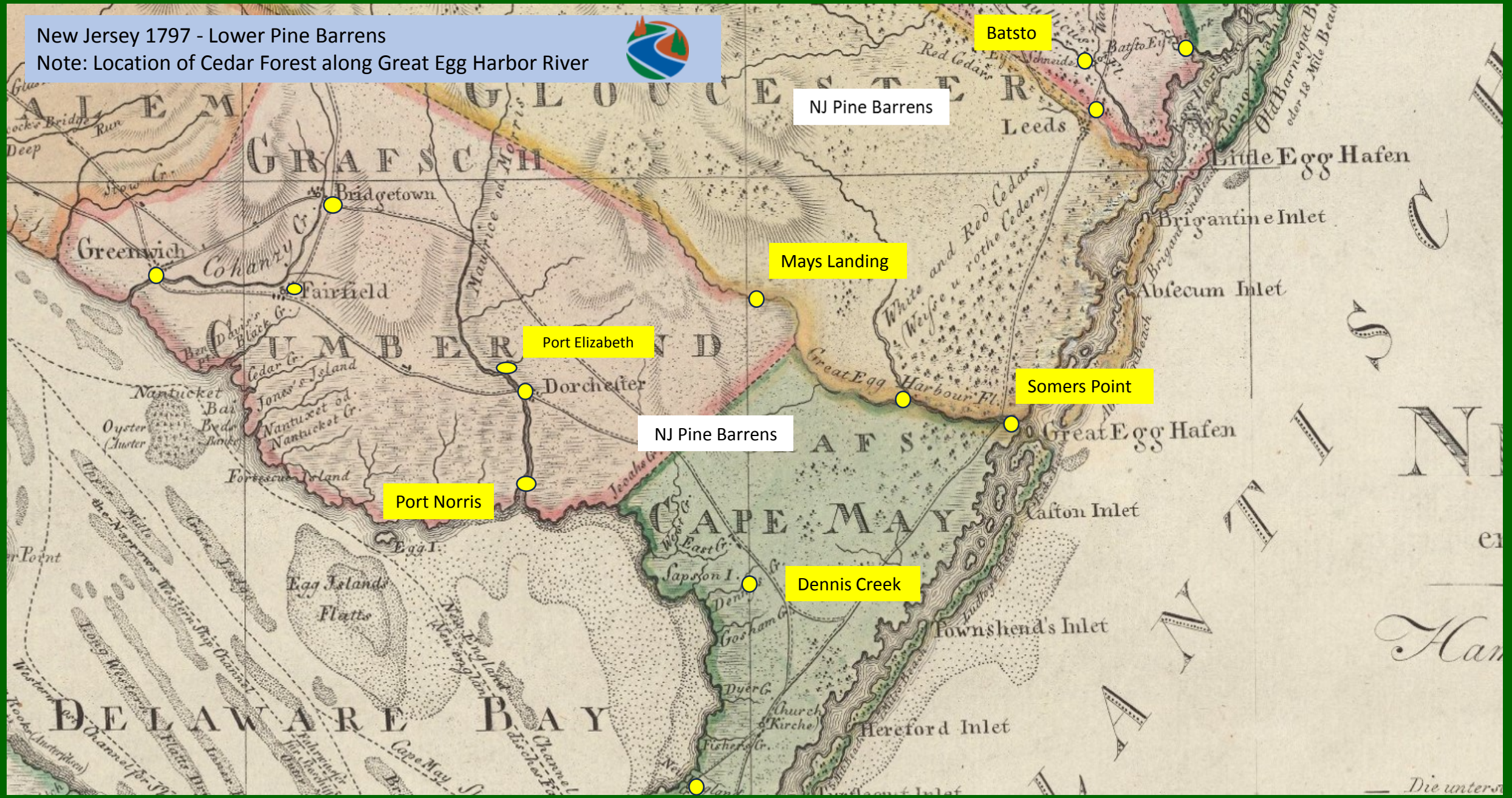


Black Line Border of the NJ Pine Barrens

Chesapeake Bay Maritime Museum

100 ton tug boat, Great Egg Harbor Inlet

Delaware, a tugboat built in Bethel, De., is a rare example of a typical early 20th century Delaware Bay tidewater tugboat. Built in 1912 by William H. Smith, it may be one two survivors. Large sailing vessels carrying cargoes of lumber, sand, wheat, fertilizer, and coal, were common on Pine Barren's tidewaters until the 1930's. NJ's Pine Barren's National Reserve tidewater rivers are narrow, shallow, meandering rivers with post-stamp landings. Tugs like *Delaware* met larger coastwise vessels and towed them nimbly into up and out of Pine Barren rivers landings and ports. Today tugs escort barges.


New Jersey 1797 - Lower Pine Barrens
Note: Location of Cedar Forest along Great Egg Harbor River
Batsto
NJ Pine Barrens
Leeds
Little Egg Hafen
Brigantine Inlet
Absecum Inlet
Bridgetown
Greenwich
Fairfield
Mays Landing
Port Elizabeth
Dorchester
Somers Point
NJ Pine Barrens
Great Egg Hafen
Port Norris
Caston Inlet
Egg I.
Egg Islands Flatts
Dennis Creek
Townshend's Inlet
Hereford Inlet
DELAWARE BAY
Nantucket Bar
Oyster (Auster) Beds
Fortescue Island
Jones's Island
Cedar Cr.
Nantuxet Cr.
Cohansey Cr.
Maurice or Morris R.
Great Egg Harbour Fl.
White and Red Cedars
Weysse v rothe Cedern
Sapson I.
Gosham Cr.
Dyer Cr.
Church (Kirche)
Fishers Cr.
Cape May
Channel for Ships
Western Ship Channel
Upper Middle the Narrows
Lower Middle
Cape May Shoal
Die unters

Wreck of the Schooner Weymouth

Located on the Clarktown Road, 1.3 miles south of its junction with Mays Landing Road at Gravelly Run Schoolhouse (visible only at very low tide).

"BLOW-OUT" TIDES of the Great Egg Harbor River lay bare the gaunt ribs of the two-masted schooner *Weymouth*. She has lain in her watery grave for nearly seventy-five years, anchored fast in the sands and mud of the river bottom.

Captain Samuel Gaskill built the *Weymouth* at his Mays Landing shipyards in 1868. She was a small vessel, only 57.8 feet in length with a beam of some 20 feet and displacing 59.75 tons.

Sailing under the hand of Captain William Barrett of Mays Landing, the *Weymouth* was a merchant craft, carrying foods, household goods, farm implements, and other staples between Philadelphia, Mays Landing, and other points along the South Jersey coast. In later years she sailed under the command of Captain J. T. Coleman.

It is said the *Weymouth* met her end when, after having been retired from the sea and moored at the old Deal's Point wharf near Mays Landing, several boys slipped her lines for a prank and she drifted on a sand bar, where she remained.

However, a newspaper account of the vanishing shipbuilding industry in Atlantic County, published in 1914 when the incident was still fresh in the minds of residents, tells a different tale.

The *Weymouth* was returning to Mays Landing with a load of housewares from Philadelphia. Almost home, and opposite Clarktown, a sudden thunderstorm broke and the vessel was struck by lightning, toppling her rigging. Strong winds drove the hapless vessel hard and fast into shoal water where she stuck sufficiently hard to resist all attempts at salvage. Her cargo removed, she was abandoned.

Mays Landing, English Creek, Patcong Creek, Nacote Creek, Chestnut Neck, and villages along the Mullica River were bustling shipbuilding centers from the late eighteenth century up to and including, in some cases, the present time. Craft built in Atlantic County of old could and did ply the Seven Seas. Two-, three-, and even four-masted craft were commonplace, and the shipwrights had the finest of materials right at hand: oak and Jersey cedar, cut from trees five and six feet in diameter. Jersey bog iron, with its famed no-rust quality, came from the furnaces at Etna, Weymouth, Gloucester, and Batsto to provide nails, bolts, rings, and other fittings for the craft. Masts for early ships were cut in the area, but later, as the supply of suitable timber dwindled, masts were imported from the Carolinas and elsewhere.

George May at "the Landing" is known to have built craft prior to the Revolution. An early deed of February, 1767, contains the phrase *"near the shipyard,"* referring to land along Patcong Creek. It establishes Great Egg Harbor as an early shipbuilding center.

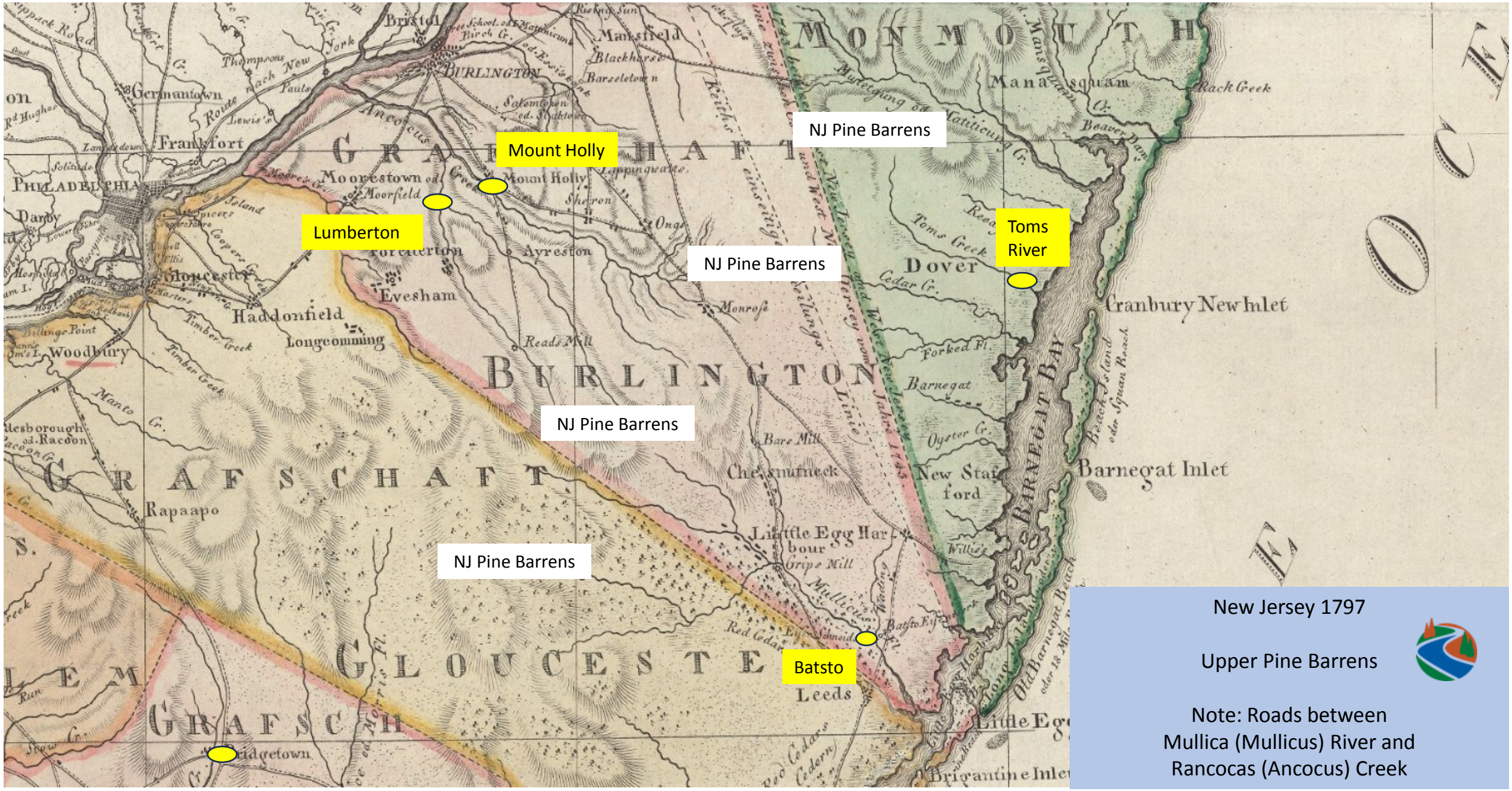
The *Olive*, a sloop skippered by Captain J. Bunker, appears in records of 1769, and Charles Steelman of Stephen's Creek built craft there before 1812. His will, dated that year, mentions "one vessel on the stocks, and plank and timber in the shipyard."

When the final thud of the "corking" hammer sounded, the last coat of paint was applied, and the last splice in the rigging made, such ships as the three-master, 138.9 foot schooner *Amanda C. Parker;* Schooner *Annie S. Gaskill;* three-master *21 Friends;* the *John Shay;* Schooner *License;* and scores of others slid down the ways in the Great Egg Harbor.

But the Age of Steam was at hand. . . . Sailing vessels, once proud, graceful possessors of the sea were doomed by "progress." More than two hundred major vessels had been built in little more than a century in Atlantic County, at least half of them near Mays Landing.

Finally, in 1885, Captain Gaskill built the three-master *Edward G. Taulane,* last wood vessel to be launched in Mays Landing. When she hit the water at the foot of her ways, an era ended.

Gaunt ribs of the Weymouth, exposed at low tide



New Jersey 1797

Upper Pine Barrens

Note: Roads between Mullica (Mullicus) River and Rancocas (Ancocus) Creek

Charles Read is credited with building the Batsto Iron Works along the Batsto River in 1766.

New Jersey in the Vanguard of Maritime Conservancy

July 11, 1959 Mullica River

NJ Department of Conservation and Economic Development confirmed the presence of sunken craft near Burlington County's Hermann City, a NJ shipbuilding center in the early 1800's. Howard I. Chapelle director of transportation of The Smithsonian Institution and advisor to the State of NJ said "coastal sailing vessels carried iron and glass products from Batsto Village to regional markets in the Mid-Atlantic and along the Eastern Seaboard".

Salvatore A. Bontempo Commissioner said of the work "Marine Archeology is still in its early stages, Our main objective is pursuing further research into maritime connections w New Jersey's early days".

Reference: NYTimes Newspaper 12 July 1959

Mullica River – Hermann City

Divers Search for Relics Hidden Under Mullica River

TRENTON—New Jersey's first underwater survey of boats and other relics is now underway in the Mullica River through the joint efforts of the New Jersey Department of Conservation and Economic Development and the Protection of Historic Sites (Underwater).

Conservation Commissioner Salvatore A. Bontempo says, "Marine archeology is still in the early stages. The organization known as POHS coordinates the advice of leading scientists, historians and educators in a technical and scientific operation of underwater retrieval. One of our main objectives in this endeavor is to recover and preserve relics now under water. The completed survey should aid historians in pursuing further research in connection with New Jersey's early days."

POHS, a non-profit organization, directed by Jackson Jenks of Roanoke, Va., already has confirmed the existence of portions of several sunken boats in the Mullica River. Jenks says that as small objects are recovered from the vessels by divers, the items will be properly tagged and preserved. Their location when found will be indicated on a scale map. "A research report and the map will be submitted to the state by POHS at the conclusion of the present

have offered their cooperation in this underwater project."

The program was initiated through the combined efforts of Mrs. Kathryn B. Greywacz, director of the New Jersey State Museum; Dr. Dorothy Cross, New Jersey archeologist, and the State Department of Conservation and Economic Development.

Divers throughout the United States have been invited by Jenks

⇒

to participate in the project during the summer months. In putting the volunteer skin divers to work, emphasis is placed on diver safety by POHS. Applicants are put through a series of tests in the shallow water of the upper reaches of the River before they are permitted to enter the deeper water where tides are stronger. Mud beneath the amber cedar waters of the Mullica makes it necessary for divers to work by feel rather than sight.

Because the work is carried on underwater and frequently in rather inaccessible stretches of the River, Mrs. Atkins indicated that at present there is little of interest for the general public. "Eventually," she added, "the state will place some of the relics on display for visitors to the Wharton Tract."

Dr. Camishion Opens Philadelphia Office

INSPECT RELIC—The State Department of Conservation and Economic Development and the non-profit Protection of Historic Sites organization have started charting all sunken vessels in the Mullica River. Jackson Jenks of Roanoke, Va., POHS director (left) and Commissioner Salvatore A. Bonterpo here inspect a block and sheave from an old sailing ship, believed to be the Argot of the 1800s. (AP Wirephoto.)

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Batsto Citizens Gazette of 1987, R. Craig Koedel "Mullica River Ships In The Age Of Sail." p1 of 2

Among the early industries along the Mullica River was shipbuilding. The building of ships was significant, especially along Nacote Creek. Shipyards also dotted the riverbanks at Batsto and Pleasant Mills, at Green Bank and Lower Bank. They stood along the tributary Bass and Wading Rivers, and on the shores of Great Bay at Leeds Point and Smithville. Other sites were at Weekstown, Clarks Landing, Great Swamp, New Gretna, and Little Egg Harbor.

The earliest vessel built in the area was a 54-ton sloop, the *Harriot,* raised in 1794 at Galloway. A second vessel was the 175-ton ship *Ohio,* built in 1799. The Van Sant shipyard at the Forks of the Little Egg Harbor dates to 1760, when John Van Sant purchased a tract from Richard Wescoat. Around 1791,Van Sant left the Forks and opened a yard along the Bass River at New Gretna. A Bass River sloop, the 52 -ton *Friendship* appears in a list of registered vessels in 1800.

According to the registry for the Port of New York, a 61-ton schooner, the *Batsto* was constructed at the iron village in 1804. This is the first vessel of Pleasant Mills/Batsto origin that can be officially documented. Pleasant Mills was a building site in 1833 with the 63-ton schooner *Elizabeth.* Ship production at Batsto and Pleasant Mills gained momentum in the 1830s, a decade in which five vessels, ranging in size from 63 to 134 tons, were built. The community reached its stride as a minor shipbuilding center during the 1840s, with a total output of eight vessels.

Batsto Citizens Gazette of 1987, R. Craig Koedel "Mullica River Ships In The Age Of Sail." p2 of 2

"The 1836 schooner *Atsion* raised at "Batsto Furnace," was presumably for Jesse or Samuel Richards. The *Atsion,* embarking from the Mullica River, carried cargo to and from New York City and the Hudson Valley. The 134-ton schooner *Emeline Peterseon* and the smaller schooners *Phoebe* and *Margaret* were built at Pleasant Mills. Jesse Richards financed the building of the *Stranger* in the amount $3,000. This 90-ton schooner was launched at Batsto in 1840. Schooner *Freylinghuysen* was built and launched at Batsto, followed in 1846 by the *John Wurtz*. *Mary* was built in 1839 at Lower Bank. The vessels were engaged primarily in carrying iron products, glass, and lumber to New York and Philadelphia, bringing back supplies for the village on their return voyages. The demise of the bog iron industry and the coming of the railroad seem to have marked the end of shipbuilding.

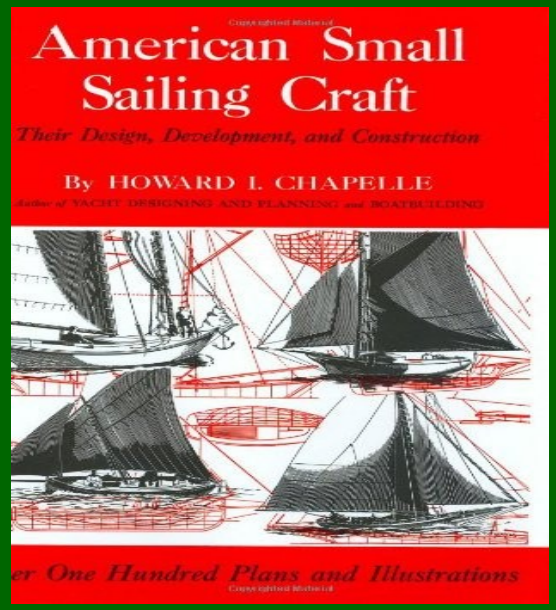
Nacote Creek was emerging as something of a major center, where 18 registered vessels totaling 1700 tons were built in the 1830s. The *Martin Van Buren* (1830), the *Pearl* (1834), and the *Rebecca* of Nacote Creek, traded in and out of Batsto. The average size of these three schooners was 78 tons. Earlier, in 1825, Nicholas Van Sant had erected a shipyard in Port Republic, thereby establishing the Van Sants as the leading shipbuilding family. By far the average tonnage of vessels attributed to Nacote Creek was greater than that for Port Republic. Bass River had a total production of 17 vessels between 1800 and 1880, eight of which exceeded 100 tons.

The shipbuilding industry in a region encompassing the Mullica River, its tributaries, Great Bay and Little Egg Harbor Bay accounted for the construction of approximately 170 vessels between 1790 and 1890. Their total capacity exceeded 18,326 tons, or an average 120 tons per vessel. These figures translate into a century of toil, occasional economic distress, and profits for a multitude of our South Jersey forefathers and their families.

Howard I. Chapelle Biography

Chapelle was born on February 1, 1901. In 1936 he became the survey director as the **New England Works Progress Administration's Historic American Merchant Marine Survey (HAMMS).** Here he documented the design and technical evolution of vessel types by making measured drawings of existing vessels, ship models, and builders' half models; by making a photographic record of significant vessels; and by compiling written data of America's maritime commercial and sailing vessels. In 1957 he became Curator of the Division of Transportation at the National Museum of History and Technology, The Smithsonian Institution and then transitioned to the role of senior historian. Retiring in 1971 he was uniquely honored as the historian emeritus. His book *American Small Sailing Craft (1951) is considered a classic among boat builders to this day. Howard I. Chapelle was author to numerous articles and books on America's maritime vessels and heritage*

Nautical Quarterly #40 Winter 1987 p 110
Author Peter Spectre



Historic American Merchant Marine Survey

Reference: Howard I. Chapelle ***American Small Sailing Craft (1951)***

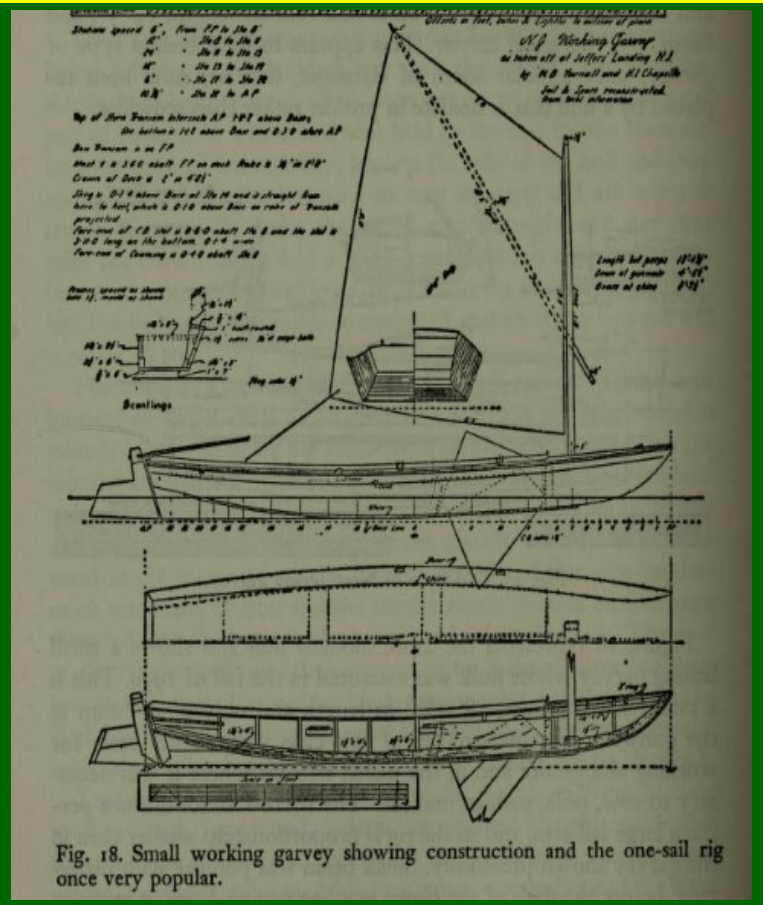
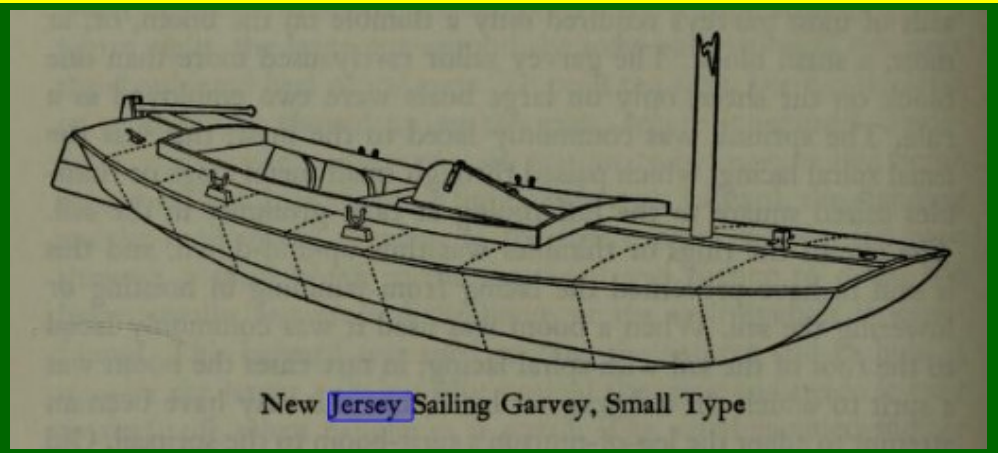


Fig. 18. Small working garvey showing construction and the one-sail rig once very popular.

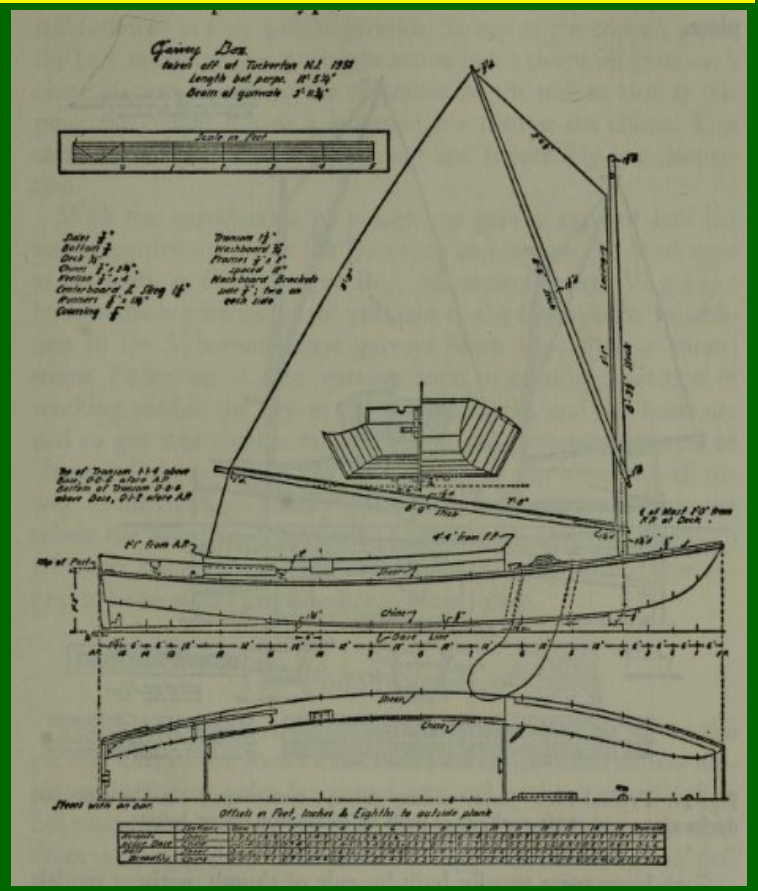
Tuckerton



New Jersey Sailing Garvey, Small Type

lantic, and Cape May. The center of this building, however, was at Tuckerton and its immediate vicinity. The garvey was also built inland, on the numerous creeks and streams running to the eastern bays.

The garvey varied a good deal in size, owing to the needs of the boat's employment. On inland waters the garveys were often large scows or pontoons, which could be used in the transport of farm produce and freight on narrow streams. Another class was used in fishing in the creeks and for tonging oysters close to home, or in clamming. These boats were commonly unrigged and form the class locally known as "rowing garveys." The most common size of



Great Egg Harbor

The Historic American Merchant Marine Survey was a program under the Works Progress Administration. The survey is held at the Smithsonian Institution's Museum of American History, Transportation Division. In 1931 NJ Coastal Vessels included in the Survey were constructed w NJ Pine Barren's Timber. By 1951 there were no records of an active NJ Sailing Garvey. Chapelle considered the NJ Sailing Garvey an "extinct" vessel.

Jersey Devil vs Rancocas Creek Pirate Ghosts

TRENTON EVENING TIMES, THURSDAY, FEBRUARY 28, 1929

Bucto Ghost Leads Old-Timers To See Dead Hand of Slain Pirate Clutching from Misty Bonny Lea

The dead hand of a murdered pirate, who died with his boots on and in his sins, reached out today to put a clammy mark on the imaginations of residents of Bucto as an explanation of the ghost who, or which, has been troubling the slumbers of Walter C. Treichler, retired chemist.

Old residents, at least those who can be induced to talk about it, will relate how the quartermaster of the "Bonny Lea" barque, out from the Windward Islands and flying the Jolly Roger, was pistoled through the back by fellow-members of his crew to guard forever a Spanish plate treasure buried somewhere in the sands of what is now Burlington County.

It happened in the first third of [illegible] century, the tale goes. Like book, the curious will be told with bated breath the account of the hell-ship, where nothing was sacred that a sword or a gun could not guard.

With all sails standing, the barque stood in past the Delaware Capes, blown completely off its course after a cruise near the Carolinas. Backing and filling, it veered its course up the Delaware River, its rigging rotten, its water butts foul and its bottom overgrown with parasites.

Reaching the neighborhood of Rancocas Creek, its helm virtually untended, the ship cast anchor and the crew of drunken, yelling demons took to the small boats. In the captain's craft, the ship's long boat it was, so the tale goes, was a huge chest.

[illegible] was a huge chest.

Winding their way up the Rancocas Creek, the progress of the boats was punctuated with shots, shouts and the hurling of empty rum bottles into the water. At length the captain's boat, which led the yelling procession, ground its nose on the soft beach and the other craft followed him to the strand. Many willing hands lifted the captain's chest, heavy with loot, to the incline of muddy beach. The gang plunged inland through a dense mass of tangled undergrowth.

According to a pre-concerted plan, lots were drawn to determine whose would be the ghostly hand that should haunt the treasure to prevent his fellows from returning alone to dig up the chest. A Spanish playing card was fastened to a tree and a distance measured. A line was drawn and each member of the crew, the last being the captain, tossed his dagger at the mark. The quartermaster was the unlucky one.

Even hexing is given credence. A story is told of an old woman who had the spirits of the air for her friends and who could bewitch anything or anyone.

Ghost Now Shy

An all night seance at Treichler's home, however, struck the ghost with shyness. A group of people, spending the night at the haunted house, heard nothing and saw even less. Even the presence of a spiritualistic medium failed to coax the ghost from the wings. He, or it, evidently had stage fright. Emil Luquet, of Beverly, N. J., was the medium. He coaxed, cajoled and even threatened the ghost, but nothing happened.

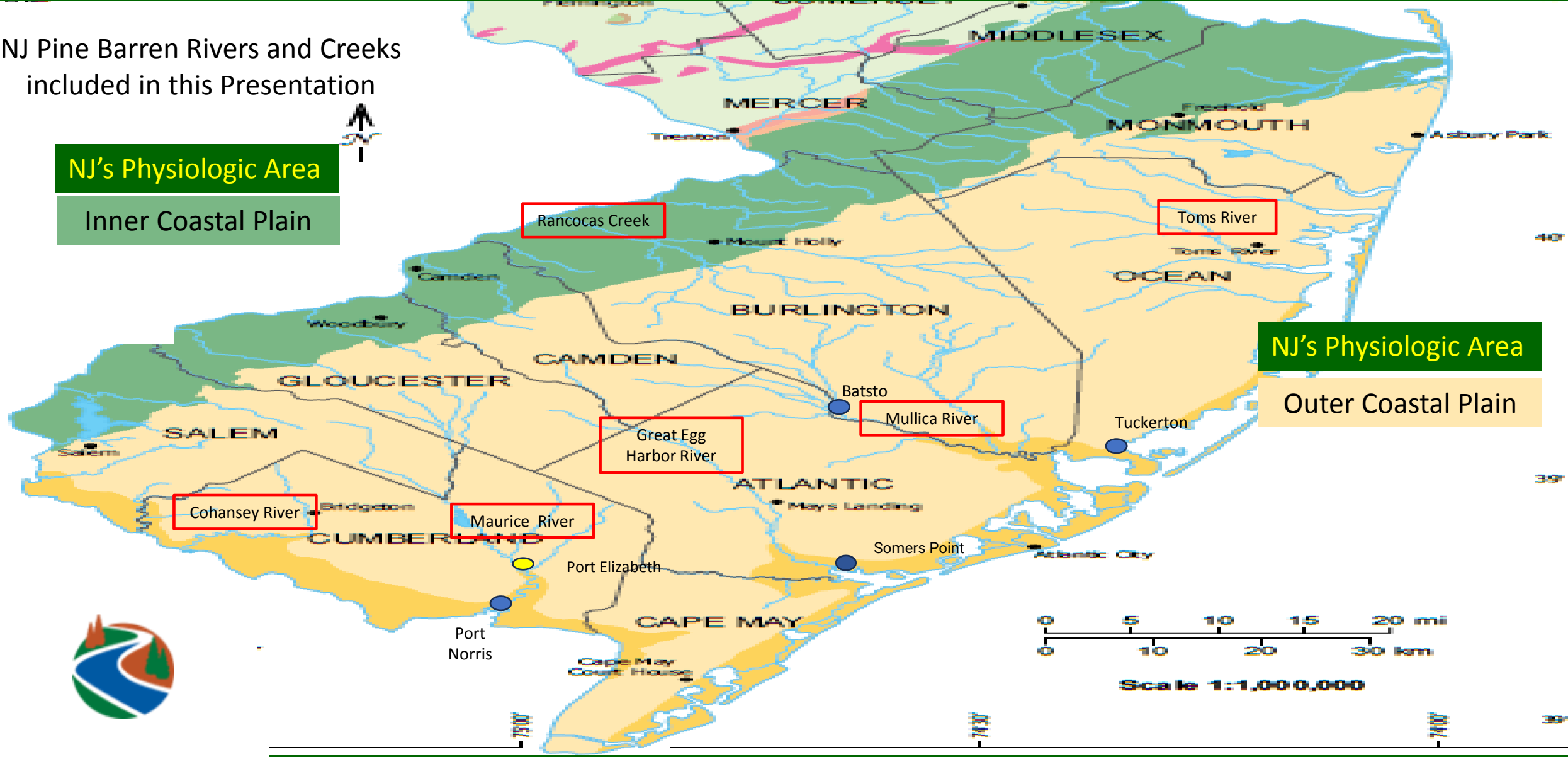
Hard-headed residents of Mount Holly do not place any stock in Treichler's ghost, which for two weeks, he says, has made mysterious noises about his new home on the Rancocas Road and has opened every lock in the house at night. The residents have heard these tales before. Some explain that the shrinking of boards and plaster could easily account for the squeaks and groans which have become the "ghost of Bucto."

The wind can bang a shutter against the side of the house and at night make it sound like an explosion. Taut nerves, played upon by the fingers of superstitition, can sing a crazy song even in a sane brain, when it is dark outside and when the world seems millions of miles away through a mist.

Silence, Preserve Thee Resting Souls

Creek Access Wood Road - Timbuctoo - February 2021

NJ Pine Barren Rivers and Creeks included in this Presentation



This flip-book enhances public awareness that promotes public access that protects the diverse culture, history, heritage and natural history of New Jersey's Pine Barrens, the Mid-Atlantic and the United States.

Detailed Descriptions NJ Pine Barrens National Reserve Maritime Cultural Landscapes
p. 41 - p. 450

Part One — p. 41 to p. 86

Part one highlights how the Pine Barrens maritime cultural landscapes (MCL's) are complex, dynamic, and evolving relationships of people, the tides and the sea. Part one explains, beyond shipwrecks, the roles of class, race, culture, and industry in the Pine Barren's National Reserve MCL's.

Part Two — p. 87 to p. 404

Part two shows how people have shaped the maritime environment and, in turn, how the maritime environment shapes a holistic and multi-layered human society.

Part Three — p. 405 to p. 450

Part three explores the diversity of human experiences, behaviors, and interactions with the pine barrens tidal waterways that form New Jersey's and associated maritime systems, from far inland waters to across the global ocean.

Pine Barren Timber Floated on Rancocas Creek to Mount Holly Mill for Lumber

Part One

<<< Pine Barrens

Delaware Bay

Delaware Capes

Maritime cultural landscapes (MCL's) help us understand the complex, dynamic, and evolving relationships of people and the sea. Beyond shipwrecks, MCL's investigate the roles of class, race, culture, and industry.

What Are the NJ Pine Barrens ?

NEW JERSEY PINE BARRENS

The New Jersey Pinelands National Reserve is one of the largest tracts of unbroken forest in the eastern United States.

PINE

OAK

CEDAR

Pinelands are made up of dense forests of Pine, Oak, and Cedar

The Pine Barrens covers roughly **22%** of New Jersey's land area

HOME TO:

850
PLANT SPECIES

500
ANIMAL SPECIES

NJ Pine Barrens National Reserve

America's First National Reserve

PINELANDS NATIONAL RESERVE

1921 - 5th Grade School New Jersey History Test

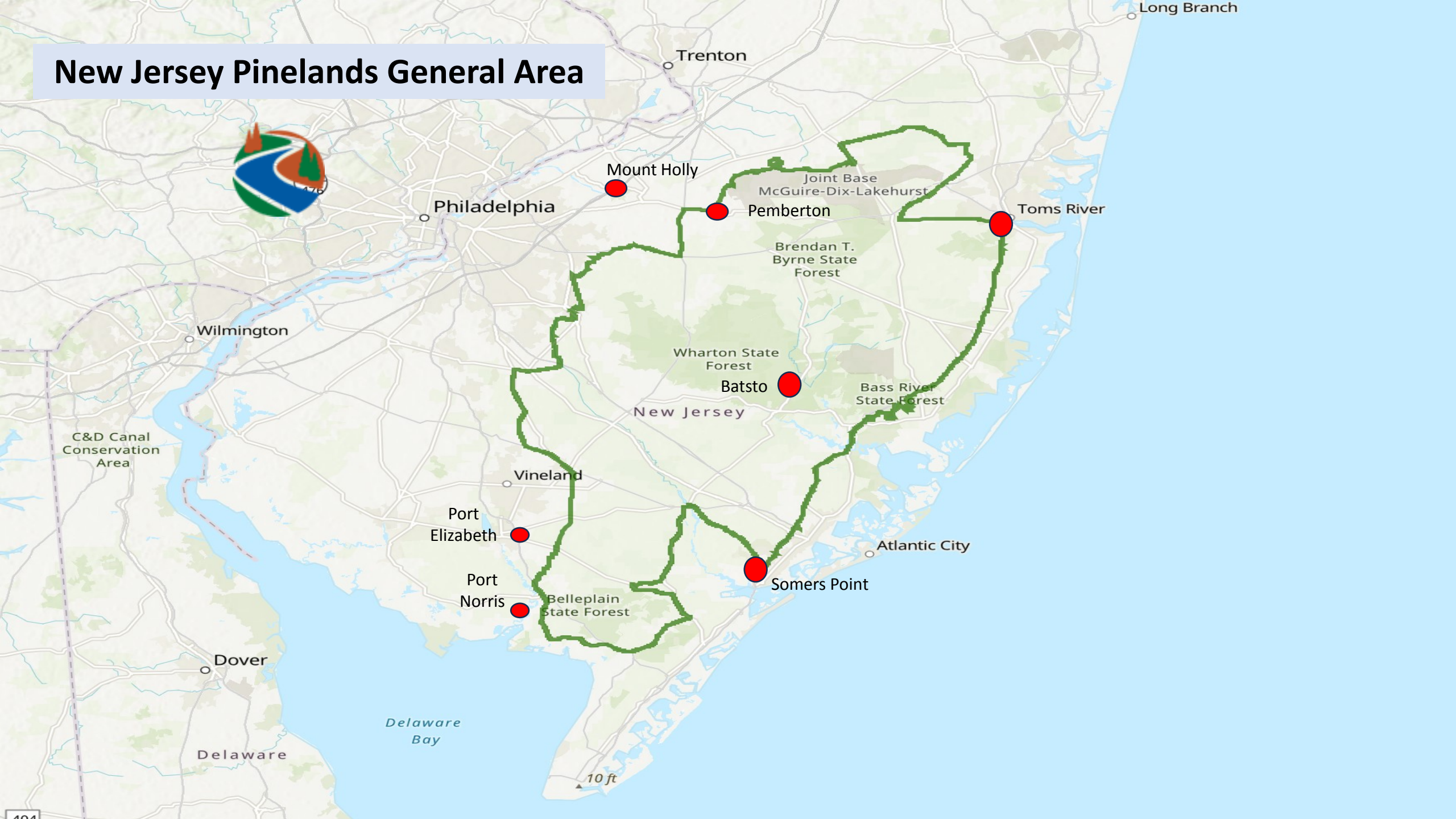
We need physical remainders of our past. Water trails provide a refreshing collaborative awareness of intimacy of community, history and heritage. A water trail provides a bridge to our past, present and future that is impossible to achieve with the written and spoken word. Water trails allow a sense of ownership in enhanced multi-use public access.

Where did Congress have its sheet-iron for army camp kettles made in May, 1775? At Mount Holly, five tons being required.

4

Why was New Jersey in 1694 prohibited from shipping her timber to any other country than Great Britain? Because the latter wanted to monopolize ship building, which the colony begun in 1683—Burlington and Salem having ship-yards. Amboy gave one of her town lots as a prize to the man who built the first sloop there.

New Jersey Pinelands General Area



Libels Filed in New Jersey Maritime Court, 15 July

To all whom it may concern:

New-jersey, *ss.* Notice is hereby given, that a Court of Admiralty will be held at the house of Zachariah Rossel in Mountholly, on Wednesday the fifth day of August next, at ten o'clock in the forenoon of the same day, then and there to try the truth of the facts alledged in the bills of Timothy Shaler,[1] (who as well, &c.) against the sloop or vessel called the *Speedwell*, lately commanded by Charles Ellis: Of Samuel Ingersoll,[2] (who as well, &c.) against the schooner or vessel called the *Lovely Nancy*, lately commanded by William Moore; the sloop or vessel called the *Betsy*, lately commanded by Arthur Harper; the schooner or vessel called the *Molly*, lately commanded by Joseph Pearson; the sloop or vessel called the *Alexandrine*, lately commanded by John M'Neal; and the vessel called the *Sun*, supposed to be a dogger, lately commanded by one Garland: Of Abraham Boys, (who as well, &c.) against the sloop or vessel called the *Chance*, lately commanded by James Neill; and the sloop or vessel called the *Elizabeth*, lately commanded by John Stedham: Of Joseph Wade,[3] (who as well, &c.) against the sloop or vessel called the *Duck*; and the sloop or vessel called the *Betsy*; with their respective tackle, apparel, furniture and cargoes: To the end and intent that the owner or owners of the said vessels respectively, or any person or persons concerned therein, may appear and shew cause, if any they have, why the said vessels and their cargoes should not be condemned according to the prayer of the said bills.

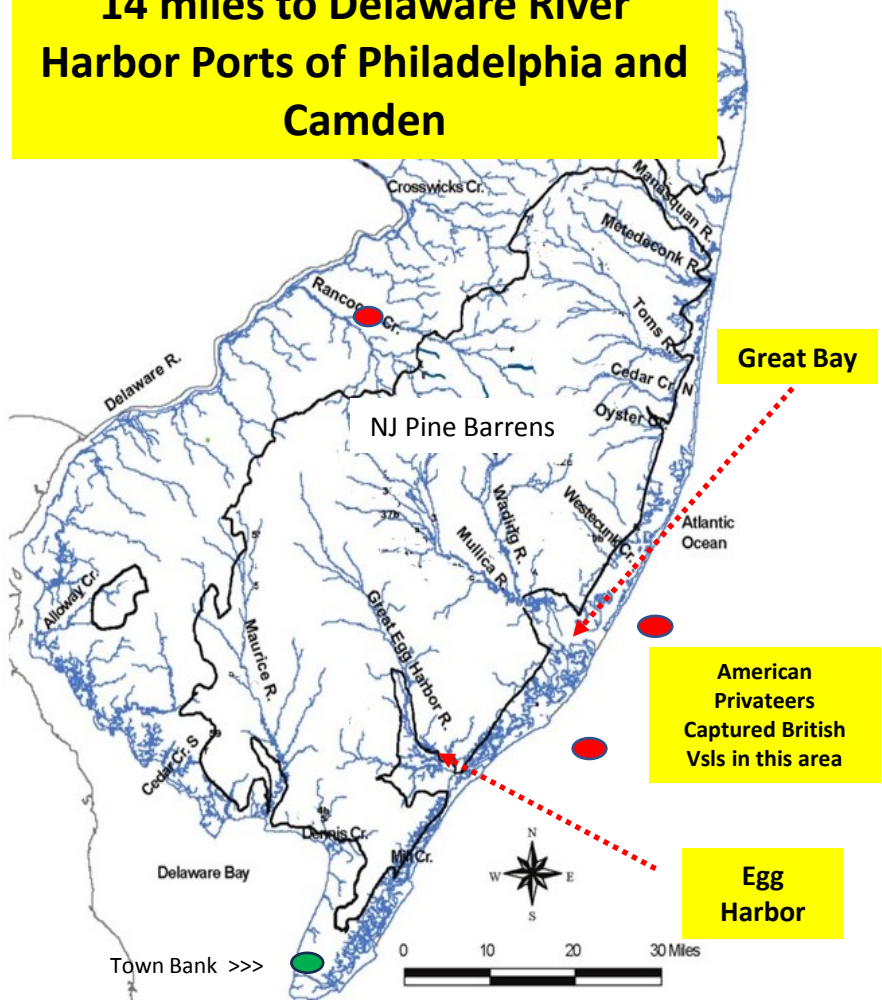
By order of the judge,
BOWES REED, Pro. Reg.[4]

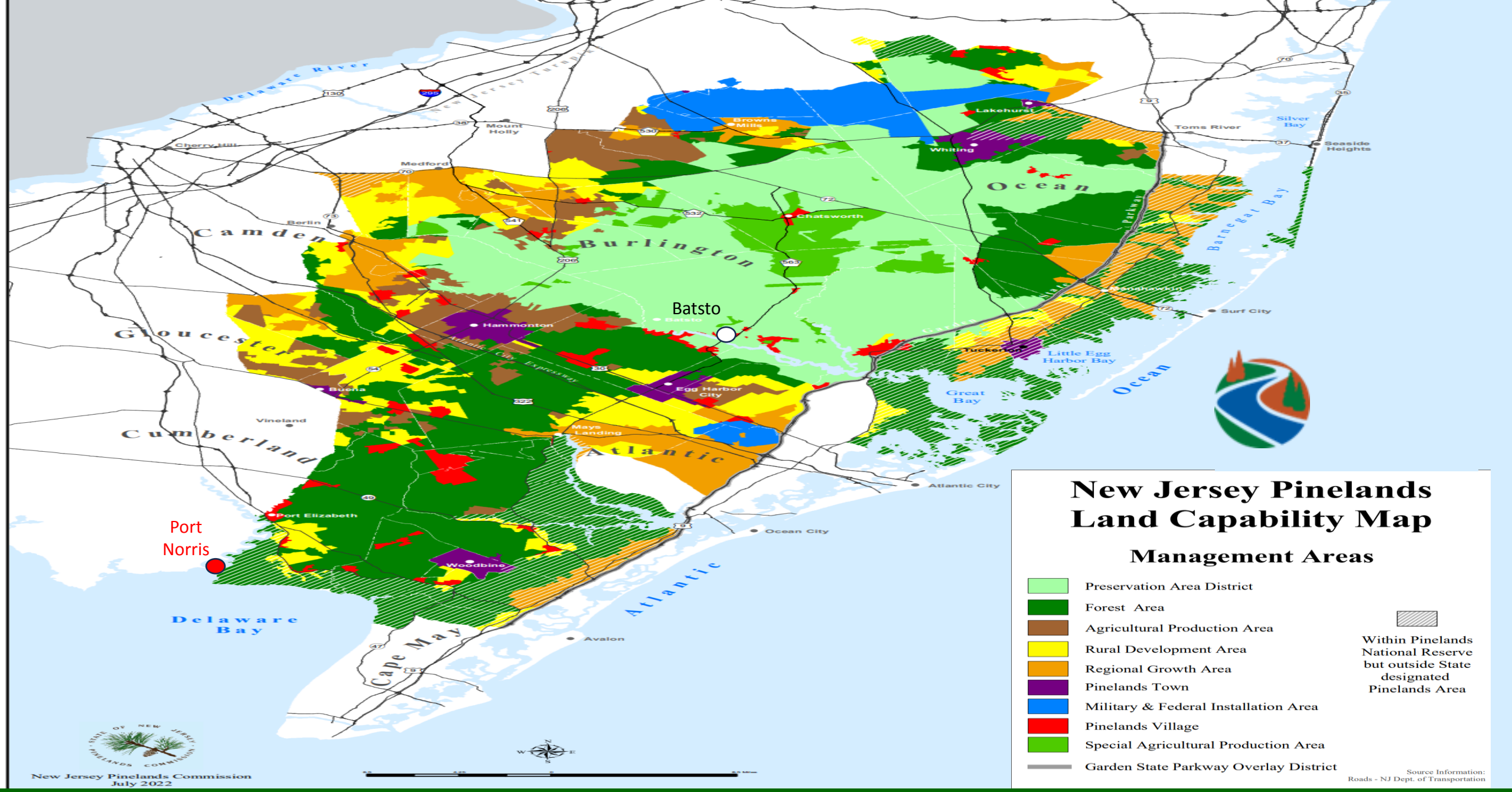
July 15, 1778

The New-Jersey Gazette (Trenton), 22 July 1778.

1. Timothy Shaler, of Gloucester, Massachusetts, commanded the New Jersey privateer boat *Chance*, guns and crew not stated, commissioned on 20 Mar. 1778. DNA, PCC item 196, vol. 2, p. 92.

Mount Holly - Head of Tide
14 miles to Delaware River Harbor Ports of Philadelphia and Camden




Batsto
Port Norris
Delaware River
Delaware Bay
Atlantic Ocean
Camden
Burlington
Gloucester
Cumberland
Cape May
Medford
Mount Holly
Cherry Hill
Berlin
Hammonton
Batsto
Chatsworth
Whiting
Lakehurst
Browns Mills
Toms River
Seaside Heights
Silver Bay
Barnegat Bay
Surf City
Tuckerton
Little Egg Harbor Bay
Great Bay
Egg Harbor City
Mays Landing
Atlantic City
Ocean City
Avalon
Port Elizabeth
Buena
Vineland
Woodbine
Garden State Parkway
Atlantic City Expressway
New Jersey Pinelands Land Capability Map
Management Areas
Preservation Area District
Forest Area
Agricultural Production Area
Rural Development Area
Regional Growth Area
Pinelands Town
Military & Federal Installation Area
Pinelands Village
Special Agricultural Production Area
Garden State Parkway Overlay District
Within Pinelands National Reserve but outside State designated Pinelands Area
Source Information:
Roads - NJ Dept. of Transportation
New Jersey Pinelands Commission
July 2022

NJ Pine Barrens coastal, tidewater and non-tidewater river orientated settlement

Native Americans used natural resources in a sustainable manner and fashion.

Early European settlers and American Colonists used natural resources for settlement and market growth.

These communities exploited, overharvested and destroyed natural resources.

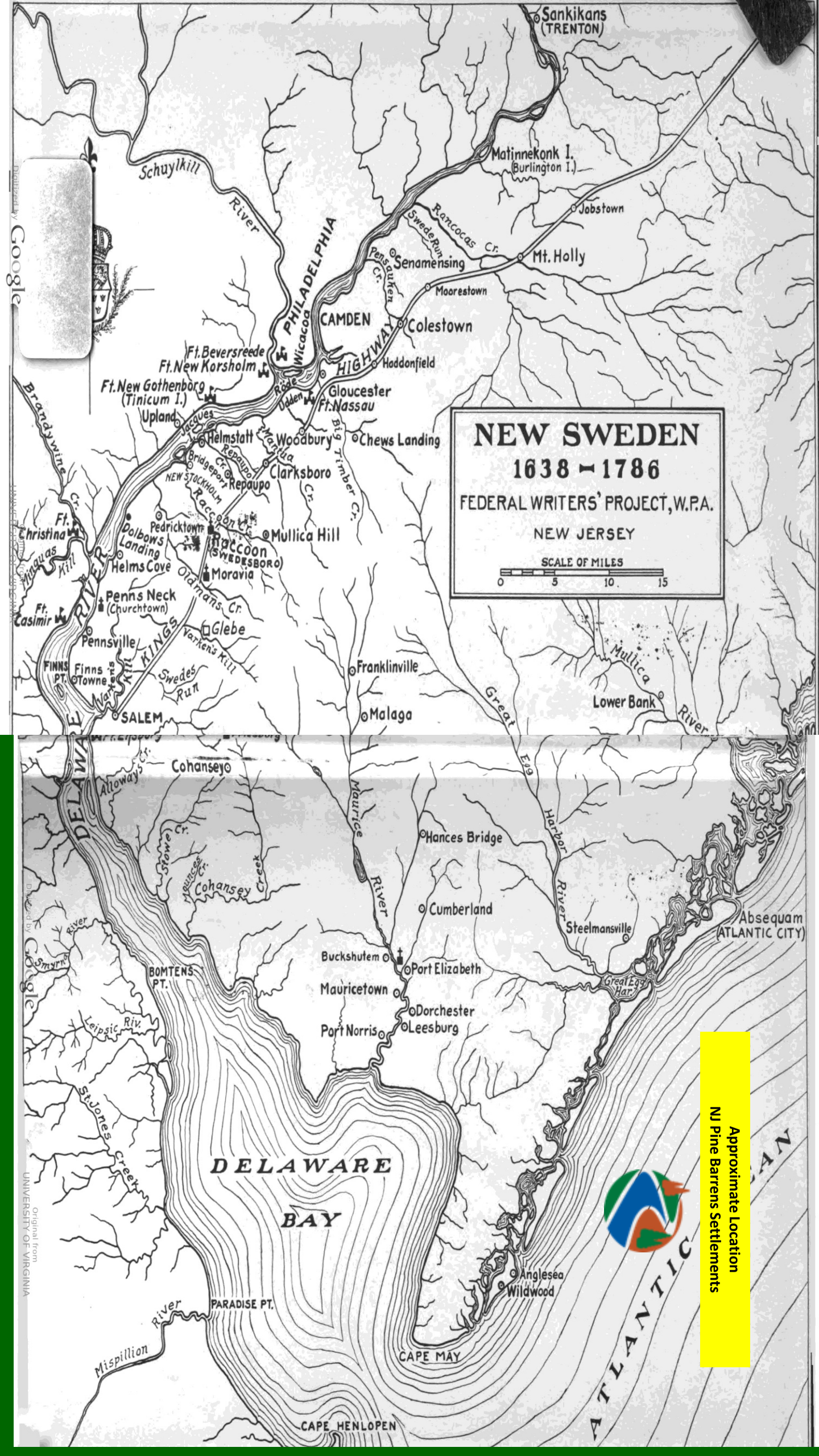
Major rivers and waterways provide ship-building sites and transportation access to larger markets.

Smaller waterways provided communities w inexpensive hydropower and tidal power for mills and local/regional economies.

Interior communities (like - Mount Holly, Batsto) served as a transportation link and market node between inland resources, industries, coastal markets, coastwise trades and seaports.

NJPB natural resources over exploited so by mid and late 19th century NJPB industries and communities collapsed.

S Branch Lumberton



Approximate Location
NJ Pine Barrens Settlements

Digitized by Google
Original from UNIVERSITY OF VIRGINIA

Origins of NJ Pine Barrens National Reserve

Maritime Cultural Landscapes

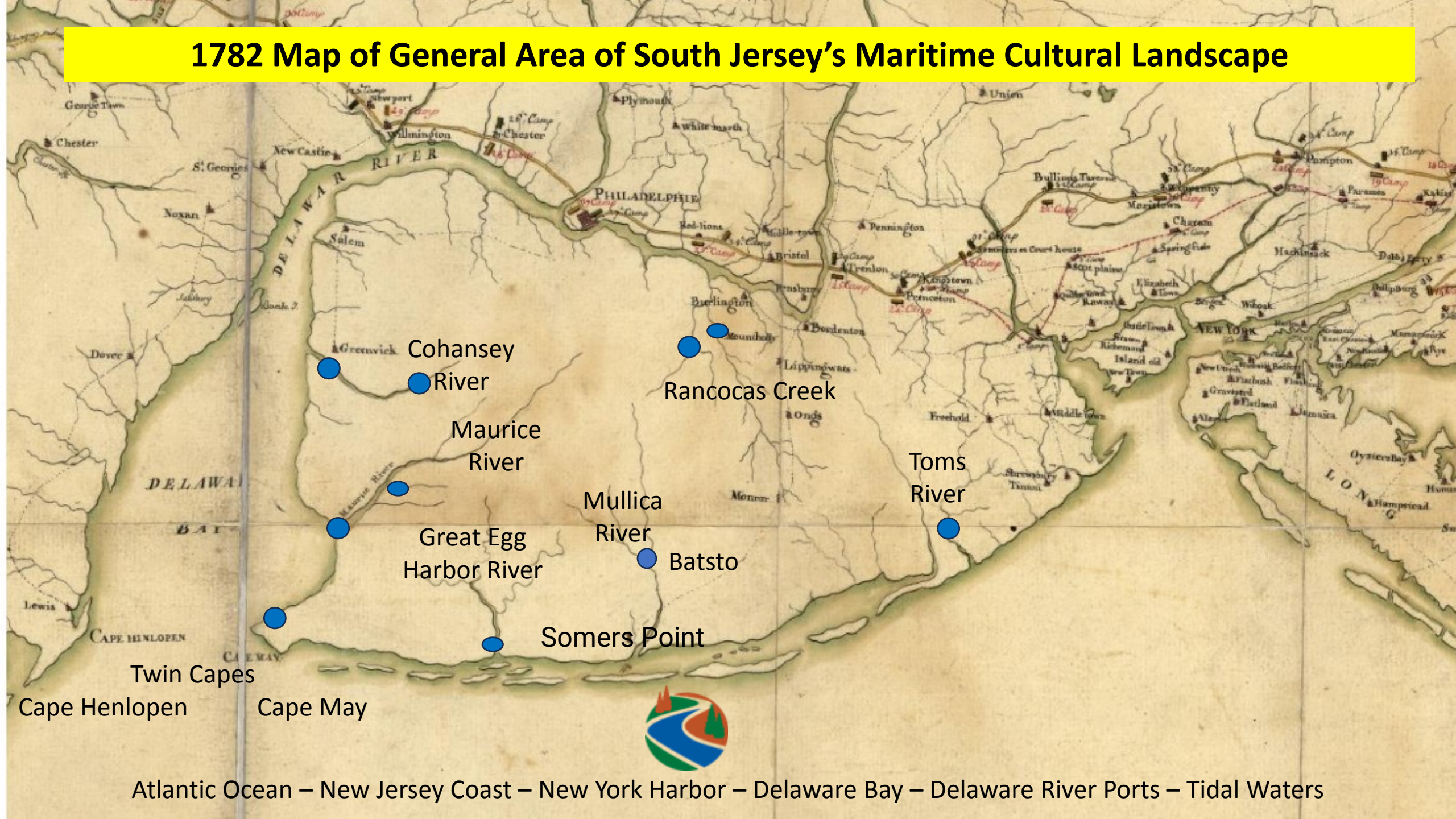
America's shipbuilding and maritime began at the mouths of rivers and bays.

Maritime cultures are concentrated on broad large tidewater rivers with deep channels and unobstructed access to open ocean and coastal waters.

In the era of the wooden ship New Jersey's tidewater communities had all the pre-requisites for success.

Passing Rancocas Creeks Leed's Wharf (1712)

1782 Map of General Area of South Jersey's Maritime Cultural Landscape



Atlantic Ocean – New Jersey Coast – New York Harbor – Delaware Bay – Delaware River Ports – Tidal Waters

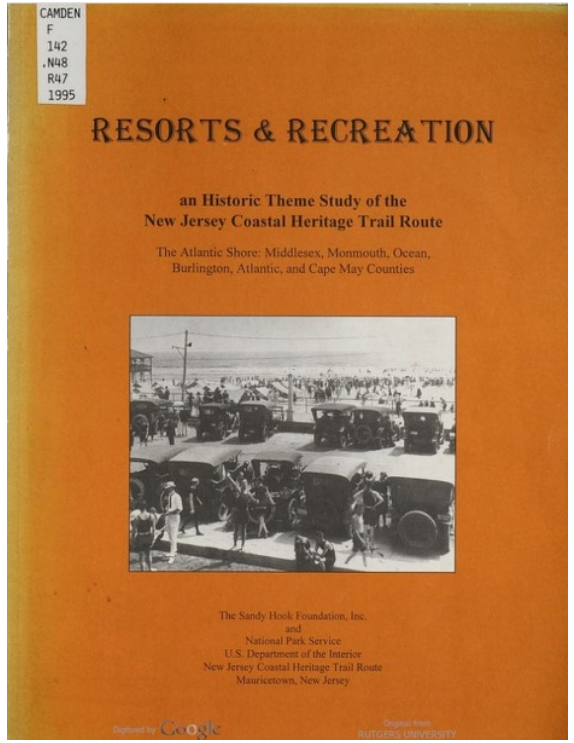
West Jersey and NJ Pine Barrens Maritime Occupations 1664-1703

Farmers
Bargemen
Boatmen
Ship Chandlers
Coopers
Ferrymen
Lightermen
Mariners and Seamen
Ropers
Shipbuilders
Shipwrights
Ship Carpenters
Watermen
Whalemen and Whalers

Reference: 1664-1703 West Jersey Documents NJ State Archives as Published

James Forten - Notable Delaware River, Philadelphia Sail Loft Owner. By Nature of the Delaware River maritime trade he knew of the Pine Barrens Western Outflow – Rancocas and Other West Jersey Delaware River tidewaters

1798 - **James Forten** purchased a sail making business in Philadelphia. Became one of the wealthiest businessmen in Philadelphia. Abolitionist.



Interpretive themes include Maritime History, Wildlife Migration, Coastal Habitats, Historic Settlements, and Relaxation and Inspiration

Tidal bench marks of Pine Barrens Outflows

TIDAL BENCH MARKS, STATE OF NEW JERSEY

Millville, Maurice River

BENCH MARK 1 (1927), established by the United States Engineers, is a cross cut in the top of a concrete wall on the left bank of the stream, about 1 inch from the face of wall and 4 inches downstream from the southeast wingwall of Main Street bridge. Elevation: 9.52 feet above mean low water; 6.52 feet above half tide level; 3.52 feet above mean high water.

BENCH MARK 2 (1927), established by the United States Engineers, is a cross cut in the top of a concrete wall on the left bank of the stream, about 1 inch from the face and at downstream corner of wall around bridge tender's house on the south side of Main Street drawbridge. Elevation: 9.48 feet above mean low water; 6.48 feet above half tide level; 3.48 feet above mean high water.

BENCH MARK 3 (1927), established by the United States Engineers, is a cross cut in the top of west bridge seat of Main Street drawbridge, about 3 inches from the face of abutment and 4 inches from downstream corner. Elevation: 9.32 feet above mean low water; 6.32 feet above half tide level; 3.32 feet above mean high water.

Elevations are based on 2½ months of automatic gage records, October 14 - December 31, 1926, reduced to mean values.

TIDAL BENCH MARKS, STATE OF NEW JERSEY

Scull Landing, Great Egg River

BENCH MARK 1 (1937) is a standard disk, stamped "No. 1 1937," set in the top of a concrete post 12 inches in diameter at the top, belled at bottom, located on the north side of the road to Scull Landing. It is 207 feet from the high water line and 6½ feet from the north side of the road. Elevation: 4.74 feet above mean low water; 2.89 feet above half tide level; 1.04 feet above mean high water.

BENCH MARK 2 (1937) is a standard disk, stamped "No. 2 1937," set in the top of a concrete post 12 inches in diameter at the top, belled at bottom, located on the north side of the road to Scull Landing. It is 690 feet from the high water line, and 4.9 feet from the north side of the road. Elevation: 5.59 feet above mean low water; 3.74 feet above half tide level; 1.89 feet above mean high water.

BENCH MARK 3 (1937) is a standard disk, stamped "No. 3 1937," set in the top of a concrete post 12 inches in diameter at the top, belled at the bottom, located on the north side of the road to Scull Landing. It is 1,115 feet from the high water line and 10 feet from the north edge of the road. Elevation: 9.73 feet above mean low water; 7.88 feet above half tide level; 6.03 feet above mean high water.

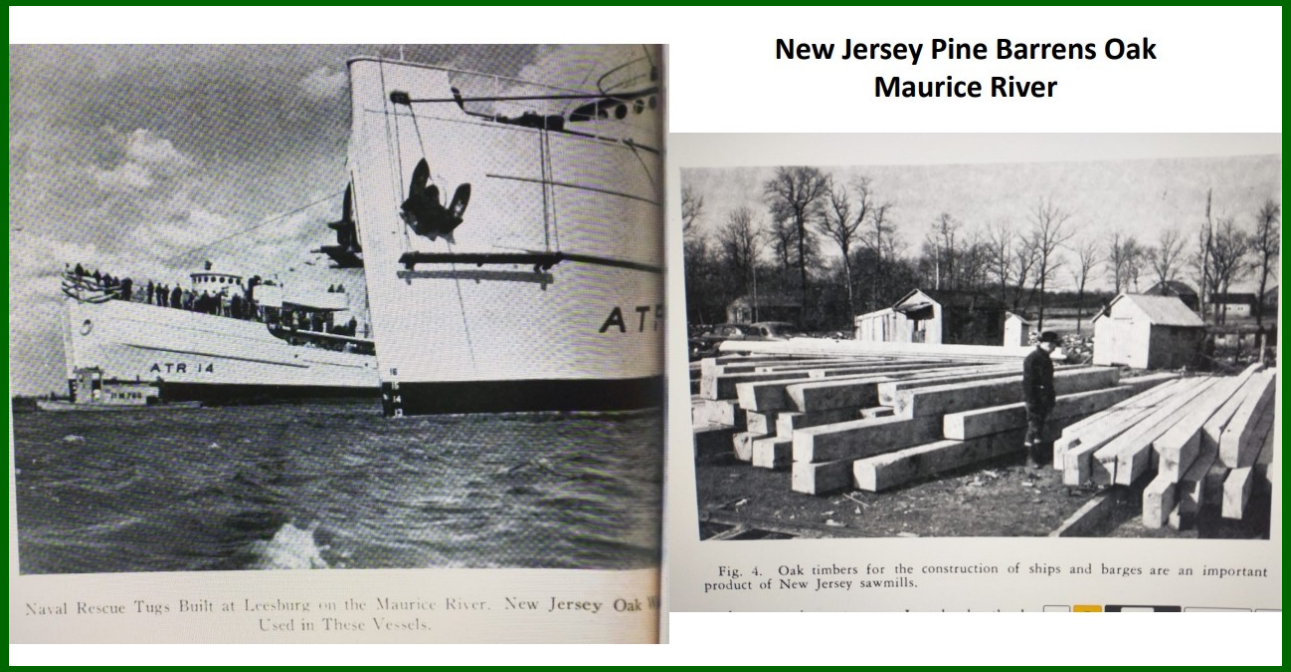
Elevations are based on 54 high waters and 54 low waters, July 13 - August 10, 1937, reduced to mean values.

Reference: 1928 Tidal Benchmarks State of New Jersey

Rancocas Creek Sand Barge

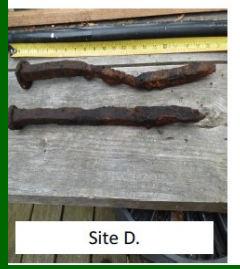
New Jersey Pine Barrens Maritime Cultural Landscape and Heritage

AJ Merwald Maurice River



New Jersey Pine Barrens Oak
Maurice River

Fig. 4. Oak timbers for the construction of ships and barges are an important product of New Jersey sawmills.



Ship Ribs – Westampton - Rancocas Creek

New Jersey Pine Barrens National Reserve

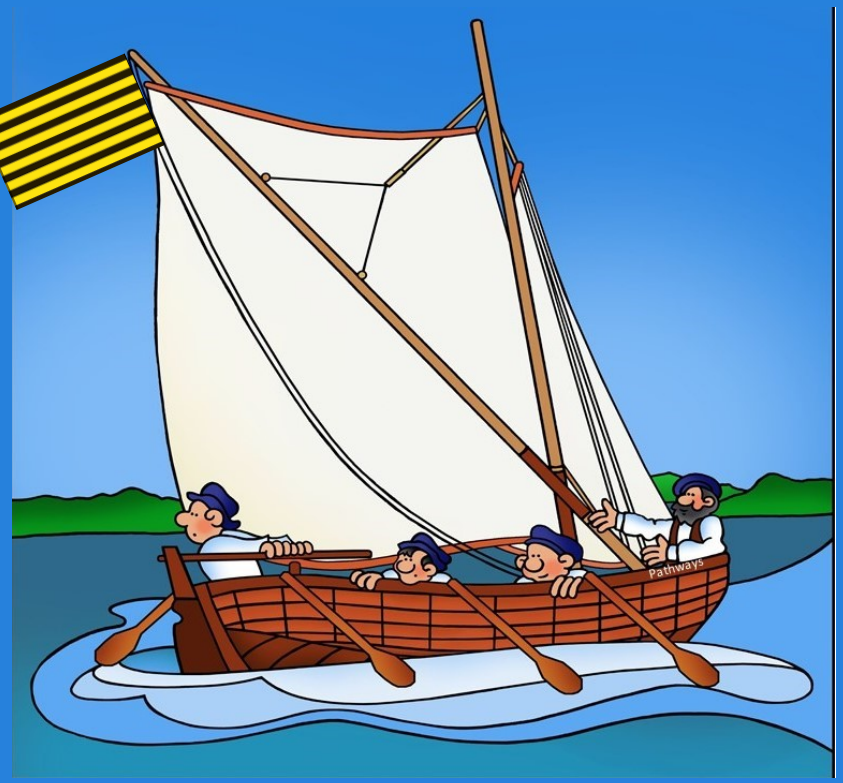
Admiralty Courts

See slide 54 and 56

Pine Barrens Privateers

Effective against the British invader. Pine Barren privateers sailed vessels designed for operating in tidewaters, shoals and flats. Manned by local people familiar with both local waters and terrain NJ Pine Barrens privateers generated and sustained a threat against the British.

(Rear Admiral, ret, E. Eller Director of Naval History, Naval History Division)



American revolutionary flag with stripes other than red and white is that of an unidentified American privateer, which "sported a black and yellow striped ensign. While at Martinique in 1776 the brig Reprisal flew a similar flag of yellow and white."

Colonial Admiralty Courts and New Jersey's Wartime Privateering: A Swarm of Hornets

Audacity was the privateers stock-in-trade **P 1 of 2**

- American privateering activity during the American Revolution encouraged patriotic private citizens to harass British shipping and capture them as "prizes" while risking their lives and resources for financial gain.
- Maritime prize money is distinct from salvage money: prize involves the capture of enemy ships, with the ship being sold for the sole gain of the captors. Salvage involves recovery of ships lost in a shipwreck or a stranding, with the proceeds split between the salvors and the owners
- Admiralty Courts fell to State Courts from American Independence before the adoption of the Constitution. Admiralty Courts were concerned w prize jurisdiction and public authorization and regulation of the seizure of ships and cargo (e.g., wartime privateering).

Colonial Admiralty Courts and New Jersey's Wartime Privateering: Prize Money

Audacity was the privateers stock-in-trade p 2 of 2

After the colonists formally seceded from Britain the United States was forced to rely heavily on privateering to supplement its emerging navy. Problems are inherent in letting loose pirates - unregulated men upon the sea to attack every merchant ship they could catch. Congress adopted Great Britain's system of using letters of marque - official commissions issued by the government allowing private persons to attack enemy ships and keep the proceeds as prize money.

Privateers were required to take the captured ship into the nearest port and file a case for payment (prize money) in the state court of admiralty, seeking condemnation of the ship as prize. American citizens would file a claim as the original owners of the ship or cargo. The case of prize then would become a case of recapture, and the privateer would receive a certain portion of its value rather than the entire amount, with the rest going to the original owner.

Letter of Marque

IN CONGRESS,

WEDNESDAY, APRIL 3, 1776.

INSTRUCTIONS *to the* COMMANDERS *of Private Ships or Veſſels of War, which ſhall have Commiſſions or Letters of Marque and Repriſal, authoriſing them to make Captures of Britiſh Veſſels and Cargoes.*

I.

YOU may, by Force of Arms, attack, ſubdue, and take all Ships and other Veſſels belonging to the Inhabitants of Great-Britain, on the High Seas, or between high-water and low-water Marks, except Ships and Veſſels bringing Perſons who intend to ſettle and reſide in the United Colonies, or bringing Arms, Ammunition or Warlike Stores to the ſaid Colonies, for the Uſe of ſuch Inhabitants thereof as are Friends to the American Cauſe, which you ſhall ſuffer to paſs unmoleſted, the Commanders thereof permitting a peaceable Search, and giving ſatisfactory Information of the Contents of the Ladings, and Deſtinations of the Voyages.

II.

You may, by Force of Arms, attack, ſubdue, and take all Ships and other Veſſels whatſoever carrying Soldiers, Arms, Gun-powder, Ammunition, Proviſions, or any other contraband Goods, to any of the Britiſh Armies or Ships of War employed againſt theſe Colonies.

III.

You ſhall bring ſuch Ships and Veſſels as you ſhall take, with their Guns, Rigging, Tackle, Apparel, Furniture and Ladings, to ſome convenient Port or Ports of the United Colonies, that Proceedings may thereupon be had in due Form before the Courts which are or ſhall be there appointed to hear and determine Cauſes civil and maritime.

IV.

You or one of your Chief Officers ſhall bring or ſend the Maſter and Pilot and one or more principal Perſon or Perſons of the Company of every Ship or Veſſel by you taken, as ſoon after the Capture as may be, to the Judge or Judges of ſuch Court as aforeſaid, to be examined upon Oath, and make Anſwer to the Interrogatories which may be propounded touching the Intereſt or Property of the Ship or Veſſel and her Lading; and at the ſame Time you ſhall deliver or cauſe to be delivered to the Judge or Judges, all Paſſes, Sea-Briefs, Charter-Parties, Bills of Lading, Cockets, Letters, and other Documents and Writings found on Board, proving the ſaid Papers by the Affidavit of yourſelf, or of ſome other Perſon preſent at the Capture, to be produced as they were received, without Fraud, Addition, Subduction, or Embezzlement.

V.

You ſhall keep and preſerve every Ship or Veſſel and Cargo by you taken, Court properly authoriſed be adjudged lawful Prize, not ſelli breaking the Bulk thereof, nor ſuffering

Reference: C. Kieth Wilbur

To Captain *commander of the private armed*

called the

INSTRUCTIONS

FOR THE PRIVATE ARMED VESSELS OF THE UNITED STATES,

1. THE tenor of your commission under the act of Congress, entitled "An act concerning letters of marque, prizes, and prize goods," a copy of which is hereto annexed, will be kept constantly in your view. The high seas, referred to in your commission, you will understand, generally, to extend to low water mark; but with the exception of the space within one league, or three miles, from the shore of countries at peace both with Great Britain and with the United States. You may nevertheless execute your commission within that distance of the shore of a nation at war with Great Britain, and even on the waters within the jurisdiction of such nation, if permitted so to do.

2. You are to pay the strictest regard to the rights of neutral powers, and the usages of civilized nations; and in all your proceedings towards neutral vessels, you are to give them as little molestation or interruption as will consist with the right of ascertaining their neutral character, and of detaining and bringing them in for regular adjudication, in the proper cases. You are particularly to avoid even the appearance of using force or seduction, with a view to deprive such vessels of their crews, or of their passengers, other than persons in the military service of the enemy.

3. Towards enemy vessels and their crews, you are to proceed, in exercising the rights of war, with all the justice and humanity which characterize the nation of which you are members.

4. The master and one or more of the principal persons belonging to captured vessels, are to be sent, as soon after the capture as may be, to the judge or judges of the proper court in the United States, to be examined upon oath, touching the interest or property of the captured vessel and her lading: and at the same time are to be delivered to the judge or judges, all passes, charter parties, bills of lading, invoices, letters and other documents and writings found on board; the said papers to be proved by the affidavit of the commander of the capturing vessel, or some other person present at the capture, to be produced as they were received, without fraud, addition, subduction or embezzlement.

By command of the President of the U. States of America.

Jas Monroe *Secretary of State.*

Letter of Marque

New Jersey Admiralty Scandal – Benedict Arnold the Fix Is In !

October 22, 1778

Tuckerton Privateer *Xantippe* Captured British Flagged *Charming Nancy*

NJ Admiralty Court Judged Ruled Against *Xantippe*

12 Wagon loads of Goods: Munitions/Swivel Guns/Schooner Sails Naval Stores/Sundry Items Hauled and Unloaded at Stephen Collins, Philadelphia. Sold in Philadelphia

Half of Proceeds went to America's General Benedict Arnold

Arnold provided *Charming Nancy w* passage unmolested by Continental Forces

"Money is this man's God, and to get enough of it he would sacrifice his country."

Revolutionary War Admiralty Courts Allentown/Toms River: Captured Ship Stores Transported Across Pine Barrens. Privateer Vsls Constructed of Pine Barrens Timber

Libels Filed in New Jersey Maritime Court, 6 June

To all whom it may concern:

New-jersey, ss. Notice is hereby given, that a Court of Admiralty will be held at the house of Gilbert Barton, in Allentown, on Monday the thirteenth day of July next, at ten o'clock in the forenoon, then and there to try the truth of the facts alledged in the bills of Joseph Wade[1] (who as well, &c.) against the sloop or vessel called the *Duck*, and the sloop or vessel called the *Betsy*—of Zephaniah Stillman (who as well, &c.) against the schooner or vessel called the *Bachelor*—of Peter Anderson (who as well, &c.) against the sloop or vessel called the *Hazard*—of Abraham Boys (who as well, &c.) against the sloop or vessel called the *Sally*—of Timothy Shaler[2] (who as well &c) against the sloop or vessel called the *Dispatch*, and the brigantine or vessel called the *Industry*—and of John Brooks (who as well, &c.) against the sloop or vessel called the *Canaster;* with their respective tackle, apparel, furniture and cargoes: To the end and intent that the owner or owners of said vessels respectively, or any person or persons concerned therein, may appear and shew cause, if any they have, why the said vessels and their respective cargoes should not be condemned according to the prayer of the said bills.

June 6, 1778

By order of the Judge,
BOWES REED, Pro. Reg.[3]

The New-Jersey Gazette (Trenton), 10 June 1778.

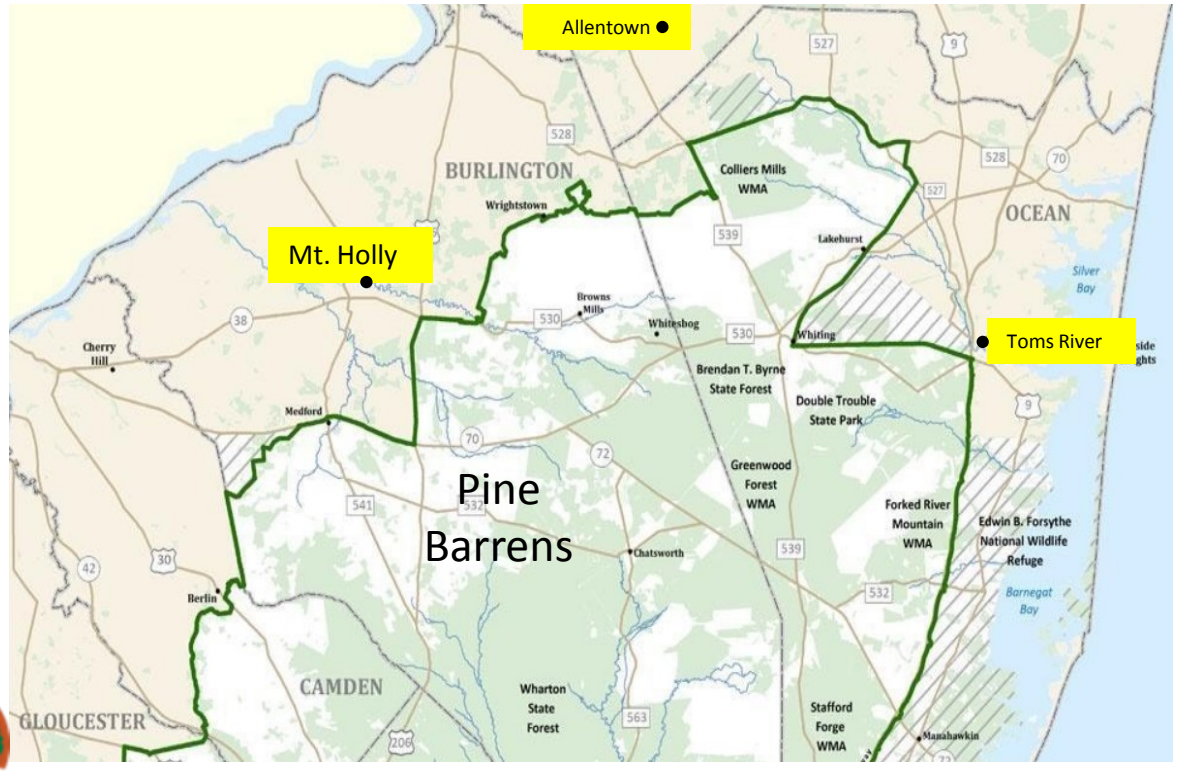
1. Joseph Wade, Capt., Pennsylvania Navy, commander of armed sloop *Fame*.
2. Timothy Shaler, of Gloucester, Massachusetts, commanded the New Jersey privateer boat *Chance*, guns and crew not stated, commissioned on 20 Mar. 1778. DNA, PCC item 196, vol. 2, p. 92.
3. Bowes Reed was one of the proctors of the Admiralty Court of the State of New Jersey.

Journal of the Virginia Navy Board

The New-York Gazette; and the Weekly Mercury, Monday, June 8, 1778

A few Days since a Vessel from Cork for this Port, was taken by Captain Anderson, in an armed Boat, and carried into Tom's-River, New-Jersey.[21]

Sloop *Hazard Cargo Beef and Pork*



Revolutionary War Admiralty Courts Mount Holly/Toms River/Great Egg Harbor: Captured Ship Stores Transported Across Pine Barrens. From Mount Holly Court of Admiralty Captured Cargo Sailed down Rancocas Creek to Delaware River Port Philadelphia

Reference George Washington Papers 1778.

10 June Maj. Gen Philemon Dickinson of the New Jersey militia reported to Gen Washington "Two valuable prizes were suck into Toms River, two days ago, by a small New England Privateer, part of Cargoes consists of one hundred & fifty hogsheads of Rum – this small Privateer within five weeks past , has taken Prizes to the amount of One hundred & fifty thousand pounds".

14 June Brig Gen William Maxwell reported to Washington that a "Prize Schoor & two sloops had been captured and brought into Little Egg harbor, the first has 160 puncheons of Rum on board, the two latter loaded w fruit and Turtle

NEW JERSEY MARITIME COURT, 19 DECEMBER 1777–3 MARCH 1778

LIBEL FILED IN NEW JERSEY MARITIME COURT, 19 DECEMBER 1777

December 19, 1777.

To all whom it may concern.

State of New-Jersey, ss. NOTICE is hereby given, that a Court of Admiralty will be held at Mountholly, at the house of Zachariah Rossel, on Saturday the tenth day of January next, at ten o'clock in the forenoon of the same day; then and there to try the truth of the facts alledged in the bill of Colonel Samuel Dick,[1] (who as well, &c.) against the sloop or vessel called *Patty*, her tackle, apparel, furniture and cargo, burthen about fifty tons, lately commanded by Tunis Mountaine:—To the end and intent that the owner or owners of the said sloop and her cargo, or any person concerned therein, may appear and shew cause, if any they have, why the same should not be condemned according to the prayer of the said bill.

By order of the Judge,
BOWES REED, PRO. REG.[2]

The New-Jersey Gazette (Burlington), 24 December 1777.
1. Col. Samuel Dick, New Jersey militia.
2. Bowes Reed was one of the proctors of the Admiralty Court of the State of New Jersey.

LIBEL FILED IN NEW JERSEY MARITIME COURT, 1 JANUARY 1778

January 1, 1778.

To all whom it may concern:

State of New Jersey, ss. NOTICE is hereby given, that a court of admiralty will be held at Mountholly, at the house of Zachariah Rossel, on Saturday the tenth of this instant January, at ten o'clock in the forenoon of the same day, then and there to try the truth of the facts alledged in the bill of Captain Powell Carpenter (who as well, &c.) against the sloop or vessel called the *Comet*, her tackle, apparel, furniture and cargo, burthen about twenty tons, lately commanded by James Taylor:[1] To the end and intent that the owner or owners of the said sloop and her cargo, or any person concerned therein, may appear and shew cause, if any they have, why the same should not be condemned according to the prayer of the said bill.

By order of the judge,
BOWES REED, PRO. REG.[2]

The New-Jersey Gazette (Burlington), 7 January 1778.
1. The *Comet* was ordered to be sold on 22 Jan., at Salem, New Jersey. *The New-Jersey Gazette*, 14 Jan.
2. Bowes Reed was one of the proctors of the Admiralty Court of the State of New Jersey.

State of New-Jersey, ss.

TO ALL whom it may concern,

NOTICE is hereby given, That a Court of Admiralty will be held at Mount-Holly, in the State of New-Jersey, on Thursday the 8th day of June next, at ten o'clock in the forenoon, then and there to try the truth of the facts alledged in the bill of the Captains Brown, Decatur and Ridge, (*qui tam*, &c.) against the sloop or vessel called the Swallow, Capt. ---Snell, late commander, with her tackle, apparel and cargo: To the end that the owner or owners or any persons concerned therein, may shew cause, if any they have, why the same should not be condemned according to the prayer of the said bill.

By order of the Judge,

New Jersey

Pine Barrens Landscapes

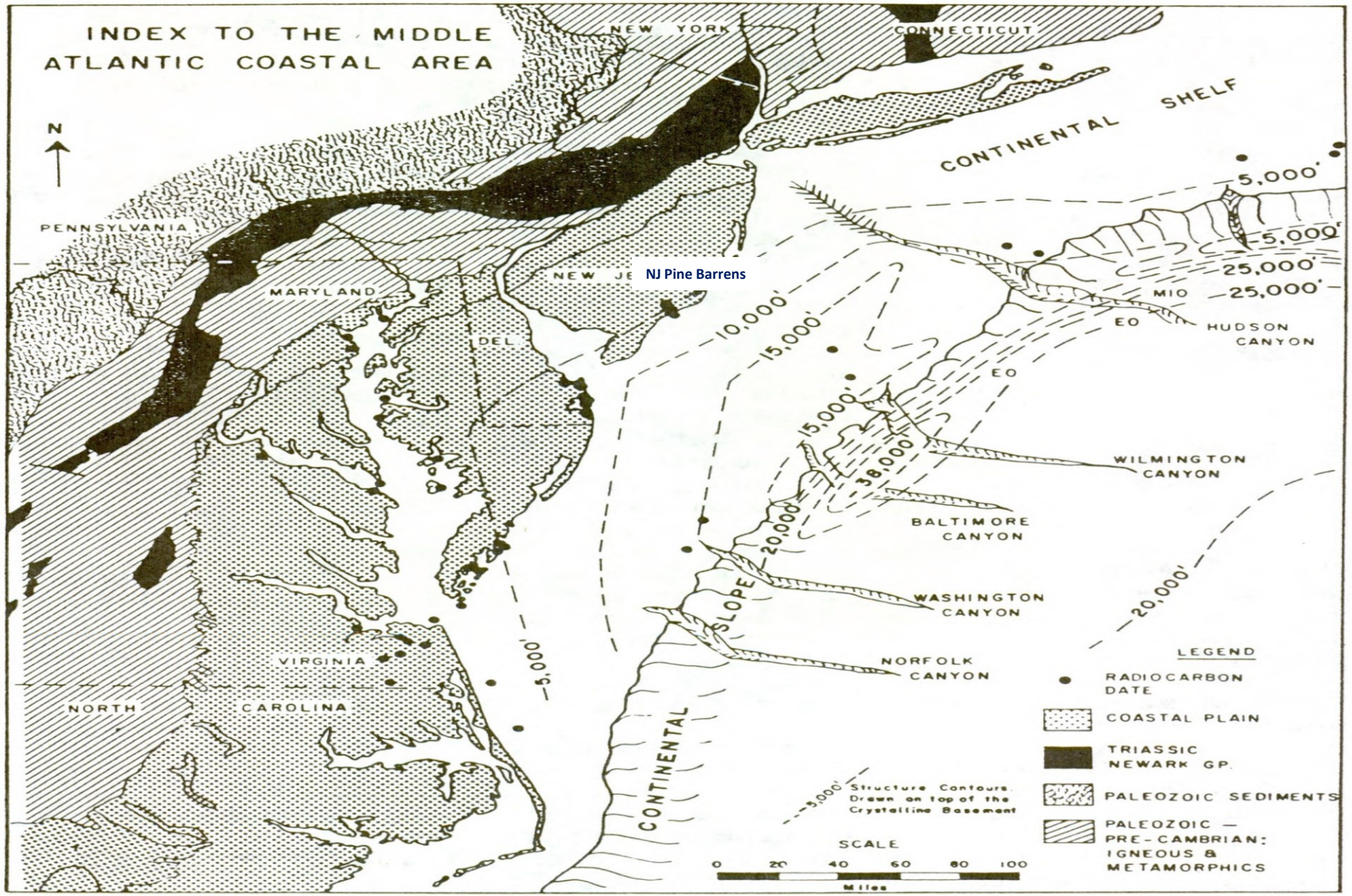


Figure 1. Geologic setting of Mid-Atlantic estuaries.

Pine Barrens Ecosystems, Topography, and Flora and Fauna Influences on Maritime Affairs

Geologic Time Frames

Reference: USACE

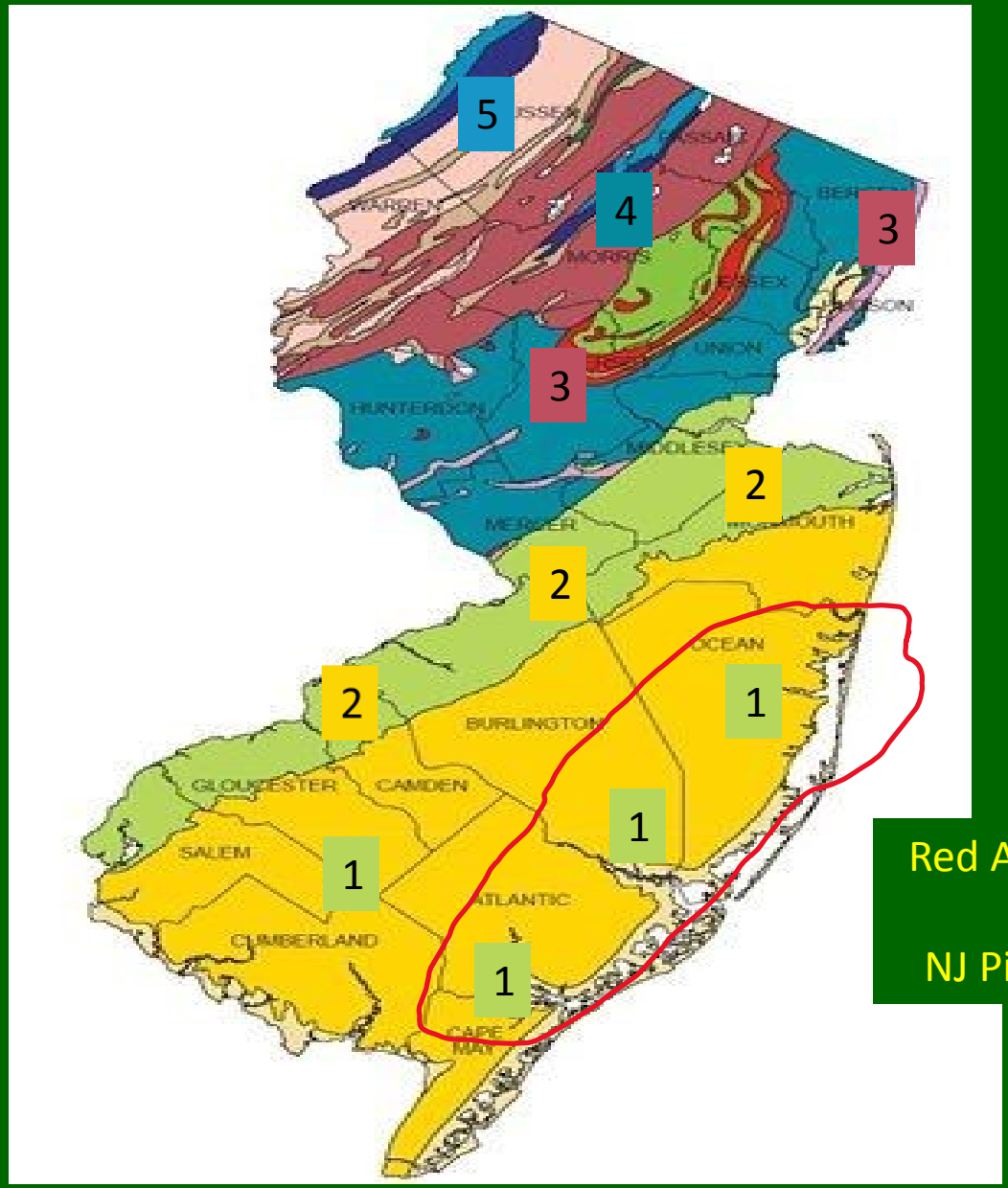
A Sense of Place - Pine Barrens Glaciation

Reference: Blaser. 1932 Biological Study of a Bog in the Wading River region

FIGURE 2
Map showing geologic history of pine-barren region

Reference: Pine Barrens Peneplain - Harshberger 1916

The Land - Pine Barrens



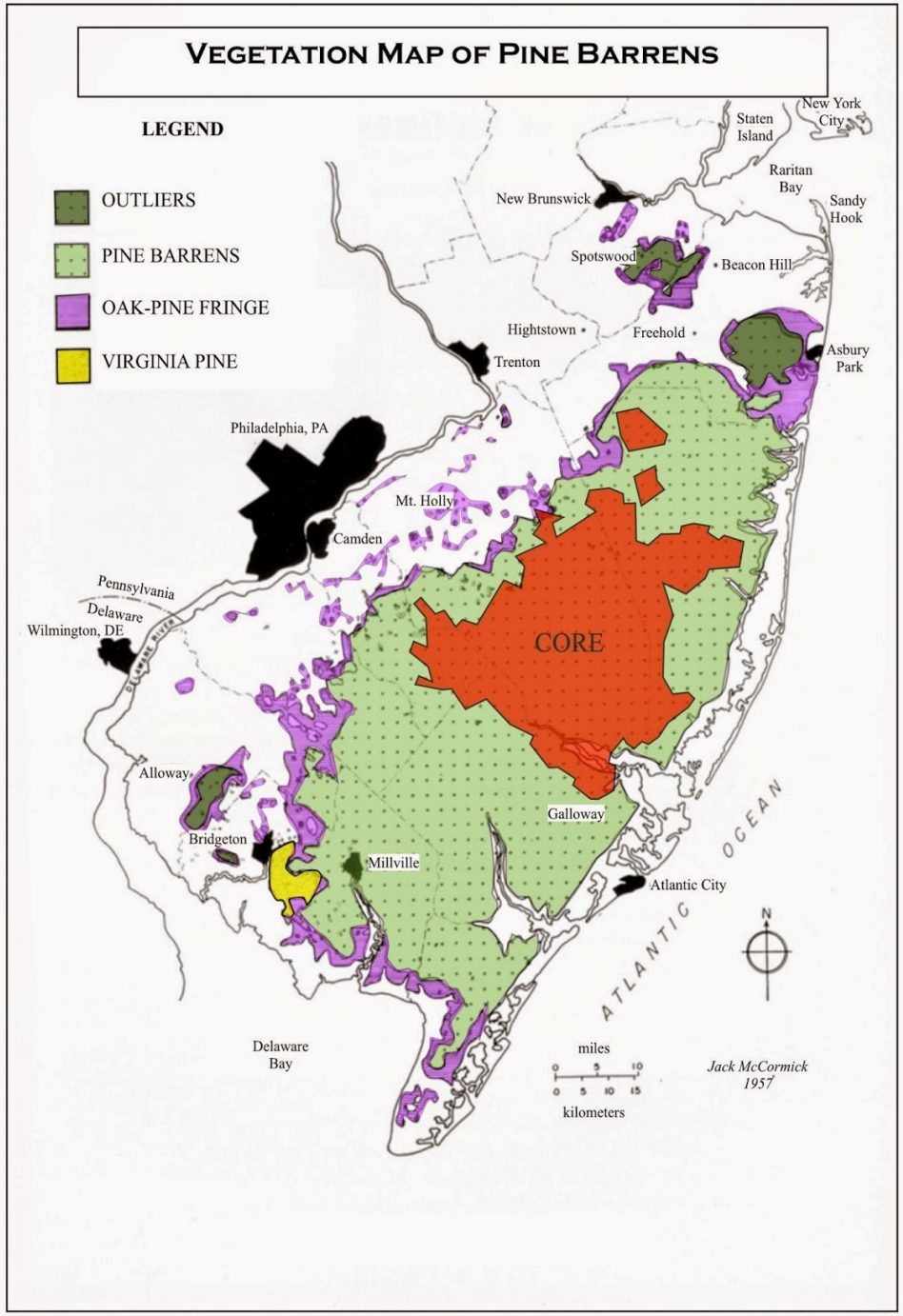
Red Approximate Border
NJ Pine Barrens

NJ's Physiologic

(Distinct Natural Land Forms)

Provinces

1. Outer Coastal Plain
2. Inner Coastal Plain
3. Piedmont
4. Highlands
5. Valley and Ridge



Pine Barrens

Pine Barrens Oak/Pine Fringe
Note: Old Rail Line

Pine Barrens “Core” Area

The Size of Pine Barren Oak Forests Directly Impacted Ship and Barge Designs

VEGETATION OF THE PINE BARRENS by Jack McCormick (ref Burlington County Library System)

Water, fire, and man have shaped the modern vegetation of the Pine Barrens. At least until the early 1900's, most forests in the Pine Barrens were clear-cut every 25 to 50 years for firewood, charcoal production, poles and lumber. Most of the forests were burned repeatedly, at intervals of 10 years or less to 30 years or more. These frequent fires apparently screened out many plants which grow along the margins, being predominant in surrounding regions.

Pitch pine, blackjack oak, and southern white-cedar are most characteristic of the twenty or more trees forming the forests. Pitch pine grows on sites ranging from the driest to the wettest. Oak-pitch forests (600 to 900 trees per acre) generally are less dense than pine-oak forests (1,100 to 1,200 trees per acre). The oak-pine forest canopy ranges from 35 to 50 feet high but in stands left unburned for 1 century or more, the trees may be 75 to 100 feet tall.

Ideal for ship constructed for coastal trade, oystering, barges, shallops….

Fernwood Springs – Pine Barrens Western Fringe – Last Remaining Atlantic White Cedar Forest in NJ Inner Coastal Plain

Cedar Tree's for Timber and Ship Building

from the forest. According to Hall and Maxwell,* the cutting of southern white-cedar began probably three hundred years ago and was in full blast in New Jersey two centuries ago. John Lawson, nearly two hundred years since, mentioned its use in the Carolinas for "yards, topmast booms, and bowsprits for boats, and shingles and pails." The drain on the swamp forests for white-cedar lumber was so great that Benjamin Franklin published an essay in Poor Richard's Almanack (1749) in which he advocated forestry methods, especially the planting of red-cedar to supply the country when the white-cedar and other woods should fail. Peter Kalm foretold the inadequacy of the white-

1765 Board of East Jersey Proprietors appointed rangers to reduce the impacts and preserve the land/timber

Reference: Richard Forman, Pine Barrens Landscapes, 1979

Human Impacts on the Pine Barrens

Reference: Richard Forman, Pine Barrens Landscapes, 1979

Count Niemcewicz* In 1799 traveled from Philadelphia to Batsto. Recorded a century plus or more of human's exploitation of the Pine Barrens. His comments appreciate a devastation of the forested woodlands of the NJ Pine Barrens.

Atlantic white cedar *(Chamaecyparis thyoides)* was extensively logged. Lumber was exported to NYC, Philadelphia and the West Indies directly from major landings on Pine Barren rivers (see Nelson).

In 1749, Peter Kalm a student of Linnaeus and Samuel Smith in 1765 record the cedars were worked out.

By 1823 hundreds of men worked the cedar swamps around Little Egg Harbor. By the end of the 19th century cedar and Pine Barrens lumbering ended.

* Polish poet, playwright and statesman. sailed on the ship *Adriana* from Bristol, in England, in the company of the Portuguese abbot and botanist, José Correia da Serra who served as the chaplain on ship for Niemcewicz and w Tadeusz Kościuszko (American Revoultionary General). Arrived in Philadelphia on August 18, 1797. During his stay, he visited South Jersey and New York State. In 1798, elected a member of the American Philosophical Society. He chronicled his travels in his published work the Vine and Fig Tree: Travels through America in 1797-1799, with account of life in New Jersey

Maritime Cultural Heritage

Early American Ports

Pre 1776

Burlington Port
Delaware River
1677

Philadelphia Port
Delaware River
1682

Mt. Holly Port
Rancocas Creek
1677

Gloucester Port
Delaware River
1650

Tuckerton
1698

Bridgeton Port
Cohansey River
1686

Baltimore Port
1702

Chestertown Port
Chester River
1706

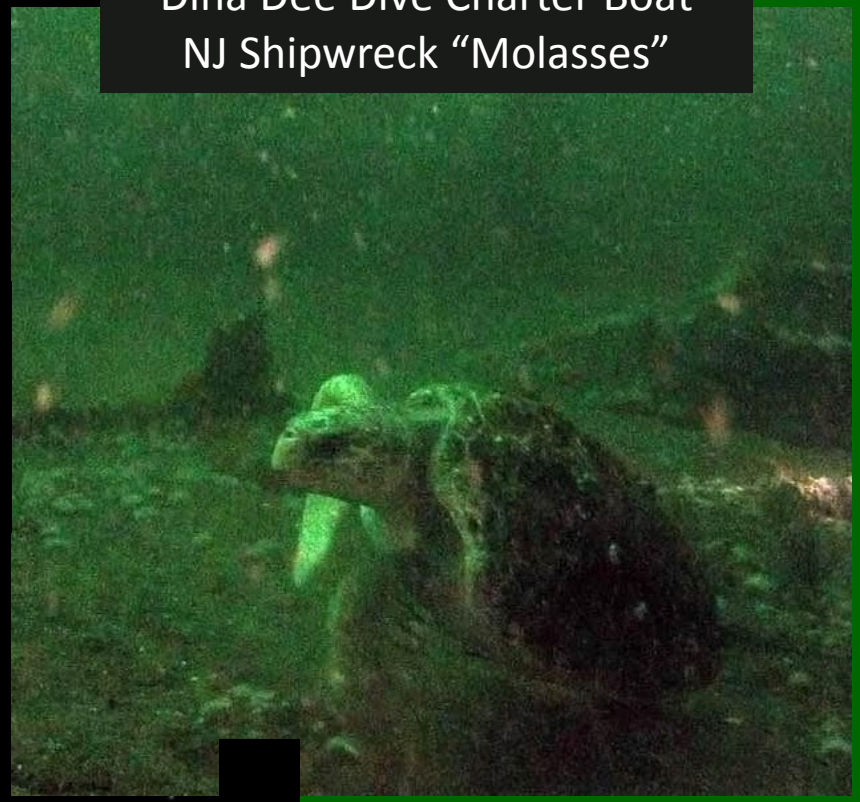
Town Bank
1632

Alexandria Port
Potomac River
1730

Salisbury Port
Wicomico River
1680

Jamestown Port
James River
1607

Atlantic Loggerhead Sea Turtle
Courtesy Dennis Smith
Dina Dee Dive Charter Boat
NJ Shipwreck “Molasses”



In the early 1920’s this barge transported molasses from the Caribbean to a New York distillery to make rum. Much like was done in the 1700’s. Molasses is a thick syrup by-product from the processing of the sugarcane or sugar beet into sugar. Today an exemplary coastal NJ artificial reef.

Tuckerton/Tuckerton Sea Port/Ship Yard

the multiplication of Saw-mills.

Ship-building and the manufacture of lumber were principal branches of business at Little Egg Harbor, where, about the year 1704, Edward Andrews erected Saw and grist-mills on Tuckerton's or Andrew's Mill Creek. Saw and corn-mills were built about the year 1758 on the north branch of the Rancocas, at Pemberton, by a company who purchased land of David Budd.

Reference: A history of American manufactures from 1608 to 1860

NJ Pine Barrens Colonial Shipyards

Deceptively small - room for two or three vessels

Sawyers, carpenters, dubbers, planking gangs, painters, rope and sail specialists

Bulk merhancidse like butter, rum, salt tobacco, turtles used to purchase vessels for investors/privateers

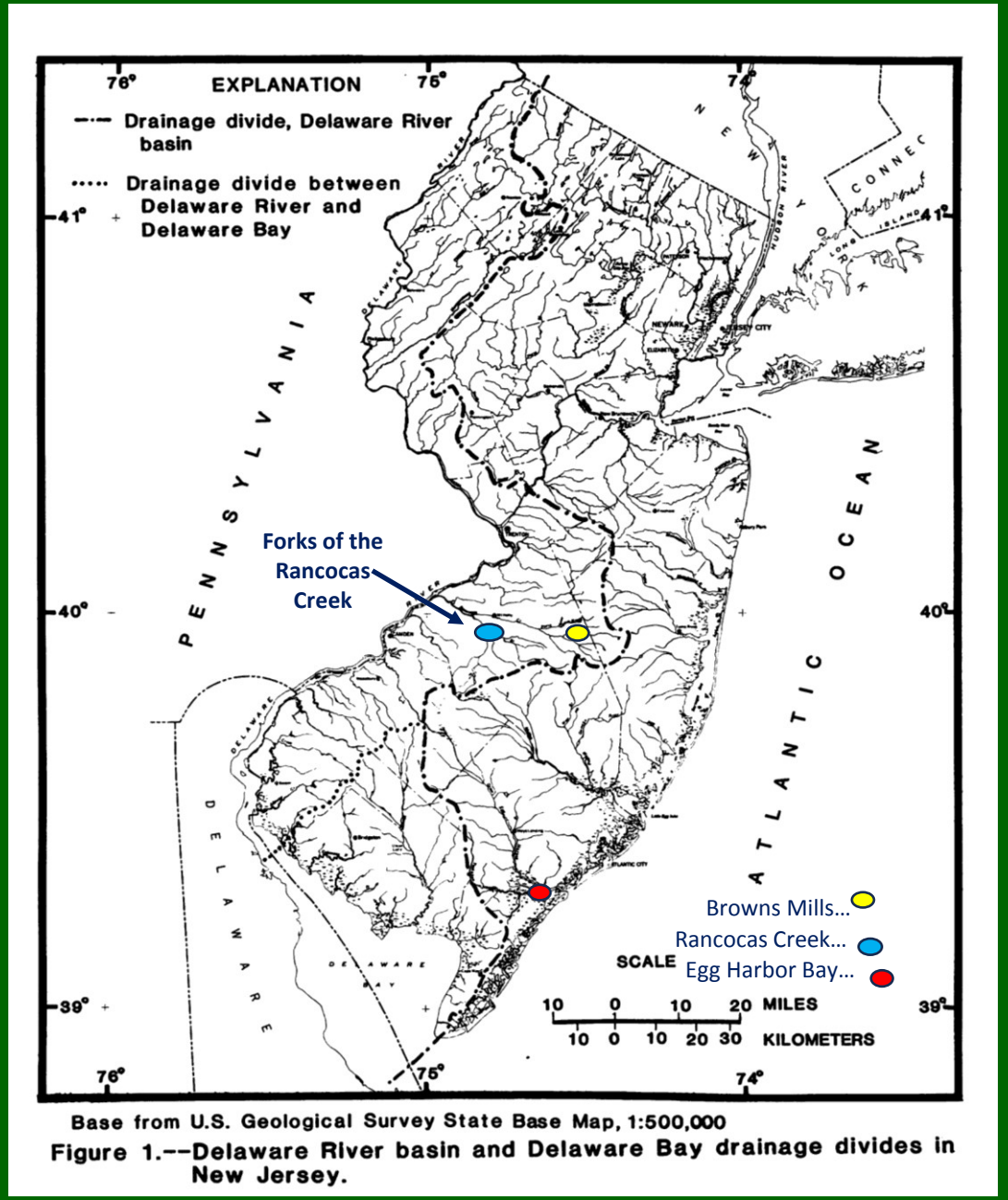
Found situated along tidewater segments of Pine Barrens waters

Reference: C. Kieth Wilbur

1863 Description of the Pine Barrens

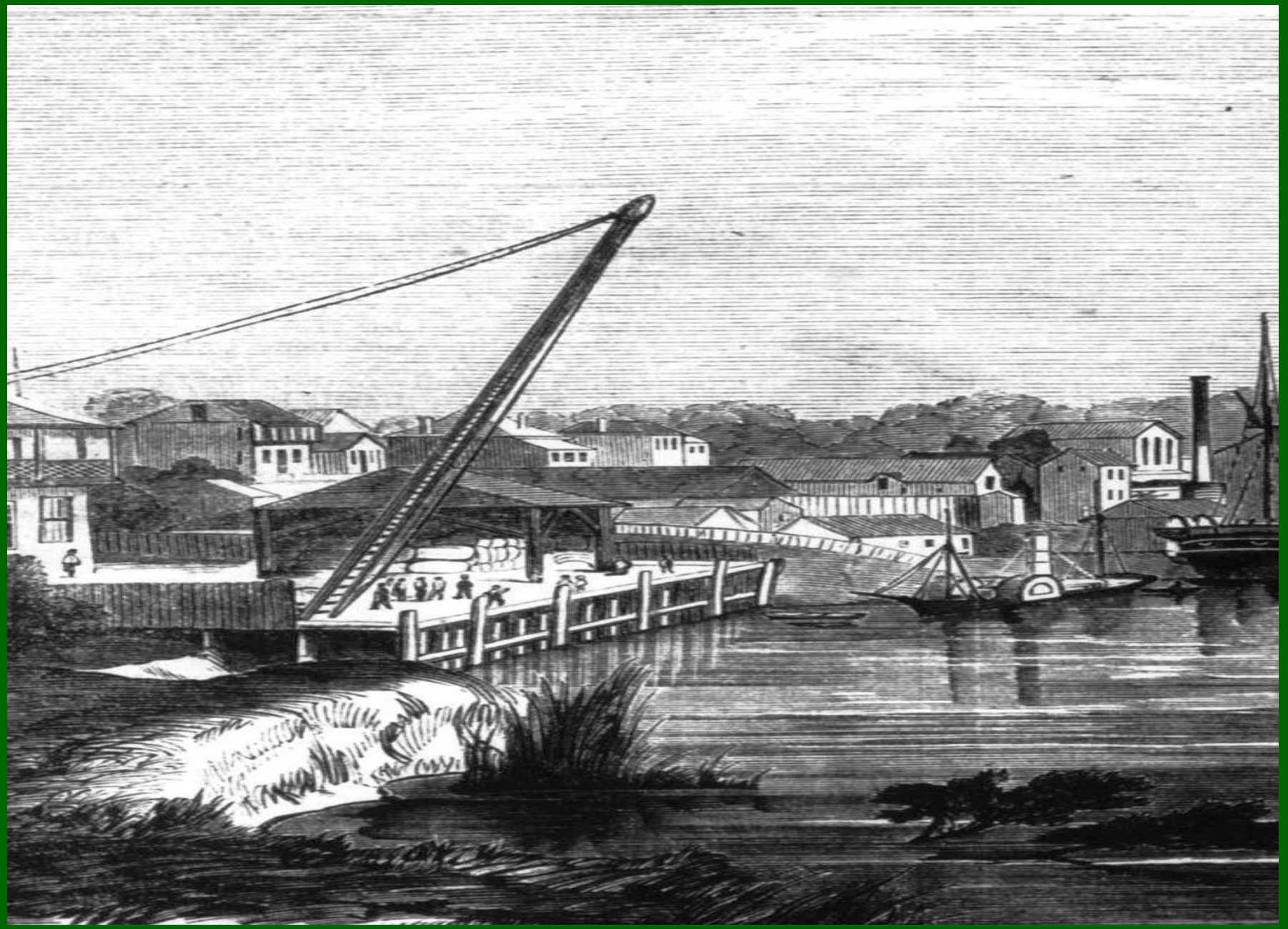
Tract of land embraces several of the main sources of the Rancocas Creek which empties into the Delaware River below Burlington. The principle Pine Barren streams by which it is watered are Pole Bridge, Cranberry, North, Middle and South Branches and the McDonalds Branch. The first the most easterly source of the Rancocas and interlocks with streams flowing into Egg Harbor Bay.

The company has designed three villages at Woodmansie, Mount Relief and Brown's Mills, in close proximity to Hanover Furnace.



Base from U.S. Geological Survey State Base Map, 1:500,000

Figure 1.--Delaware River basin and Delaware Bay drainage divides in New Jersey.



Harpers' Weekly

1877

NJ Tidewater River Landing Pier

Western Outflow NJ Pine Barrens Tidewater Confluence
“Forks of the Rancocas”
N Branch joins S Branch
Western Viewshed NJ’s Rancocas State Park
7 (seven) miles West to the Delaware River Federal Navigation Channel - Visible Top of Photo

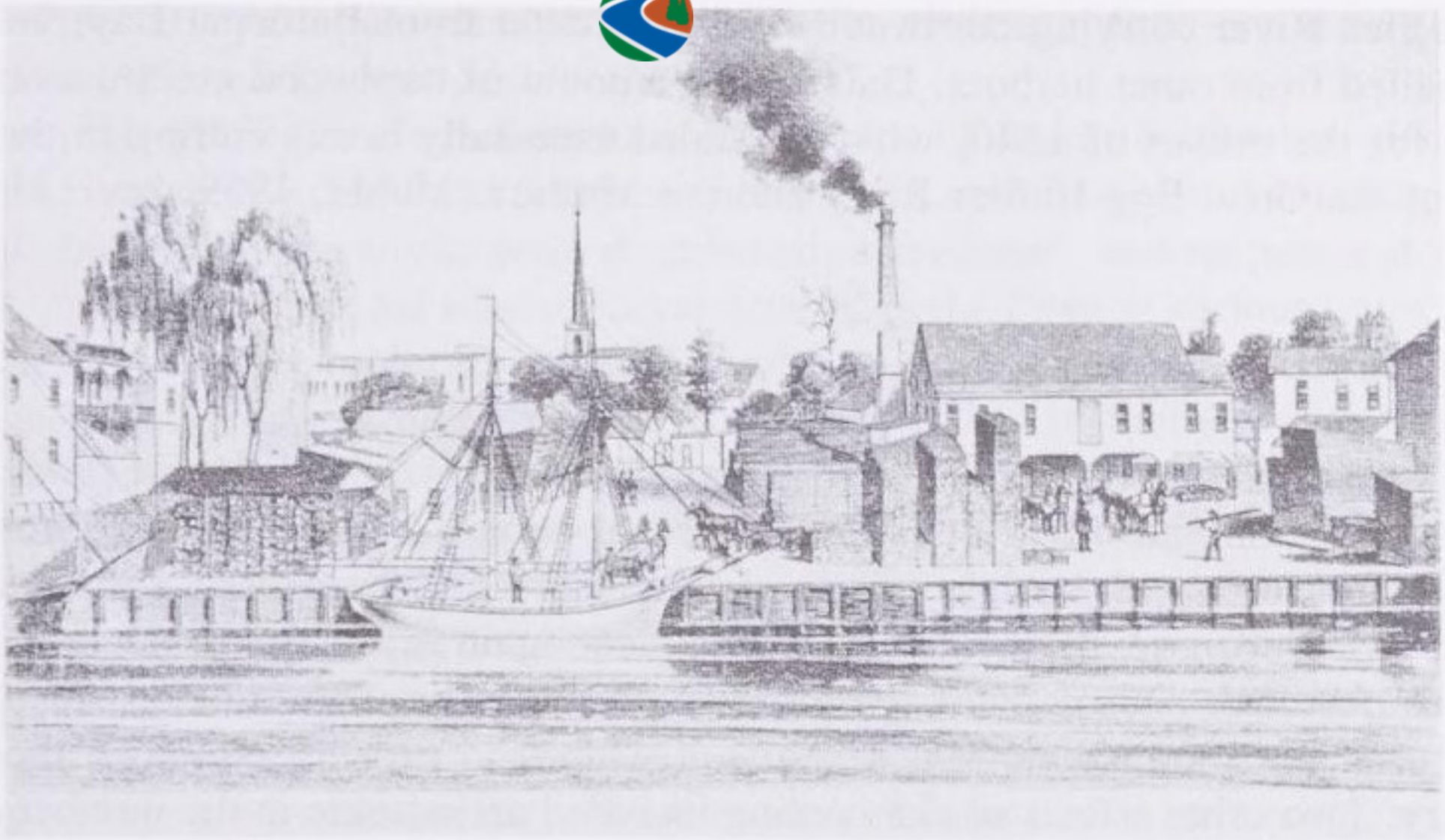
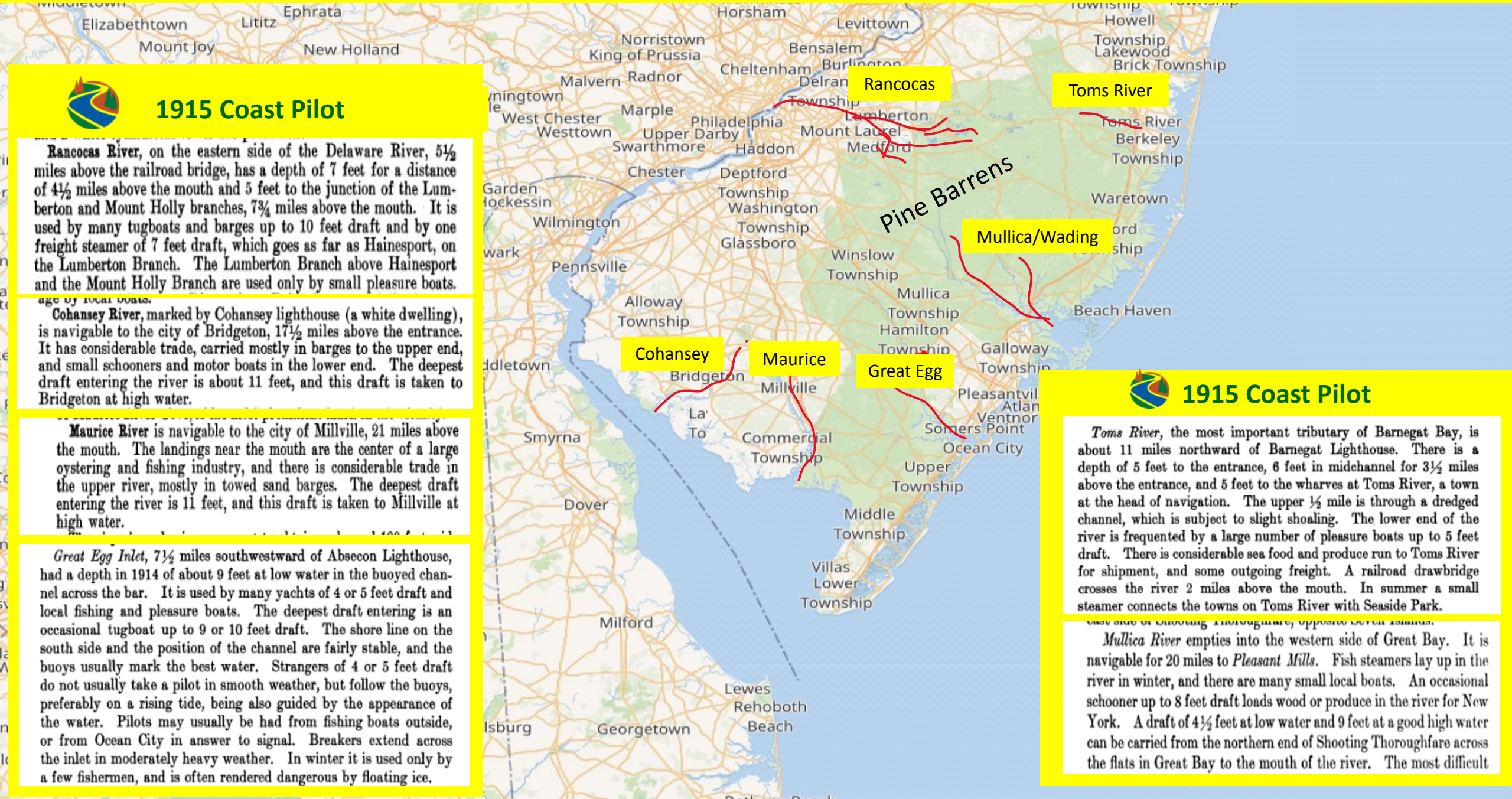


Fig. 3. Lumber left the Pine Barrens from mills on many rivers, such as this at Bridgeton on the Cohansey River about 1876. From Stewart (1876).

Reference: Richard Forman, Pine Barrens Landscapes, 1979

New Jersey Pine Barrens Main Navigable Tidewater Outflows



1915 Coast Pilot

Rancocas River, on the eastern side of the Delaware River, 5½ miles above the railroad bridge, has a depth of 7 feet for a distance of 4½ miles above the mouth and 5 feet to the junction of the Lumberton and Mount Holly branches, 7¾ miles above the mouth. It is used by many tugboats and barges up to 10 feet draft and by one freight steamer of 7 feet draft, which goes as far as Hainesport, on the Lumberton Branch. The Lumberton Branch above Hainesport and the Mount Holly Branch are used only by small pleasure boats.

Cohansey River, marked by Cohansey lighthouse (a white dwelling), is navigable to the city of Bridgeton, 17½ miles above the entrance. It has considerable trade, carried mostly in barges to the upper end, and small schooners and motor boats in the lower end. The deepest draft entering the river is about 11 feet, and this draft is taken to Bridgeton at high water.

Maurice River is navigable to the city of Millville, 21 miles above the mouth. The landings near the mouth are the center of a large oystering and fishing industry, and there is considerable trade in the upper river, mostly in towed sand barges. The deepest draft entering the river is 11 feet, and this draft is taken to Millville at high water.

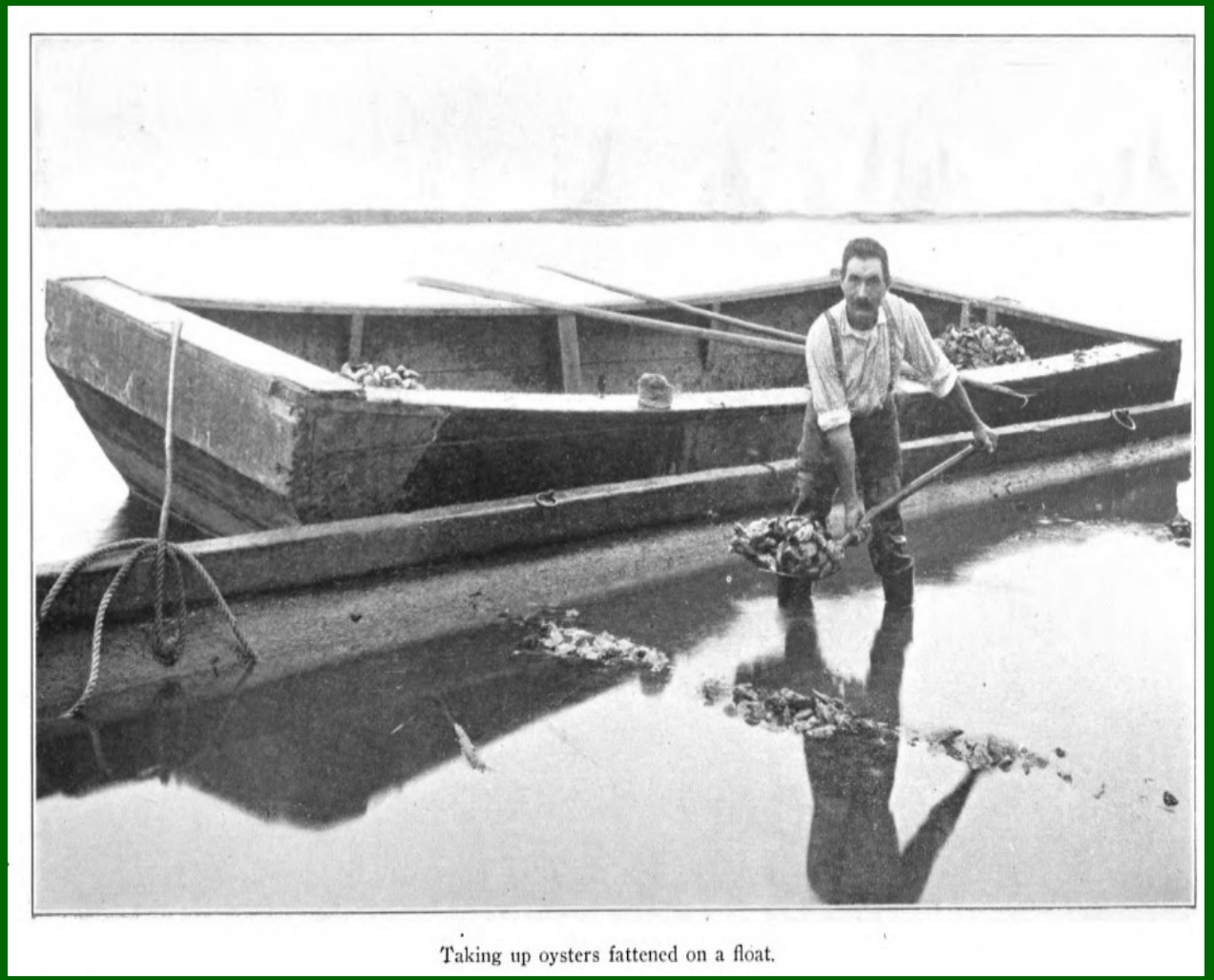
Great Egg Inlet, 7½ miles southwestward of Absecon Lighthouse, had a depth in 1914 of about 9 feet at low water in the buoyed channel across the bar. It is used by many yachts of 4 or 5 feet draft and local fishing and pleasure boats. The deepest draft entering is an occasional tugboat up to 9 or 10 feet draft. The shore line on the south side and the position of the channel are fairly stable, and the buoys usually mark the best water. Strangers of 4 or 5 feet draft do not usually take a pilot in smooth weather, but follow the buoys, preferably on a rising tide, being also guided by the appearance of the water. Pilots may usually be had from fishing boats outside, or from Ocean City in answer to signal. Breakers extend across the inlet in moderately heavy weather. In winter it is used only by a few fishermen, and is often rendered dangerous by floating ice.

1915 Coast Pilot

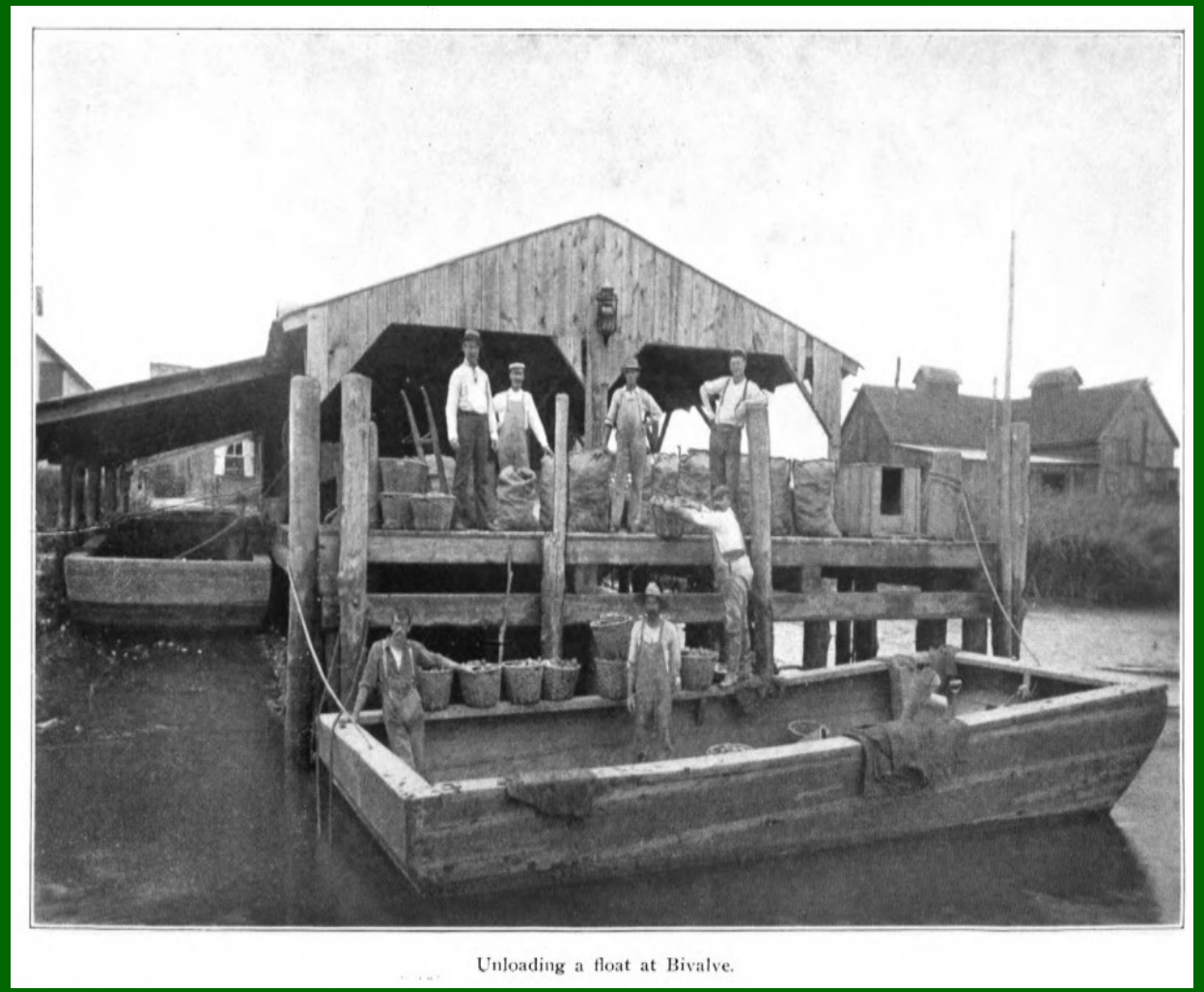
Toms River, the most important tributary of Barnegat Bay, is about 11 miles northward of Barnegat Lighthouse. There is a depth of 5 feet to the entrance, 6 feet in midchannel for 3½ miles above the entrance, and 5 feet to the wharves at Toms River, a town at the head of navigation. The upper ½ mile is through a dredged channel, which is subject to slight shoaling. The lower end of the river is frequented by a large number of pleasure boats up to 5 feet draft. There is considerable sea food and produce run to Toms River for shipment, and some outgoing freight. A railroad drawbridge crosses the river 2 miles above the mouth. In summer a small steamer connects the towns on Toms River with Seaside Park.

Mullica River empties into the western side of Great Bay. It is navigable for 20 miles to *Pleasant Mills*. Fish steamers lay up in the river in winter, and there are many small local boats. An occasional schooner up to 8 feet draft loads wood or produce in the river for New York. A draft of 4½ feet at low water and 9 feet at a good high water can be carried from the northern end of Shooting Thoroughfare across the flats in Great Bay to the mouth of the river. The most difficult

Pine Barrens Oystering Delaware Bay
Note: size of wooden float barge (Mid-size timber from Southern Regions of NJ Pine Barren)



Taking up oysters fattened on a float.

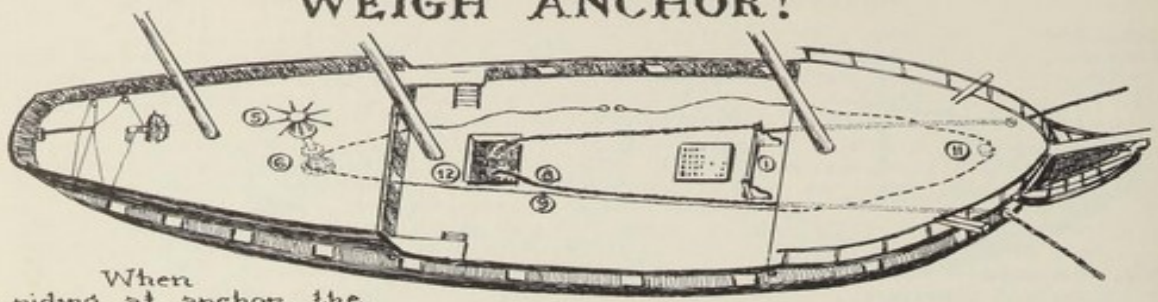


Unloading a float at Bivalve.

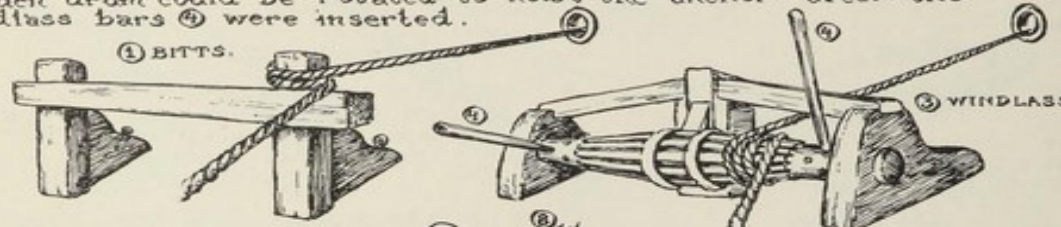
Report of NJ Bureau of Shell Fisheries. 1904-1905

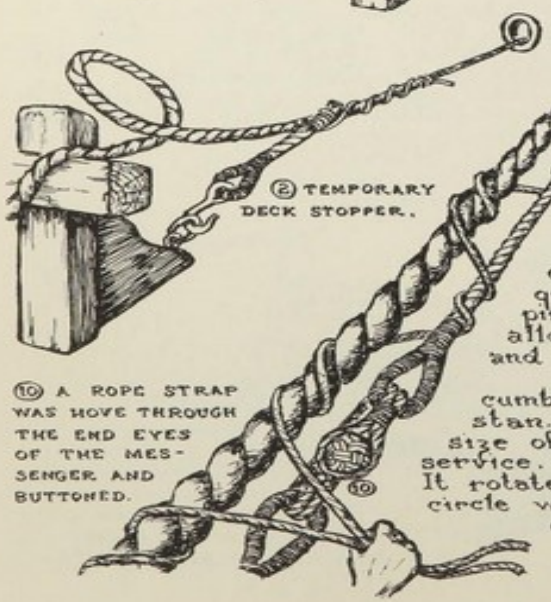
Fernwood Springs, Last remaining Atlantic White Cedar Forest NJ's Inner Coastal Plain NJ Pine Barren's Western Fringe

WEIGH ANCHOR!



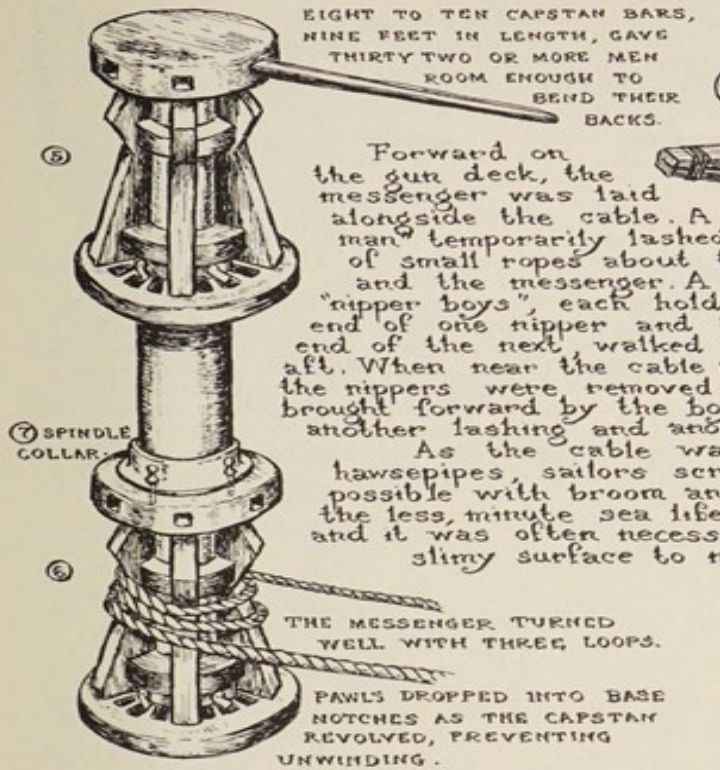
When riding at anchor, the great strain of the anchor cable was carried by a sturdy upright post called the bitt ①. To obtain slack enough to loop the cable over the bitt, a deck stopper ② was temporarily lashed forward. On a small vessel, the windlass ③ held the cable well enough. This round wooden drum could be rotated to hoist the anchor after the windlass bars ④ were inserted.





Hoisting anchor on the larger privateer took considerably more skill and effort. A heavy wooden upright winch, the capstan, was needed. Generally there were two - one on the quarterdeck ⑤ and one on the deck directly below. They could be rotated together to haul the anchor. The lower capstan ⑥ could work independently of the quarterdeck capstan by removing the pins on the metal spindle collar ⑦ to allow a single capstan to hoist tackles and the main yard.

The cable ⑧ was too large and cumbersome to be looped around the capstan. Therefore a messenger ⑨, half the size of the anchor cable, was pressed into service. It could handily encircle the capstan. It rotated about the deck in a continuous circle when the eye splices ⑩ were connected. The forward part of the messenger passed around a roller ⑪ under the bowsprit



EIGHT TO TEN CAPSTAN BARS, NINE FEET IN LENGTH, GAVE THIRTY TWO OR MORE MEN ROOM ENOUGH TO BEND THEIR BACKS.

Forward on the gun deck, the messenger was laid alongside the cable. A "nipper man" temporarily lashed a series of small ropes about the cable and the messenger. A number of "nipper boys", each holding the after end of one nipper and the forward end of the next, walked the two ropes aft. When near the cable hatch ⑫, the nippers were removed and brought forward by the boys for another lashing and another walk.

As the cable was hauled through the hawsepipes, sailors scrubbed off as much mud as possible with broom and buckets of water. None the less, minute sea life made the cable slippery and it was often necessary to sprinkle sand on the slimy surface to make the nippers hold.

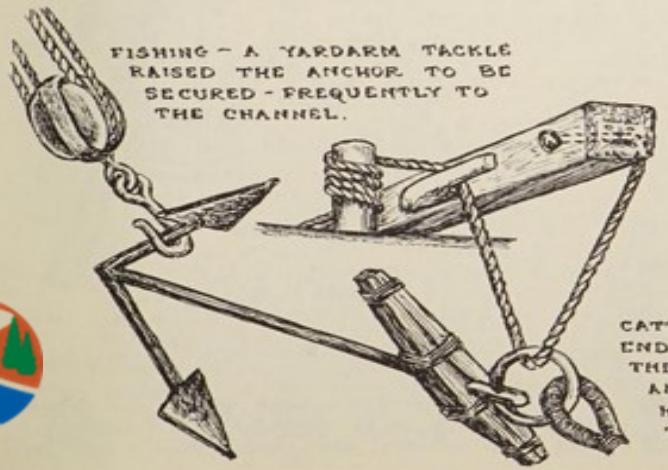
THE MESSENGER TURNED WELL WITH THREE LOOPS.

PAWLS DROPPED INTO BASE NOTCHES AS THE CAPSTAN REVOLVED, PREVENTING UNWINDING.

THE ANCHOR WAS SIZABLE - FIVE HUNDRED POUNDS FOR EVERY HUNDRED TONS OF TONNAGE STOCK WAS OF TWO PIECES OF WOOD, CLAMPED WITH IRON HOOPS. A SLIGHT BEVEL TO THE SQUARE IRON BARS WAS ALL A FORGE COULD MANAGE.

THIS GILDED CATHEAD CARVING GLARED FROM AND GAVE GOOD LUCK TO THE FAMOUS FRIGATE CONSTITUTION OF LATER DAYS.

FISHING - A YARDARM TACKLE RAISED THE ANCHOR TO BE SECURED - FREQUENTLY TO THE CHANNEL.



CATTING THE ANCHOR - A ROPE WITH ITS END STOPPERED WAS PASSED THROUGH THE CATHEAD, THEN THROUGH THE ANCHOR RING TO A CLEAT ON THE CAP-HEAD. IT WAS THEN MADE FAST TO A TIMBER HEAD.

Thanks 2 Mike T.

<<< Pine Barrens Kedge Anchor Great Egg Harbor River

American seamanship manual from 1904 describes kedging as a means for maneuvering large engineless ships in and out of tight harbors and tidal river entrances. Strapping young lads would take to the longboats and row out one of the ship's smaller anchors in the direction they wanted to move the ship. They would then drop anchor when they ran out of cable, return to the ship and take up on the capstan to pull the ship up to the anchor, usually 600 feet or so at a time.

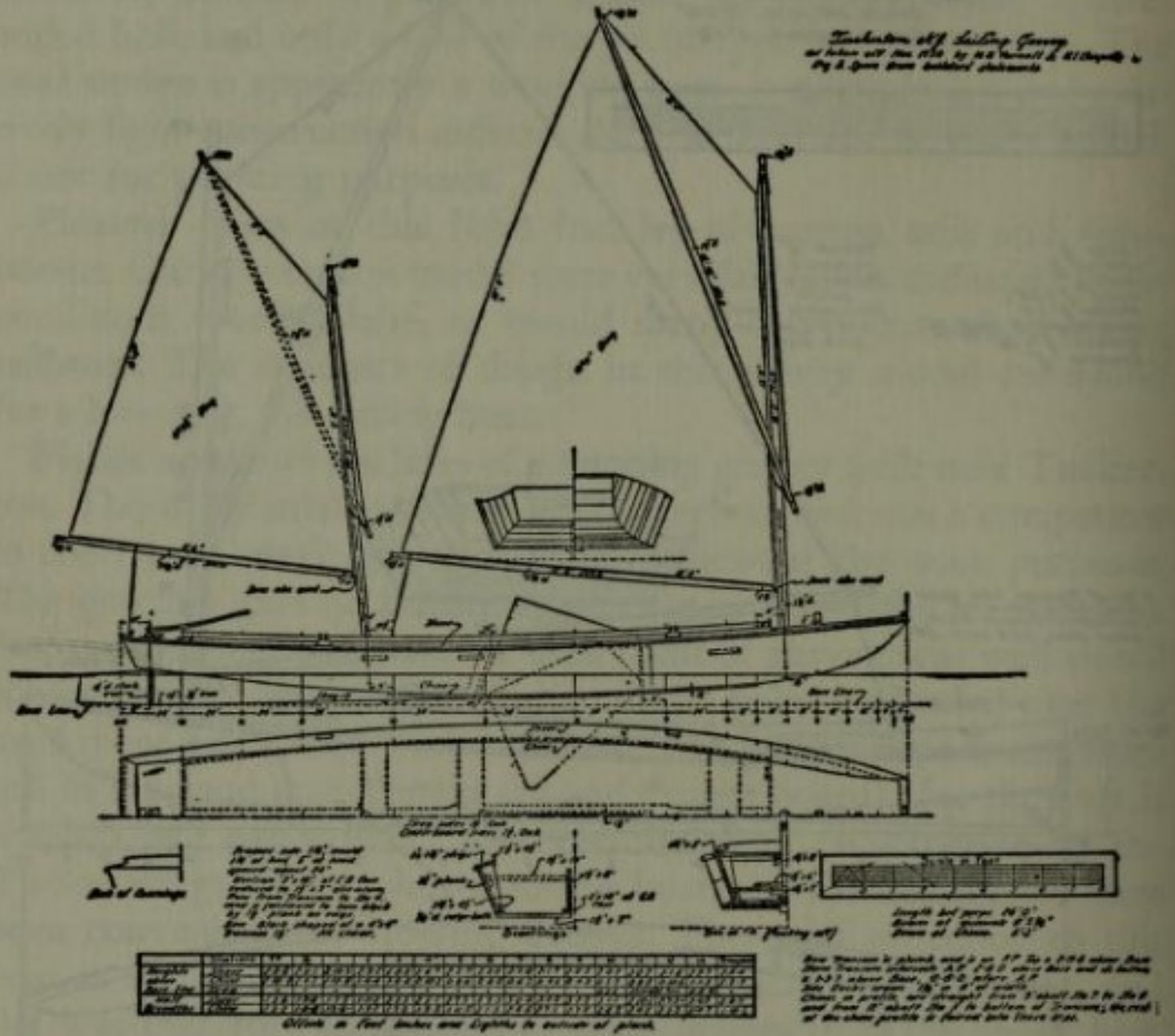


Fig. 21. Typical New Jersey sailing garvey, two-masted rig, showing flat decks afore and abaft cockpit, as built at Tuckerton, New Jersey.

In 1932 there were no reports of any active original NJ Sailing garvey's.

Reference:

Howard I. Chapelle

HAMMS Survey

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Tuckerton Seaport

Come discover why Tuckerton Seaport is more than a museum!

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Book Now

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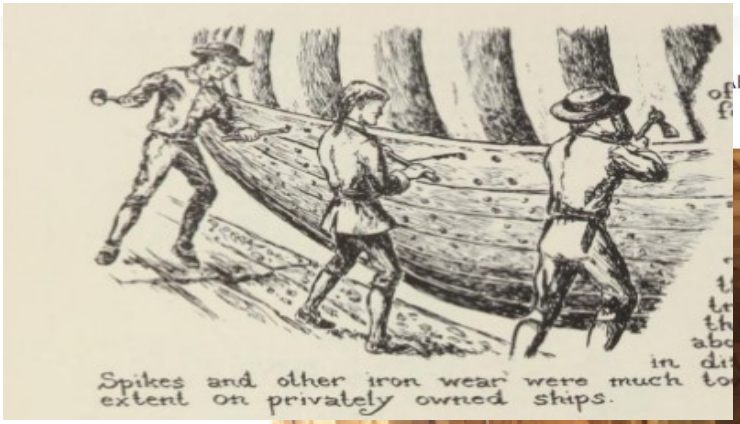


Our Mission

Our mission at the Tuckerton Seaport is to preserve, present and interpret the rich maritime history, artistry, heritage and environment of the Jersey shore and the unique contributions of its baymen.

Part Two Landscapes

High Tide - Cohansey Creek Wharf - 1946

MCL's are how people have shaped the environment and, in turn, how the environment has shaped human society. MCL's are holistic and multi-layered

NJ Pine Barrens Trifinium* Landscape

* a place where three boundaries meet.

Maritime way points/Ports

Mays Landing
Bridgeton
Schooner Landing
Millville
Greenwich
Port Elizabeth
Leesburg
Port Norris
Maurice River Cove
DELAWARE RIVER
DELAWARE BAY
Bridgeton Port District - 1785
Approximate Location
New Jersey's
Pine Barrens Port's/Landings

Navigable Waterways of the South Jersey Port District

The seven NJ counties which comprise the NJ State designated (1926) South Jersey Port District are those bordering the Delaware River and Delaware Bay.

1. Rancocas Creek*
2. Big Timber Creek
3. Woodbury Creek
4. Manuta Creek
5. Racoon Creek
6. Oldmans Creek
7. Salem River

* Headwaters Originate in or directly abut the NJ Pine Barrens

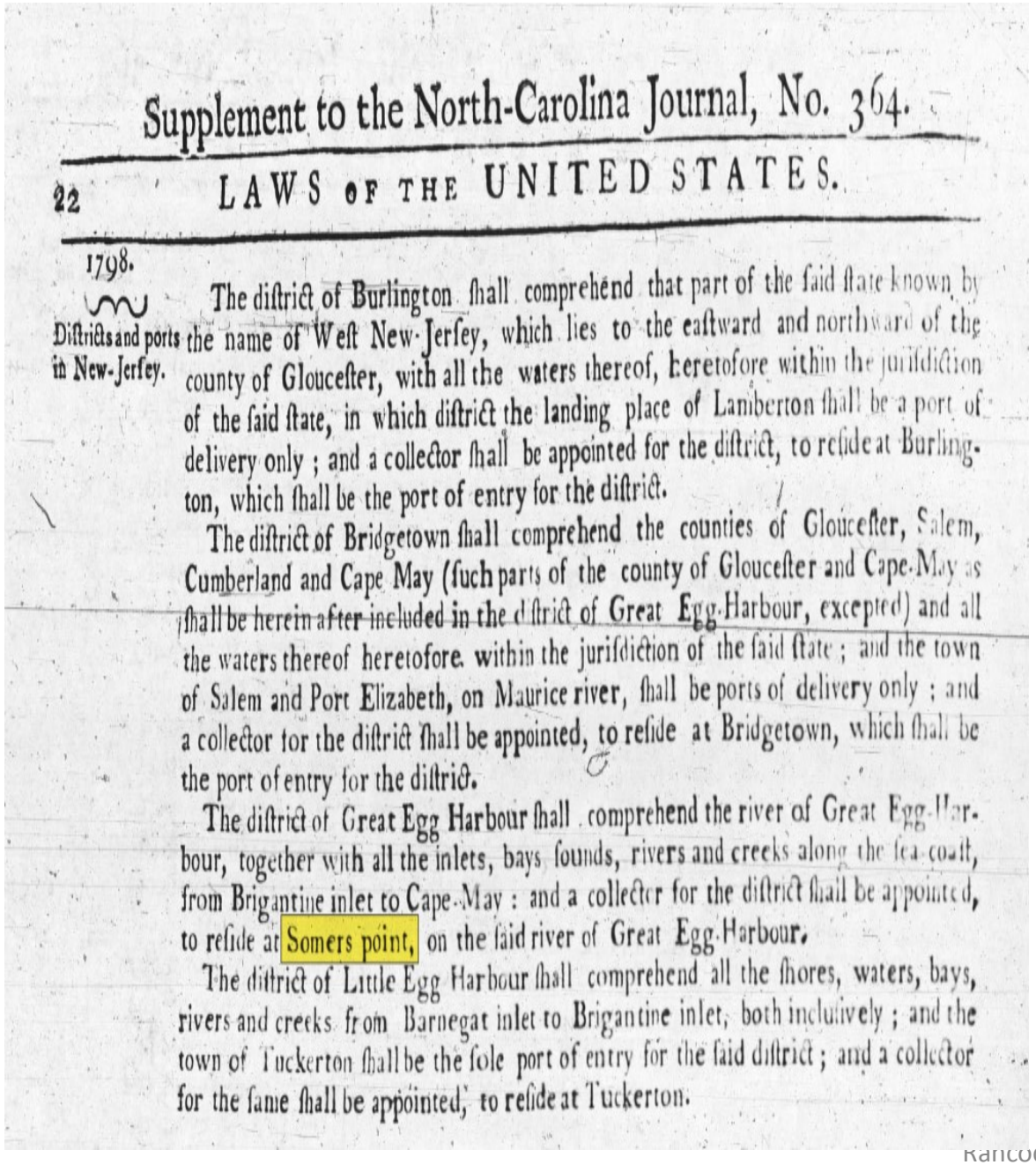
8. Alloway Creek
9. Cohansey River*
10. Maurice River*
11. Dennis Creek*

Goshen Creek

NJ Intracoastal Waterway

* Headwaters Originate in or directly abut the NJ Pine Barrens

Port Districts and Ports of Delivery 1798



Supplement to the North-Carolina Journal, No. 364.

22 LAWS OF THE UNITED STATES.

1798.

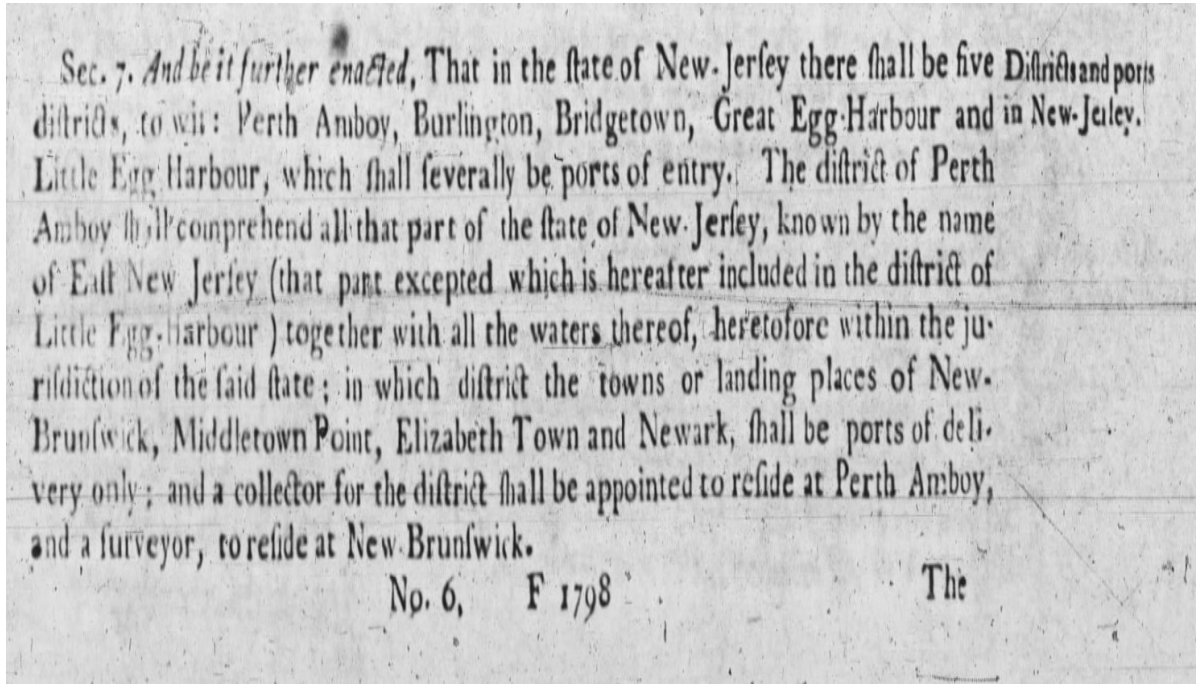
Districts and ports in New-Jersey.

The district of Burlington shall comprehend that part of the said state known by the name of West New-Jersey, which lies to the eastward and northward of the county of Gloucester, with all the waters thereof, heretofore within the jurisdiction of the said state, in which district the landing place of Lamberton shall be a port of delivery only; and a collector shall be appointed for the district, to reside at Burlington, which shall be the port of entry for the district.

The district of Bridgetown shall comprehend the counties of Gloucester, Salem, Cumberland and Cape May (such parts of the county of Gloucester and Cape-May as shall be herein after included in the district of Great Egg-Harbour, excepted) and all the waters thereof heretofore within the jurisdiction of the said state; and the town of Salem and Port Elizabeth, on Maurice river, shall be ports of delivery only; and a collector for the district shall be appointed, to reside at Bridgetown, which shall be the port of entry for the district.

The district of Great Egg Harbour shall comprehend the river of Great Egg-Harbour, together with all the inlets, bays sounds, rivers and creeks along the sea-coast, from Brigantine inlet to Cape-May: and a collector for the district shall be appointed, to reside at Somers point, on the said river of Great Egg-Harbour.

The district of Little Egg Harbour shall comprehend all the shores, waters, bays, rivers and creeks from Barnegat inlet to Brigantine inlet, both inclusively; and the town of Tuckerton shall be the sole port of entry for the said district; and a collector for the same shall be appointed, to reside at Tuckerton.



Sec. 7. *And be it further enacted*, That in the state of New-Jersey there shall be five districts, to wit: Perth Amboy, Burlington, Bridgetown, Great Egg-Harbour and Little Egg Harbour, which shall severally be ports of entry. The district of Perth Amboy shall comprehend all that part of the state of New-Jersey, known by the name of East New Jersey (that part excepted which is hereafter included in the district of Little Egg-Harbour) together with all the waters thereof, heretofore within the jurisdiction of the said state; in which district the towns or landing places of New-Brunswick, Middletown Point, Elizabeth Town and Newark, shall be ports of delivery only; and a collector for the district shall be appointed to reside at Perth Amboy, and a surveyor, to reside at New-Brunswick.

Districts and ports in New-Jersey.

No. 6, F 1798 The

British Military Headquarters Map
West Jersey East Bank Delaware River, 1778

Compare w German and American Military Maps of the period. You will find differences. This map is outstanding in that is shows the East Bank of the Delaware River and this association w the British Navy. (ref U of Mich Library)

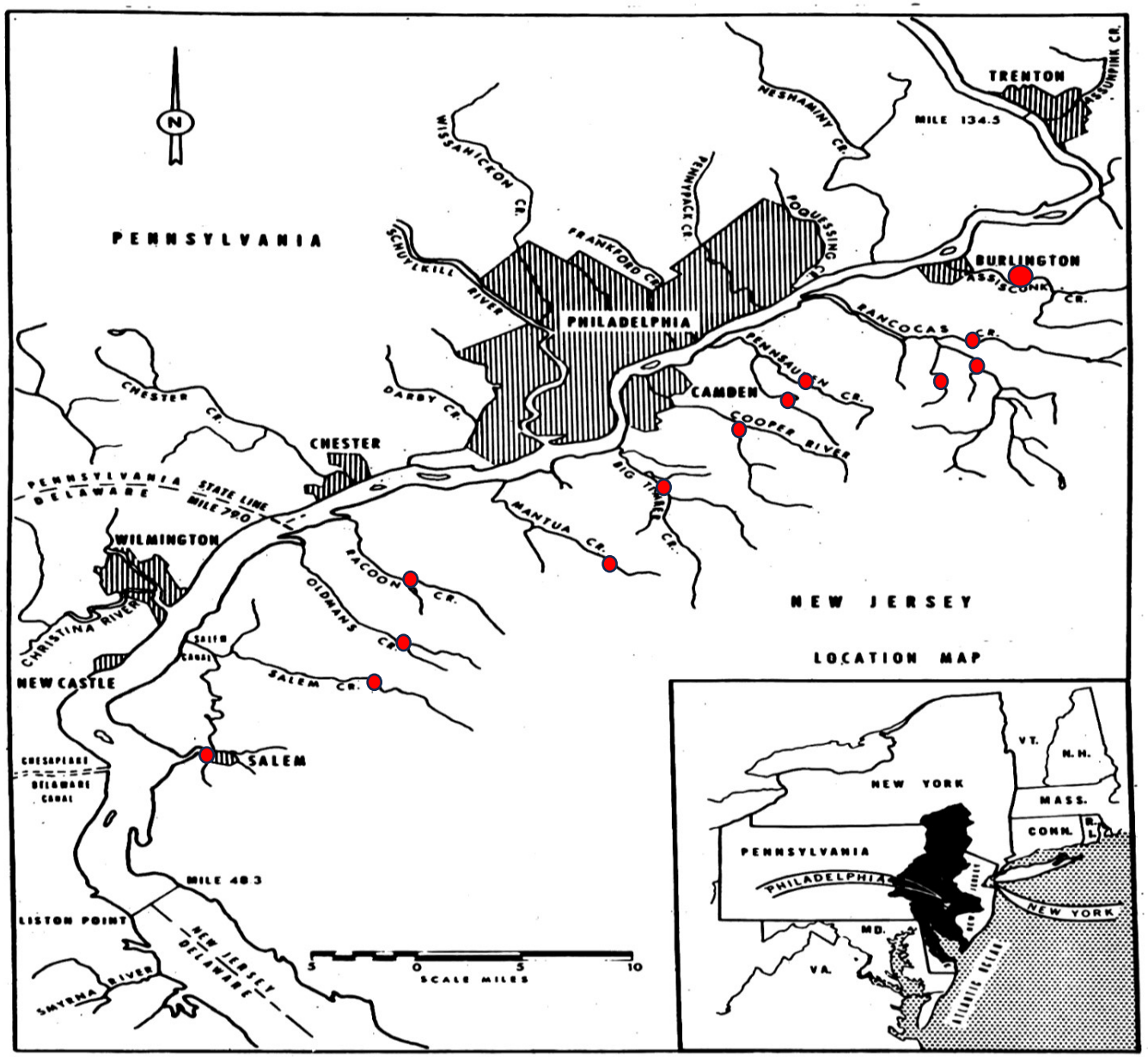


FIGURE 1. - The Delaware Estuary and location of the Delaware River Basin, river mile 0.0 = mouth of Delaware Bay.

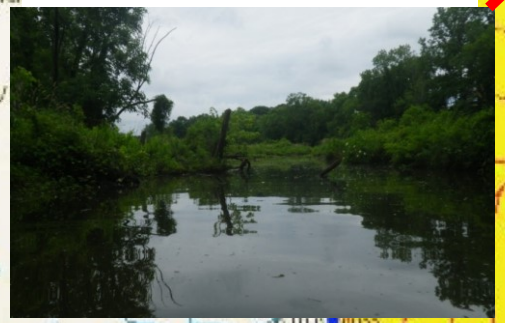
West Jersey's

Rancocas Creek

● Head of Tide

Rancocas Creek Pine Barrens Western Outflow
360 Square Mile Watershed

Head of Tide
Mount Holly N Branch
Lumberton S Branch



Mill Creek
Lumberton
Mt Holly
Willingboro
Riverton
Mayfair
Fort Dix
Lakehurst
Pointville
Hanover Furnace
Whitesbog
Browns Mills
Pemberton Heights
Cedar Glen Lakes
Pine Ridge at Crestwood
Retreat
Presidential Lakes Estates
Leisuretowne
Burrs Mill
Ong
Wheatland
Webbs Mill
Oak Shade
Medford Lakes
Taunton Lakes
Johnson Place
Flyat
Bozuretown
South Park
Chatsworth
Braddocks Mill
Lindenwold
0 2 4mi
EnviroMapper®
State of New Jersey, Esri, HERE, Garmin, NGA, U.S. EP

Law of Primitive Growth

Reference: Purdy Moorestown 1886

that neither history nor tradition sheds much light upon. According to the law of primitive growth the navigable water-courses controlled the location of the first settlement in the region. Penisauken and Rancocas creeks were such water-courses, and the first English settlement in this vicinity was planted between the branches of the Penisauken; and all Chester township, including what are now Cinnaminson and Delran townships, was originally named Posomokin, or Penisauken, from the Indian town already existing there when the first white settlers came. The banks of the Rancocas gained

What Stands Out ? 400 Years Maritime Heritage Rancocas Creek Watershed

James Forten

12,000-15,00 End of last ice age

10,000 Years Man Arrives

1671 Sussex County Lundy's Willingboro

Whaling Ship Building

1682 Moorestown

Burlington County Prison 1819

Lumberton Mosasaurs

Sand Mines

Texas

Typhoid

Prohibition

Development

Water Trail

170-200 million years Atlantic Plain forms

Early 1600's – Creek mapped by the Dutch/Swedes

Sending Area Philadelphia Market

Global Markets

Revolutionary War

Moorestown/ Battle of Mt. Holly/Admiralty Court/S. Girard

James Forten

Brick Works

Timbuctoo - Underground Railroad

Industrialization

Recreation

President Roosevelt

Rancocas State Park

Exploring Historic Pathways, Discovering New Understandings

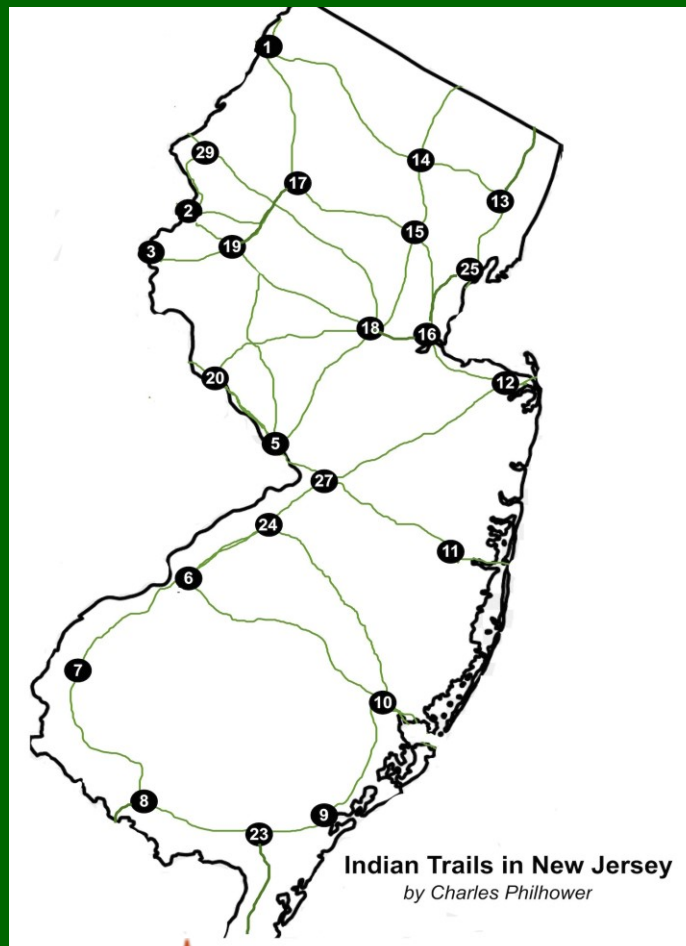
Native Americans Trails Across the Pine Barrens: Delaware River to Atlantic Ocean

The Lenape practiced tree girdling and slash-and-burn techniques to clear land to raise corn, squash, beans, rice, sunflowers, cranberries, blueberries, and tobacco; many of these were domesticated by the Indians and later adopted by the Europeans.

Agrarian Settlement
Moved on Local Pine Barren Waters in Canoes

The Indians not only provided the first Europeans with proof of fertile soil, but their trails provided travel routes. As white settlements increased, however, the Indians were perceived as a growing obstacle.

Dorthey Cross
NJ State
Archeologist
1930's



Indian Trails in New Jersey
by Charles Philhower

Villages	Lenape sub-tribe
1. Minisink	Minsi
2. Manunkachunk	Minsi
3. Lopatcong	Minsi
4. Tohickon	Minsi
5. Assanpink	Unami
6. Maroakong	Unami
7. Naratacong	Unilachtigo
8. Seppetaking	Unilachtigo
9. Absecum	Unilachtigo
10. Mechesactauxin	Unilachtigo
11. Metedikunk	Unami
12. Navesink	Unami
13. Haginsack	Minsi
14. Pompton	Minsi
15. Pasaya	Minsi
16. Ampoge	Unami
17. Hopatcong	Minsi
18. Sacunk	Unami
19. Musconetcong	Minsi
20. Aliabhoking	Minsi
21. Tuckaramahacking	Unami
23. Manamuskin	Unilachtigo
24. Rancocas	Unami
25. Weequahic	Unami
27. Crosswick	Unami
28. Allamuchahokking	Minsi
29. Pahuckqualong	Minsi

Trails

1-17-15-16-12 The Minisink Trail; in use until c. 1820
1-14-13 The Pompton Trail
5-18-16 The Assanpink Trail
(Philhower identifies 14 other named trails on his map)

Courtesy RF. Early Rancocas Creek Watershed Argillite Knife. Argillite easily worked into tools and weapons. ca 6,000 – 8,000 years old

Courtesy Mr. Ray W. Early American Rancocas Creek Archaic Cutting Tool. Notched biface tool or weapon. Most likely a variety of cryptocrystalline chert or chalcedony. In the tidal regime for a long time. ca 6,000 – 8,000 years old

Native American Footpaths and Trails

Trails linked all of these areas. A path paralleled the one mentioned earlier, but on the western side of the Great Egg Harbor River. Starting at Beesley's Point, it wound past Tuckahoe and Stephen's Creek, and continued inland. Invariably, these obscure paths would strike for the tiny streams that fed the major rivers, for it was to these that the herring would come to spawn in season, offering rich pickings for the food-seeking Lenape.

Reference Abansnagmi

Stone Quarry Landing - Rancocas State Park
South Branch - Hainesport

Courtesy Lumberton
Historical Society

Highly Probable Type of Canoes used in the NJ Pine Barrens and associated waters.

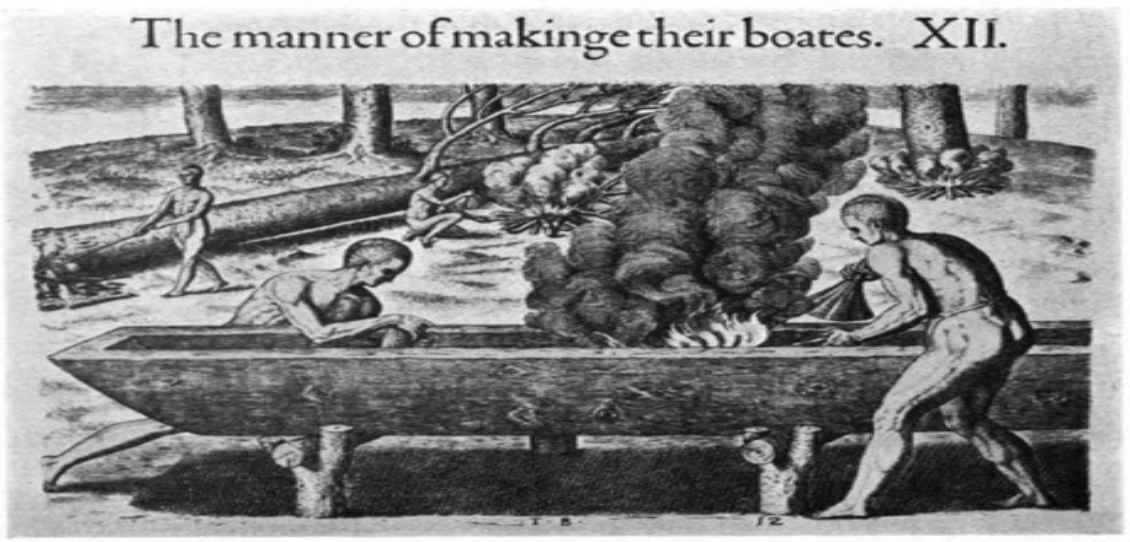


Figure 2. "The Manner of Makinge Their Boates." By John White, 1585 From: Hariot, *Virginia*

Figure 4. Dugout Canoe Showing First European Influence In The Valentine Museum *Courtesy: Valentine Museum*

The earliest, written by Thomas Hariot, was printed in London in 1588. It is too general in terminology to be of much value, but in DeBry's *Grandes Voyages* (1590) there is an expansion of the account and a good description with an illustration (figure 2) of the process written and drawn by eye witnesses:

> The manner of makinge their boates in Virginia is verye wonderfull. For wheras they want Instruments of yron, or other like unto ours, yet they knowe howe to make them as handsomelye, to saile with whear they liste in their Riuers, and to fishe

with all, as ours. First they choose some longe, and thicke tree, accordinge to the bignes of the boate which they would frame, and make a fyre on the grownd abowt the Roote therof, kindlinge the same by little, and little with drie mosse of trees, and chipps of woode that the flame should not mounte opp to highe, and burne to muche of the lengte of the tree. When yt is almost burnt thorough, and readye to fall they make a new fyre, which they suffer to burne vntill the tree fall of yt owne accord.

When Europeans came to the shores of New Jersey they mapped all the rivers, creeks and streams. In some cases, these maps show permanent and large settlements along them including the Rancocas. Native American presence along the Rancocas, as well as within the State of New Jersey, was short lived as the Delaware were forced out of New Jersey beginning in the early 1800s.

Lattanzi

Heritage Rancocas Creek Water Trail

Compliments Mount Holly Historical Society

Lenni-Lenape Cedar Basket

Rancocas Creek Site **31-4-3-2-4**

Rancocas Creek's handsomest of marsh plants, Wild Rice.

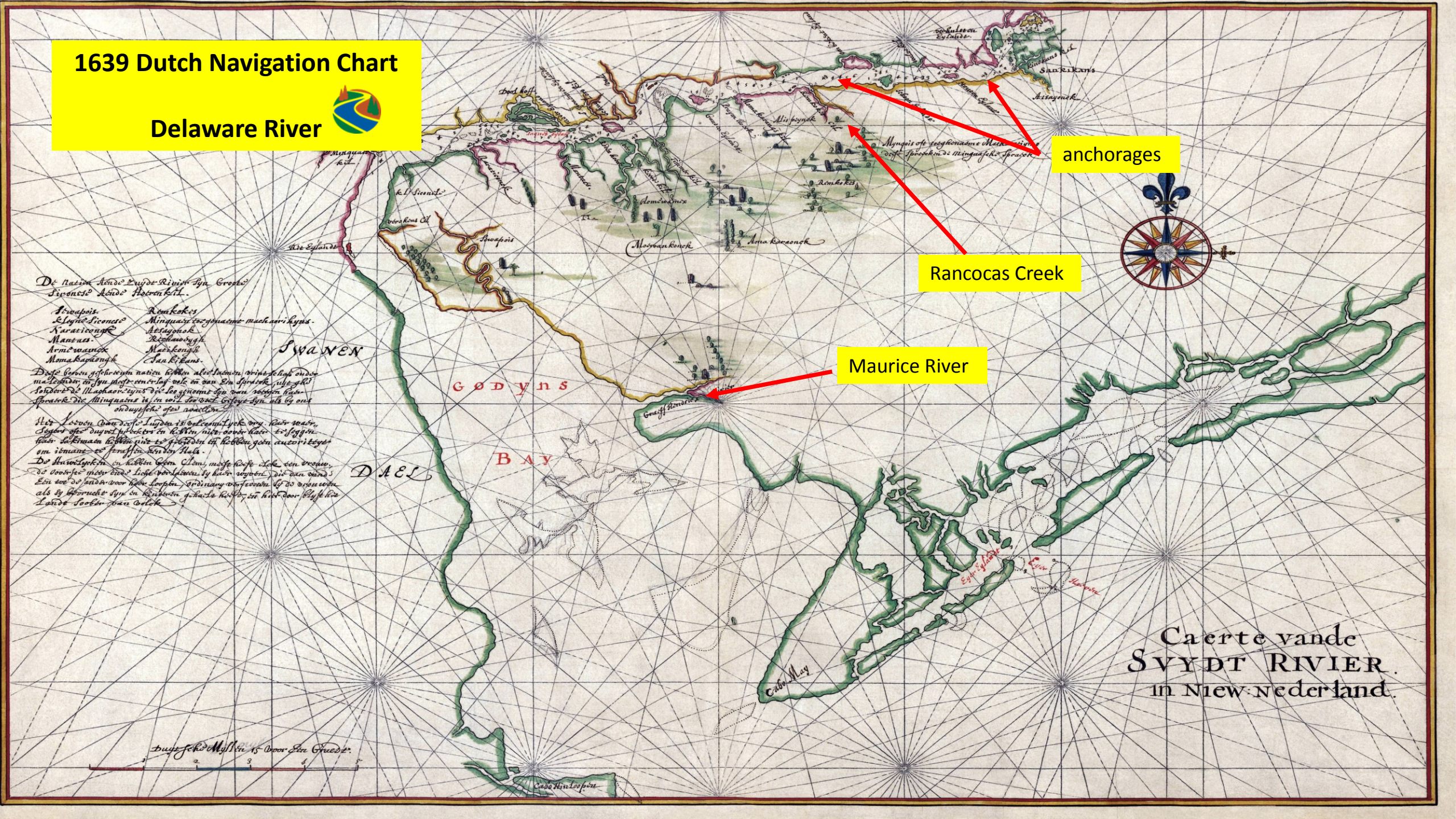
Rancocas Creek Indigenous people harvested wild rice for food and culture.

Today NJ's largest remaining expansive wild rice marshes are found on the Rancocas Creek in a protected NJ State Natural Area.

Who Was here First? European Interlopers

“Truffle Hunting with an Iron Hog: 1614 The First Dutch Voyage up the Delaware River”
Jaap

Early 1500’s Portuguese Navigation Chart East Coast USA and Canada


1639 Dutch Navigation Chart
Delaware River
anchorages
Rancocas Creek
Maurice River
GØDYNS
BAY
DAEL
SWANEN
Caerte vande
SVYDT RIVIER
in New-Nederland.

1639 Dutch Navigation Chart

Delaware River Anchorages

Burl Native Capt James Lawrence

Sunset from Burlington Island lake

Moran Tugs Delaware River Federal Navigation Channel - Burlington

Burlington Island , Delaware River Federal Navigation Channel Mile 102.5

Indigenous Lenape called the island Matennecunk. Initial settlement by the Dutch, 1624

Dutch trade on the Delaware River, and specific ships sailing from Texel to the Delaware River.

Ships with the names Witte Leeuw and De Hoope (or Hope, Hoop) are not mentioned in combination with the Delaware valley/river.

Information from the publication "Scheepvaart en handel van de Nederlandse Republiek op Nieuw Nederland 1609-1675 / J.A. Jacobs":
Jacobs mentiones the small importance of trade, because the main reason for the Dutch sailing on New-Amsterdam and Delaware was the colonisation. However, there was beaver trade (fur), and for example some whaling.

List of ships journeys on the Delaware River:
042.1, Walvis, Captain Pieter Heyes, 300 tons, owner K. van Rensselaer c.s. Departure Texel 12-12-1630, Arrival Delaware 1631. Sailed together with the 'Salm'(no. 043). Via Tortuga, where they settled a colony. After that whaling on the Delaware.

338.1 Walvis, capt. Pieter Heyes, left Delaware after 03-06-1631, arrived Amsterdam sept. 1631

046.2, Walvis, capt David Pietersz. De Vries, 300 tons, owner K. van Rensselaer c.s. Departure Texel 24-05-1632, Arrival Delaware 06-12-1632. Went after the whaling to New-Amsterdam, arrived 16-04-1632

047.1, Eekhoorntje, capt. Jan Tjepkesz. Schellinger, yacht 20 tons, owner K. van Rensselaer c.s., Departure Texel 24-05-1632, Arrival Delaware 06-12-1632. Went after whaling to New-Amsterdam, arrived 16-04-1632

024.1 Nieu Nederlandt, capt Cornelis Jacobsz. May, 260 tons, Owner West Indian Company, Departure Amsterdam 30-03-1624, Arrival Hudson may/june 1624, transported 30 families Walloon colonists. Went half august to Delaware.

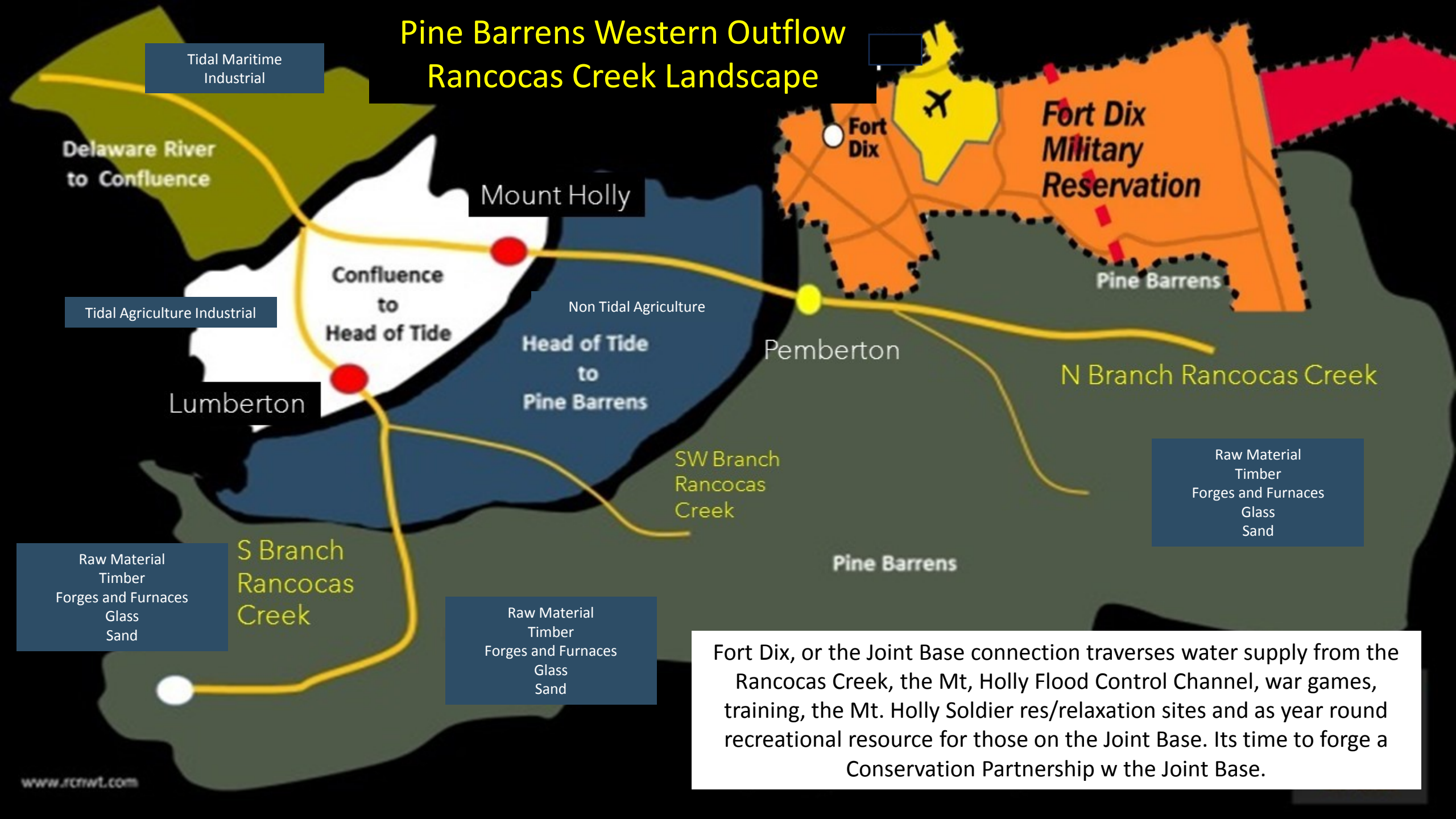
322.1 Nieu Nederlandt, capt. Cornelis Jacobsz. May, owner WIC, left Delaware sept 1624, arrived Amsterdam before 14-10-1624

137.1 Liefde, capt. Anne Douwes, private ownership, departure Amsterdam before 28-05-1655, arrival New-Amsterdam before 24-08-1655. Helped during the capture of the Swedish colony on the Delaware.

40.1 Waegh, capt. Frederick de Coninck, Wic-charter, departure Amsterdam after 24-05-1655, arrival New-Amsterdam 13-08-1655. War-ship, chartered from Amsterdam for the capture of the Swedish colony on the Delaware.

Dutch explorers, traders and settlers in the Delaware Valley, 1609 – 1664" / C.A. Weslager ; in collaboration with A.R. Dunlap. - Philadelphia : [s.n.], 1961. - 329 p. : ill. ; 8°

Pine Barrens Western Outflow
Rancocas Creek Landscape

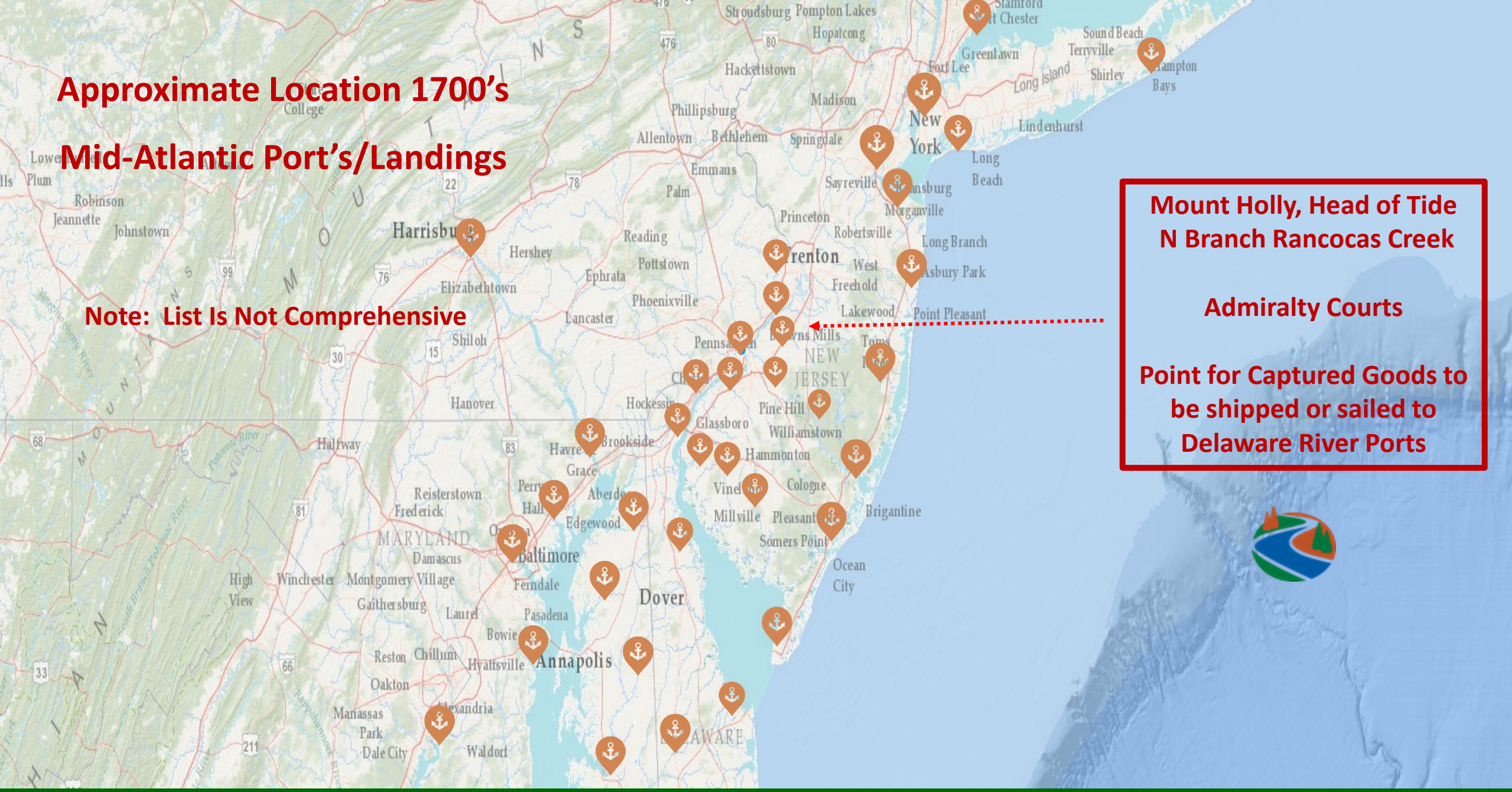


Fort Dix, or the Joint Base connection traverses water supply from the Rancocas Creek, the Mt, Holly Flood Control Channel, war games, training, the Mt. Holly Soldier res/relaxation sites and as year round recreational resource for those on the Joint Base. Its time to forge a Conservation Partnership w the Joint Base.

Approximate Location 1700's

Mid-Atlantic Port's/Landings

Note: List Is Not Comprehensive



Rancocas Drainage Beaver Trade

1665 A.D.
Price of a Brooklyn (NYC) Ferry *Shallop*

550 Dutch Guilders ($220.00)

1/3 in Beaver Furs (Winter Beaver Pelts)
1/3 Merchantable Wampum
(120 beads = 1 guilder)
1/3 in Goods, and Free Passage.

Reference: Perry, John.,
American Ferryboats, 1957

ЭКО-СВЯЗИ

Rancocas Creek Beaver

Photo credit #ks337pohoto

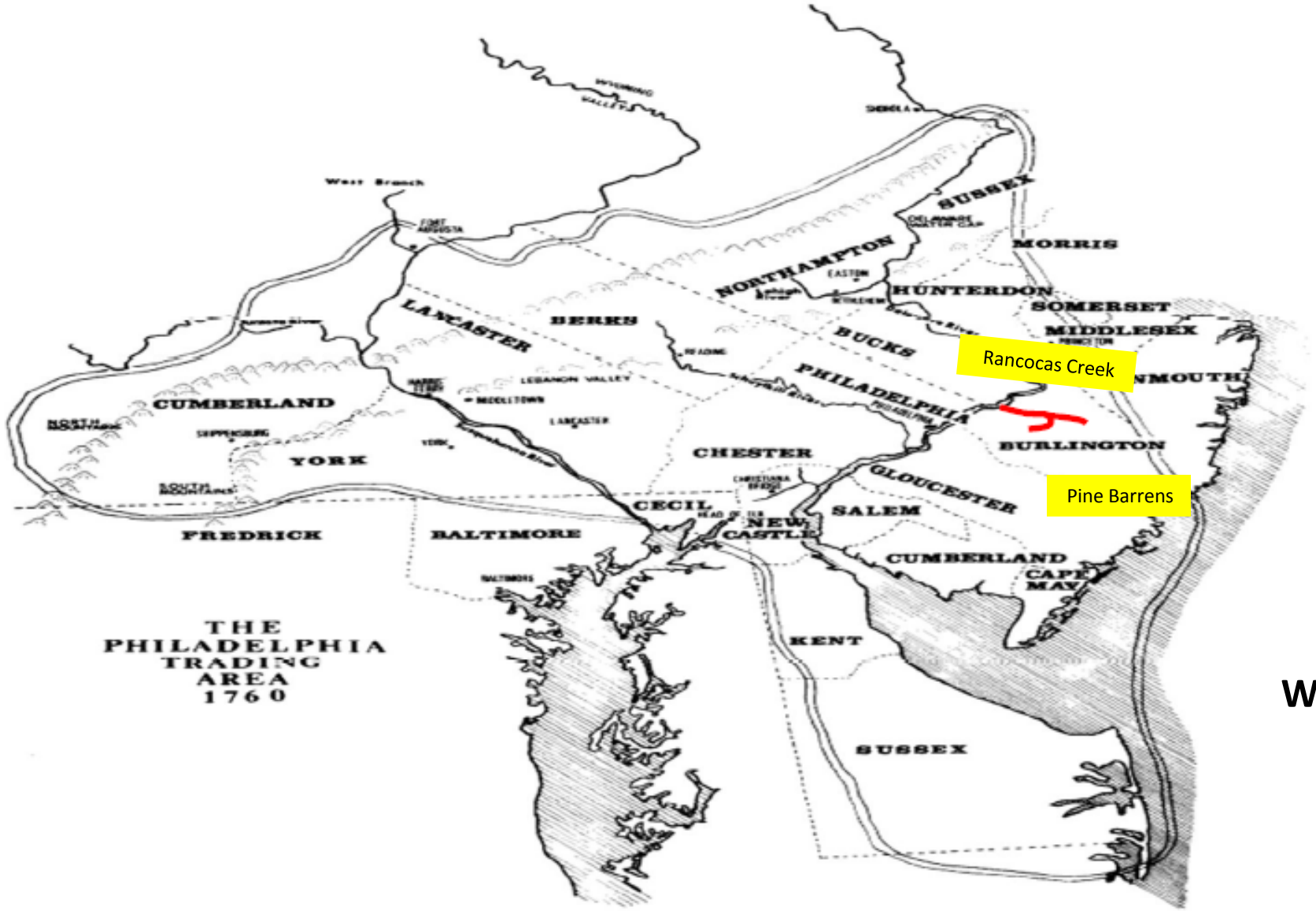
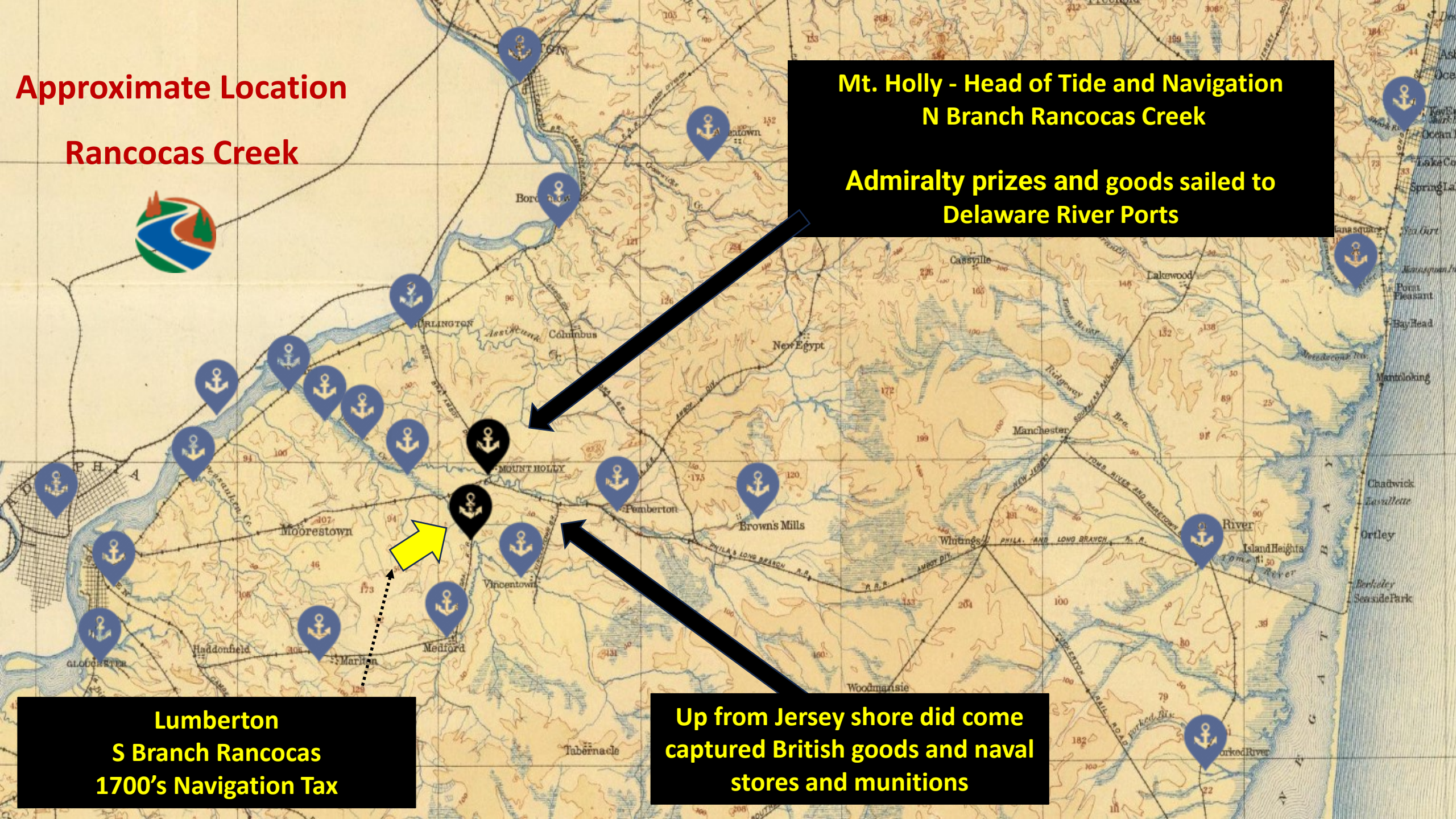


Fig. 1. The Philadelphia Trading Area, 1760. (Drawn by Rob Howard: Photo, Winterthur.)

Delaware River Estuary Fuses a Dynamic Rancocas Creek Maritime Cultural Landscape.

Waterways are "roads" that Allow Commerce to larger markets


Approximate Location
Rancocas Creek
Mt. Holly - Head of Tide and Navigation
N Branch Rancocas Creek
Admiralty prizes and goods sailed to
Delaware River Ports
Lumberton
S Branch Rancocas
1700's Navigation Tax
Up from Jersey shore did come
captured British goods and naval
stores and munitions
MOUNT HOLLY
Pemberton
Browns Mills
Moorestown
Vincentown
Medford
Marlton
Haddonfield
Tabernacle
Woodmansie
Whitings
Manchester
Lakewood
Cassville
New Egypt
Columbus
BURLINGTON
Chadwick
Ortley
Island Heights
Seaside Park
Bay Head
Point Pleasant
Mantoloking

Navigation on the Rancocas

First Ferry Across the Rancocas Creek: Bridgeboro in 1748
Chaise, Chair or sleigh, if drawn by 1 horse ... Toll of 9 pence (DeCou)

Rancoas Creek
March 21, 1817
Sailing Shallop "Good Intent"

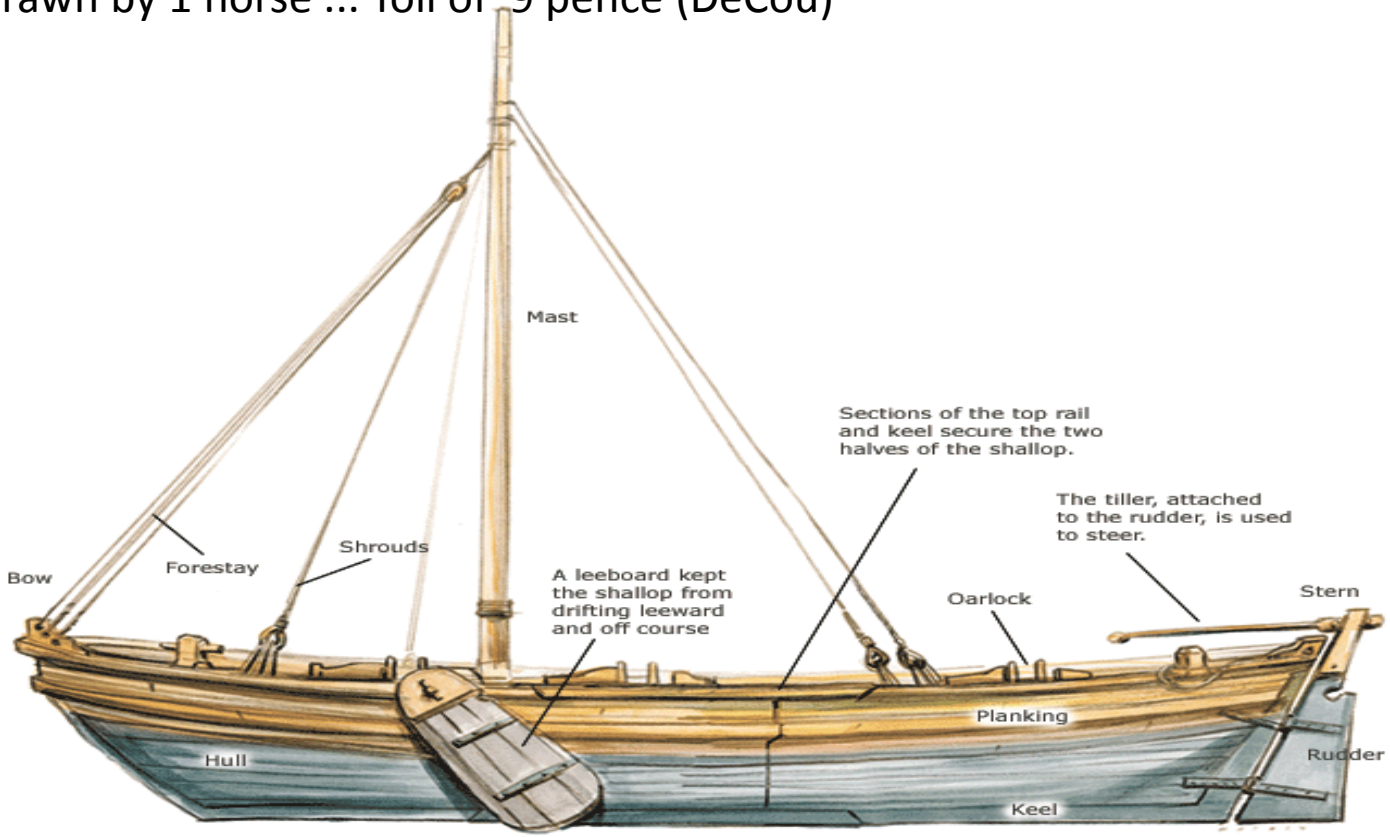
One Deck-One Mast
Length: 52 feet – 8 inches
Width: 18 feet 6 inches
Dept: 4 feet
Weight: 30 tons
Reference: Decou

1823 Steam Navigation begins on the Rancocas

Mt. Holly and Rancocas Steamboat Company (1824)

Rancocas Creek Steamer Barclay

120 feet long. 24 feet wide.



Mostly Produce-Lumber-Charcoal to the Philadelphia Port Market

Rancocas Creek Navigation Channel in 1909 *

RANCOCAS RIVER, NEW JERSEY.

LETTER

FROM

THE SECRETARY OF WAR,

TRANSMITTING,

WITH A LETTER FROM THE CHIEF OF ENGINEERS, REPORTS ON EXAMINATION AND SURVEY OF RANCOCAS RIVER, NEW JERSEY, FROM THE MOUTH TO MOUNT HOLLY.

This river has been improved by the General Government by the formation of a low-water channel 100 feet wide and 6 feet deep from the mouth to Centerton (now called Bougher), near the forks; 50 feet wide and 5 feet deep for a distance of 1¾ miles farther upstream on the Mount Holly branch; and thence 25 feet wide and 4 feet deep to Mount Holly. No work has been done on this project since 1895, operations after that year being confined to Lumberton branch.

The district officer submits a plan for further improvement by dredging a channel 10 feet deep and 200 feet wide over the bar at the mouth; 8 feet deep and 100 feet wide to Paxsons wharf at Centerton; thence to Leeds wharf, tapering to 5 feet deep and 40 feet wide; 5 feet deep and 40 feet wide, including several cut-offs between Leeds wharf

PRELIMINARY EXAMINATION OF RANCOCAS RIVER, NEW JERSEY.

ENGINEER OFFICE, UNITED STATES ARMY,
Wilmington, Del., July 31, 1909.

SIR: In accordance with your instructions of March 8, 1909, I have the honor to submit report of preliminary examination of Rancocas River, New Jersey, from the mouth to Mount Holly, as required by section 13 of the river and harbor act of March 3, 1909.

The investigations in connection with this work were made by Assistant Engineer George W. T. Miller, of this office, whose report is substantially as follows:

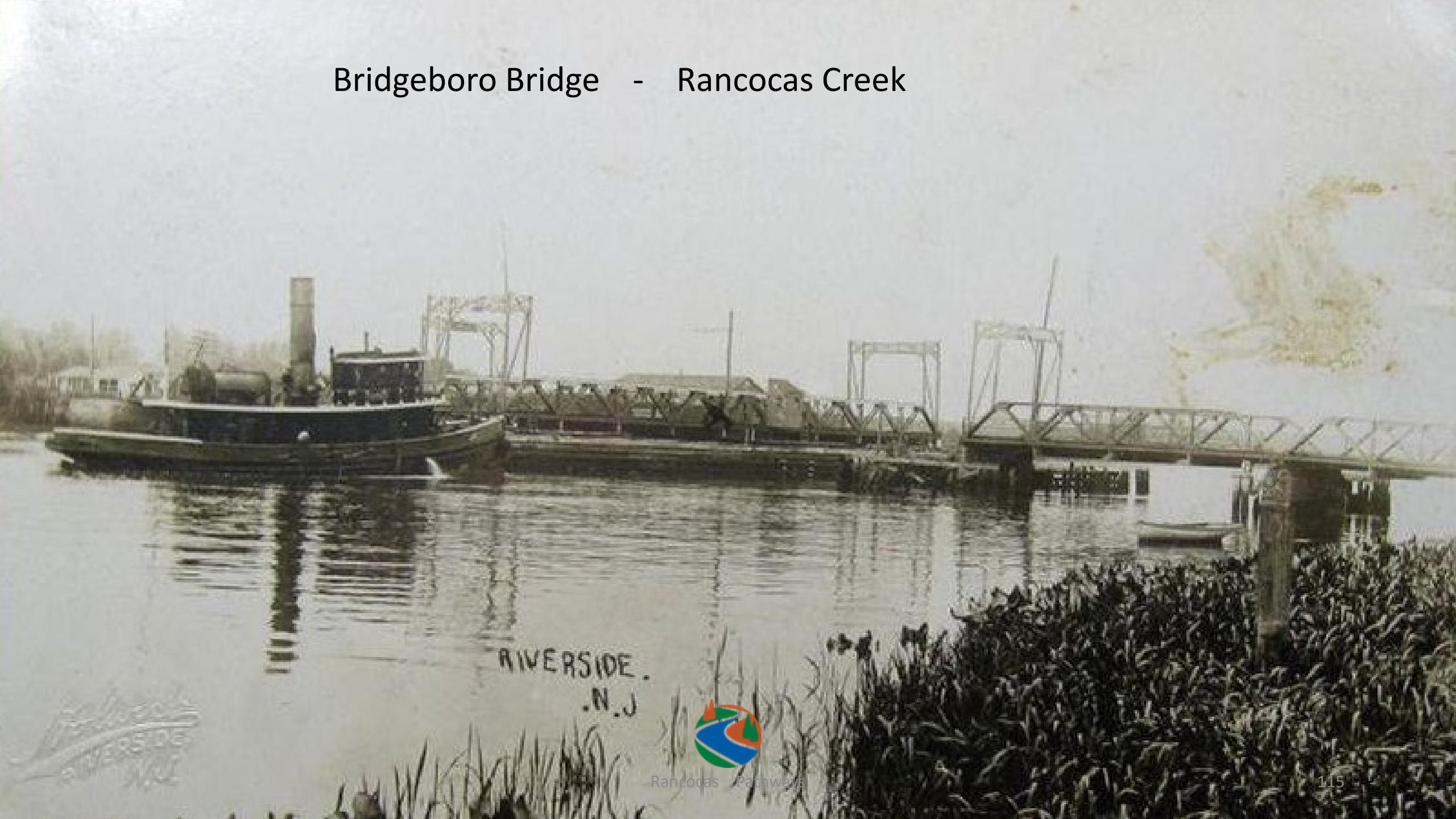
The Mount Holly branch of the Rancocas rises in the western portion of Ocean County, flows in a general direction of slightly north of west through Burlington County and enters the Delaware River about 12 miles above Market street, Camden, in a wide, sweeping curve toward the southwest.

About 1 mile above the mouth on the south shore is the town of Riverside, with a population of about 4,500, and a number of large manufacturing plants; opposite, on the north bank, is Delanco, largely made up of summer residences, with a winter population of 700. The two towns are connected by a highway bridge, carrying the Camden and Trenton trolley line, and by the Camden and Amboy Railroad bridge. About 1¾ miles farther up, on the southern shore, lies the town of Bridgeboro and another highway bridge crosses the river; about 4 miles farther above is Centerton and another highway bridge. Three-quarters of a mile beyond Centerton the river forks; the southern and larger branch leads to the towns of Hainesport and Lumberton and is called the Lumberton branch. With this tributary the present examination is not directly concerned. The northern branch, known as the Mount Holly branch, leads to the towns of Mount Holly, Smithville, Pemberton, and Brown Mills. All but Mount Holly, however, are beyond tidal influence and open navigation by reason of a dam near the upper limits of Mount Holly, built for the purpose of securing a water supply for that town.

The range of the tide is about 6 feet at the mouth, 4 feet at Centerton, and about 1 foot below the dam at Mount Holly.

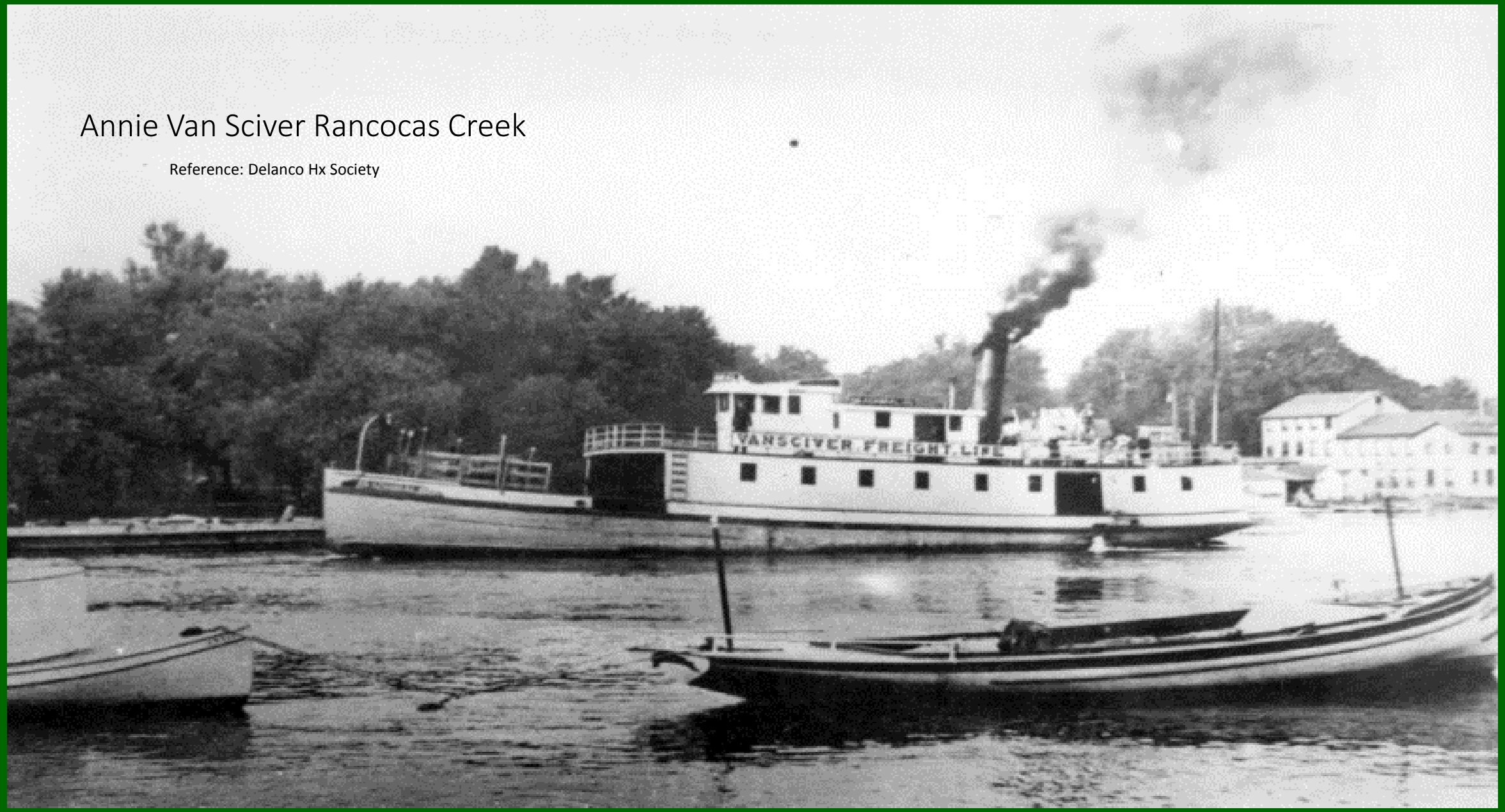
The course of the river is very crooked throughout its entire length from Mount Holly to the mouth. Along the banks sandy bluffs, for the most part heavily wooded, alternate with wide flats submerged at high tide and covered with aquatic plants.

Bridgeboro Bridge - Rancocas Creek



Annie Van Sciver Rancocas Creek

Reference: Delanco Hx Society



After Rancocas Creek Operations - Norfolk 1910

North Branch Rancocas Creek Water Trail
December 1968

SJ Waters, the N Branch Rancocas Creek, Narrow, Meandering Tidal Waters flow into and out of Mount Holly

Shallops, Steamers, Tugs Barges, Other commercial vsls called on Mt. Holly as a Port of call. This lead to congestion on the Rancocas Creek navigation channel and resulting Loss of Profits

Rancocas Creek N Branch has the remains of a maritime turning basin.

Turning Basins, are like a modern day traffic rest stop.

Maritime turning basins are found in and near the head of tide on Pine Barrens Waters.

As an example as above is the Turning Basin Huston Ship Channel, Texas. Wide enough to turn vsls around

1898

Rancocas Creek

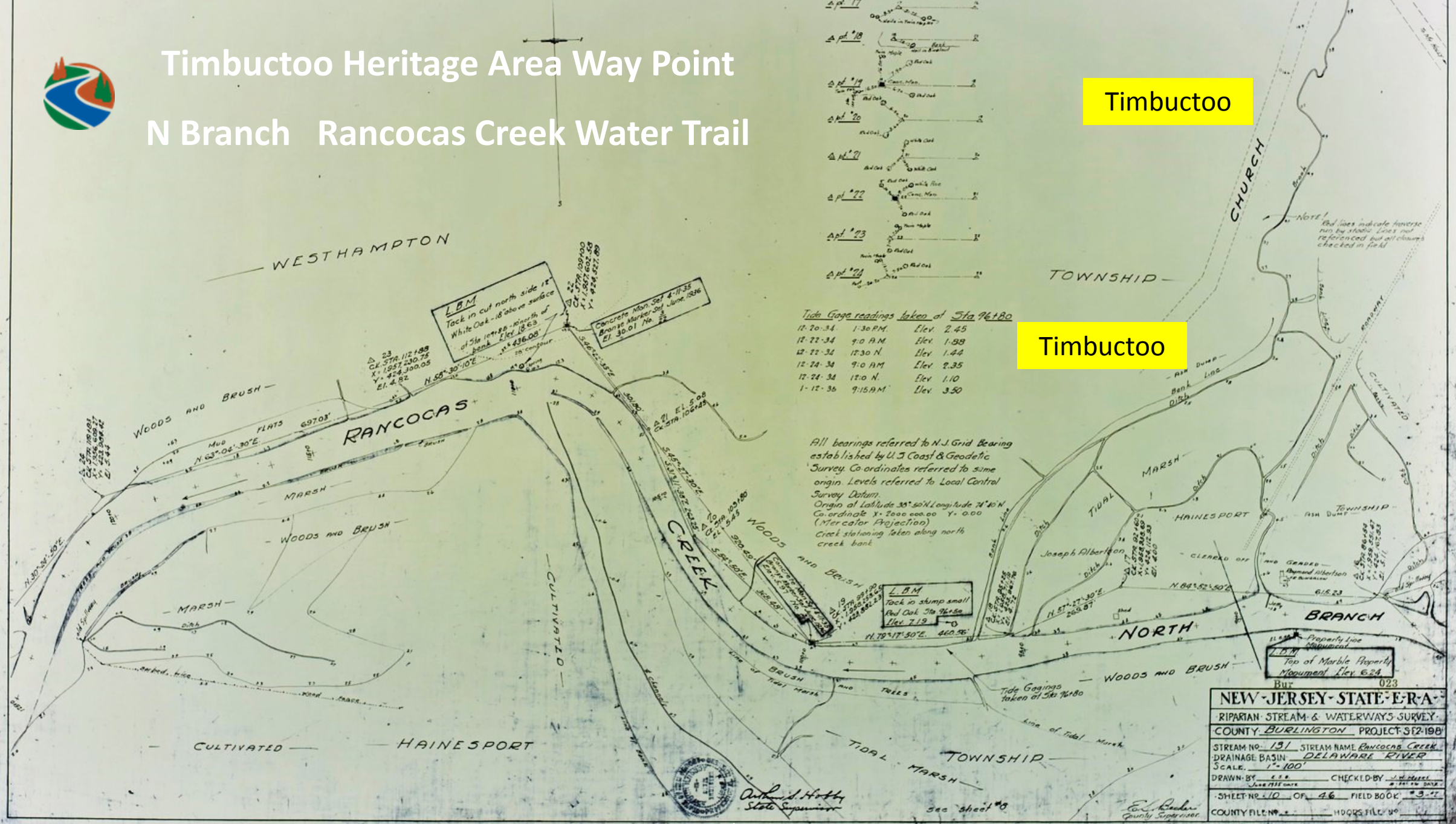
Maritime Turning Basin

Reference: US Army Engineers Report to Congress 1898 Navigation Improvements to the Rancocas Creek Navigation.

Maritime Turning Basin

Timbuctoo Heritage Area Way Point

N Branch Rancocas Creek Water Trail



Underground Railroad

Baylis was a Delaware Bay schooner captain who assisted fugitive slaves by removing them from the Virginia coastline to freedom for a fee. Baylis and the Keziah, his schooner, were active until his capture in 1858. Baylis was charged with five counts of kidnapping. At his trial, the prosecution maintained that the Black passengers were runaway slaves that paid between $34 to $50 for Baylis to transport them to New Jersey, a free state.

Although the Underground Railroad is best remembered as a series of overland routes, the stealthy network also operated at sea. One of the most important seaborne route of the Underground Railroad ran from the South, past Cape Henlopen, up the Delaware Bay and into New Jersey's Delaware Bay and River Ports

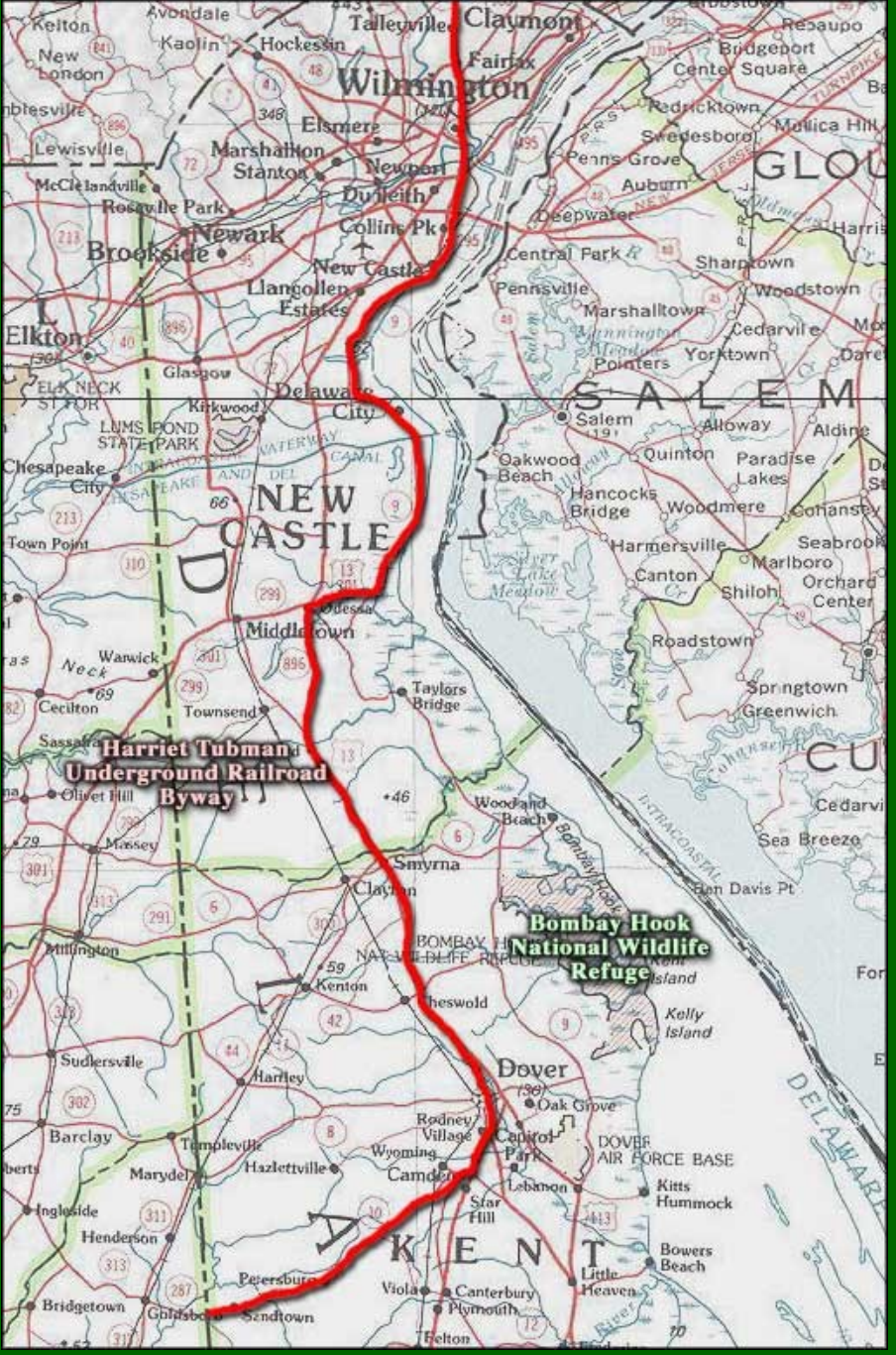
Rancocas Pathways

Moses Grandy Landing Maurice River (1843)

One day, I saw a boat coming from the shore with white men in it. I thought they were officers coming to take me; and such was my horror of slavery, that I twice ran to the ship's waist, to jump overboard into the strong ebb-tide then running, to drown myself: but a strong impression on my mind restrained me each time.

Once more we got under way for New York; but meeting again with head winds, we ran into Maurice's River, in Delaware Bay. New Jersey, in which that place lies, is not a slave state. So I said to the captain, "Let me have a boat, and set me on the free land once-more, then I will travel home overland; for I will not run the risk of going back to Virginia any more." The captain said there was no danger, but I exclaimed, "No! no! captain, I will not try it; put my feet on free land once again, and I shall be safe." When I once more touched the free land, the burthen of my mind was removed: if two ton weight had been taken of me, the relief would not have seemed so great.

From Maurice's Creek I traveled to Philadelphia, and at that place had a letter written to my wife at Boston, thanking God that I was on free land again. On arriving at Boston, I borrowed 160 dollars of a friend, and going to New York I obtained the help of Mr. John Williams to send the 450 dollars to Norfolk: thus, at length, I bought my son's freedom. I met him at New York, and brought him on to Boston.



Pine Barrens Towns New Jersey

Maurice River

Cohansey River

Newfield

Salem River

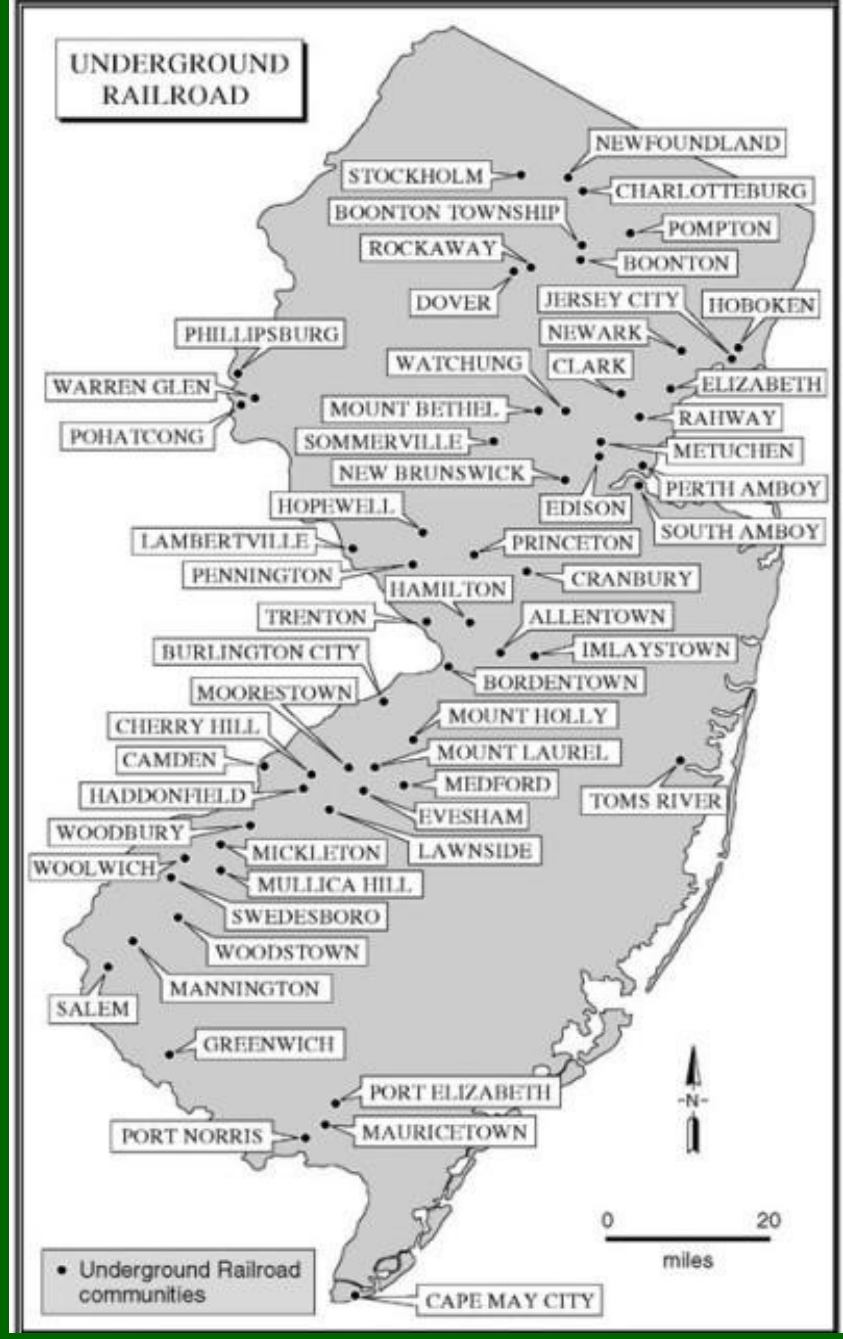
Rancocas Creek

Toms River

Mullica River

Great Egg Harbor

James Still – Dr. of the Pines



In boats marked by a yellow light hung below a blue light

William Still

During his 14 year service providing aid and comfort as a "station master" to Southern slaves on a journey to freedom William Still recorded hundreds of interviews.

One narrative *"Crossing the Delaware Bay in a Skiff"* tells of 4 escaping slaves over the Delaware Bay. Crossing took more then 15 hours. They had no knowledge of Delaware Bay and were bewildered and in a state of despair when discovered by an Delaware Bay Oyster Boat. Oyster Boat Captain took them on board and ferried them to the Port of Philadelphia

William Still Underground Rail Road Narratives crossing the Delaware Bay and Coastwise

- Captain F. and the Mayor of Norfolk TWENTY-ONE PASSENGERS SECRETED IN A BOAT. NOVEMBER, 1855

- Crossing the Bay in a Batteau - Delaware to Cape May

- Arrival of Five from the Eastern Shore of Maryland SEPTEMBER 28, 1856.

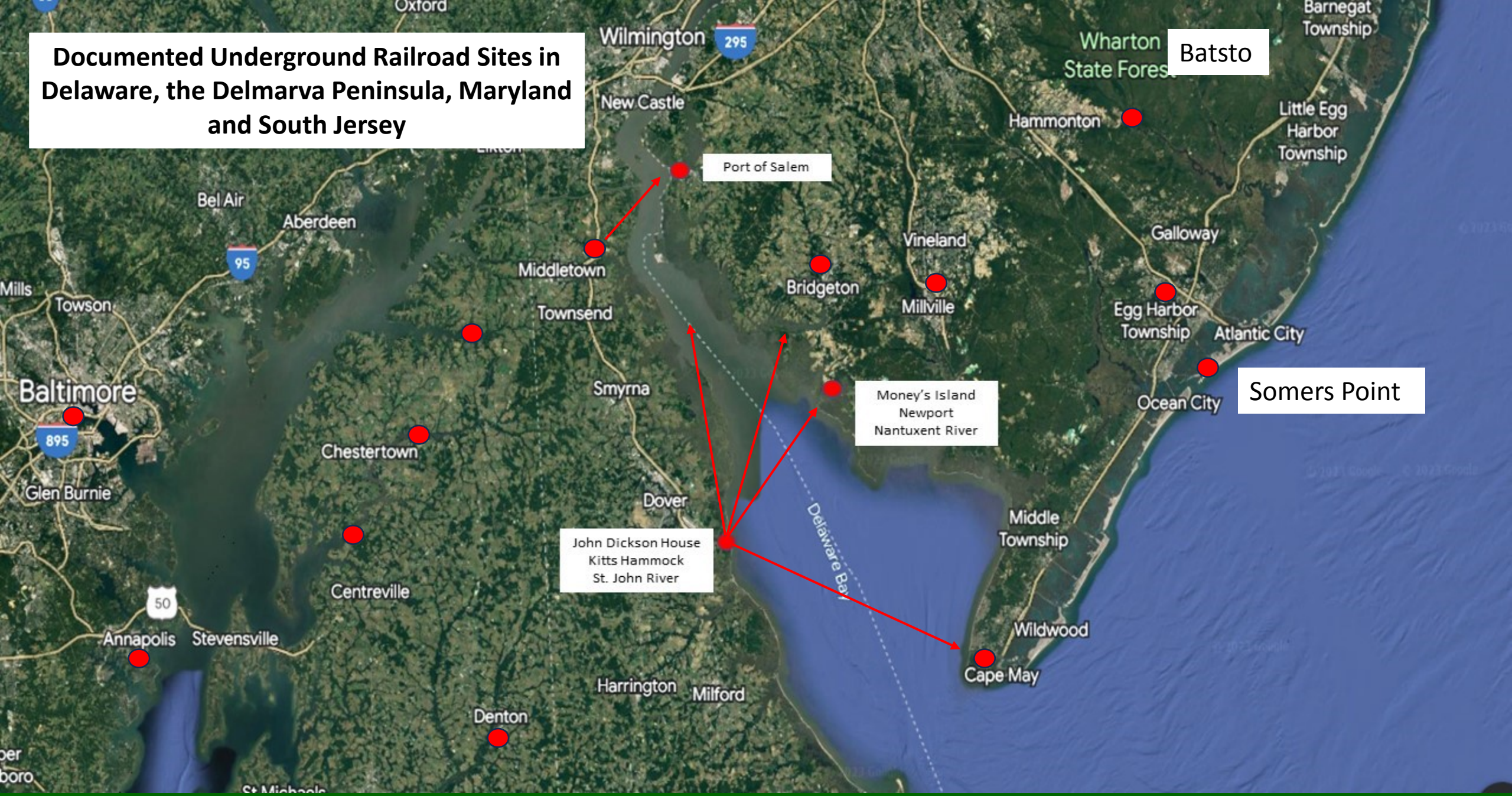
- Captain F. Arrives with Fourteen "Prime Articles" on Board WILMINGTON, 3d mo., 23d, 1856.

- Arrival from Fifteen from Norfolk, Virginia PER SCHOONER—TWICE SEARCHED—LANDED AT LEAGUE ISLAND

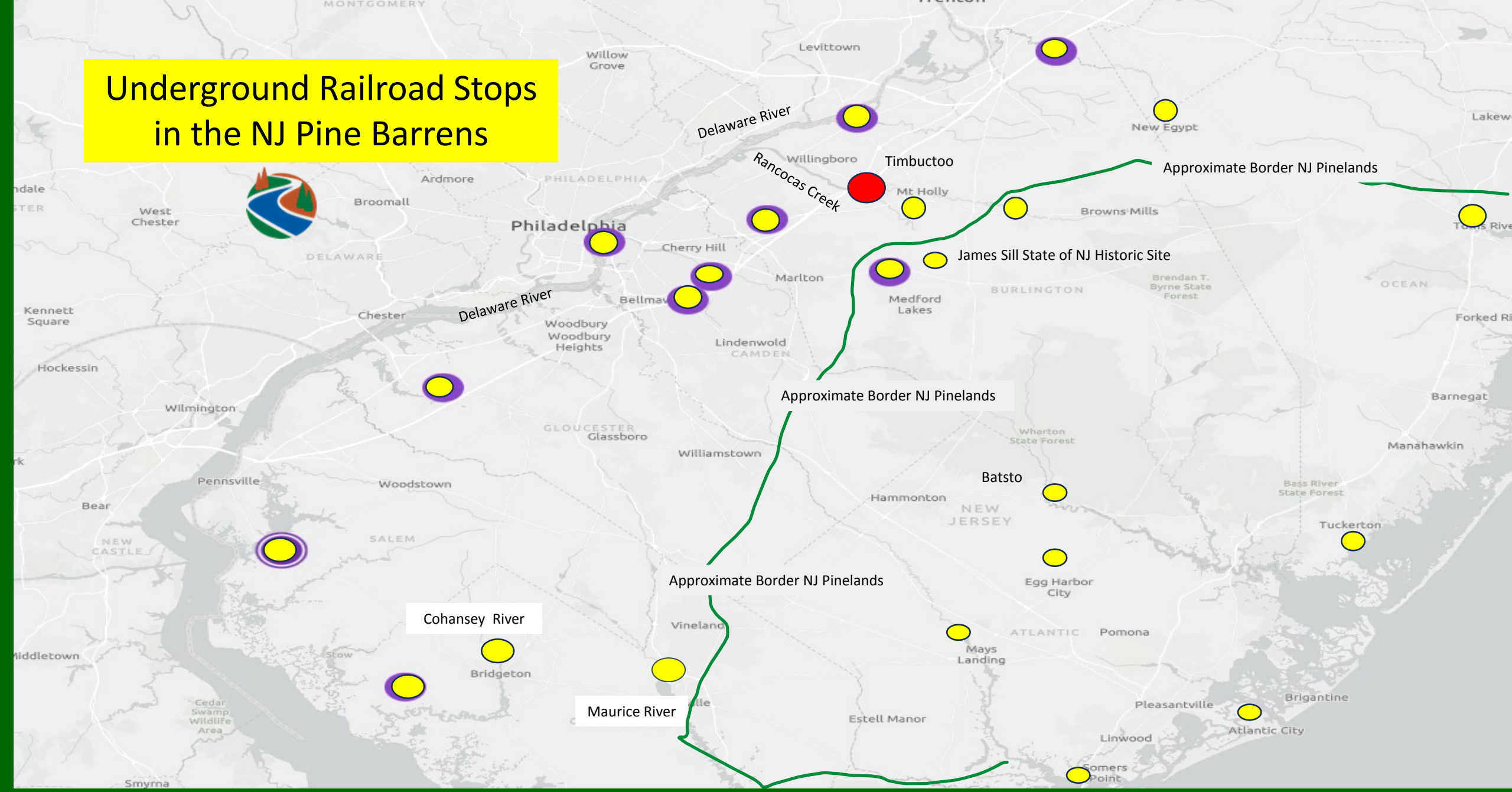
Harriet Tubman

Tubman came from the Eastern Shore of Maryland, very close to the western side of Delaware Bay. Her knowledge of New Jersey may have come from historic ties between blacks of the Eastern Shore and the Delaware Bayshore. She escorted groups of slaves from the Eastern Shore of Maryland to Philadelphia and as far north as St. Catharines, Canada (now Ontario).

It is believed that Tubman's spent the summers between 1849 and 1852 in Cape May, and winters in St. Catharines.


Documented Underground Railroad Sites in Delaware, the Delmarva Peninsula, Maryland and South Jersey
Batsto
Somers Point
Port of Salem
Money's Island
Newport
Nantuxent River
John Dickson House
Kitts Hammock
St. John River
Wilmington
New Castle
Wharton State Forest
Hammonton
Barnegat Township
Little Egg Harbor Township
Bel Air
Aberdeen
Middletown
Townsend
Bridgeton
Vineland
Millville
Galloway
Egg Harbor Township
Atlantic City
Ocean City
Towson
Baltimore
Smyrna
Chestertown
Glen Burnie
Dover
Middle Township
Delaware Bay
Centreville
Annapolis
Stevensville
Wildwood
Cape May
Harrington
Milford
Denton
Oxford
95
895
50
295

Underground Railroad Stops in the NJ Pine Barrens



Chapter Four

LANDSCAPES OF TIMBUCTOO

The Archaeology of Race and Class at Timbuctoo: A Black Community in New Jersey
By Christopher P. Barton and Guy Weston, University of Florida Press, 2022

The built environment offers archaeologists a unique way to understand past people in ways that go beyond excavation units and shovel test pits. In this chapter, I focus on landscape archaeology at Timbuctoo. I first look at the settlement pattern of the community and then at the practice of yard sweeping at the Davis Site. These two practices have deep roots for the people of the African Diaspora and serve both functional and social purposes for impoverished people.

The Layout of the Community

Historical records suggest that the core portion of Timbuctoo was closer to the creek than to the road. That area is where the Timbuctoo Discovery Project focused our research. Rancocas Road, which ran along the northern boundary of Timbuctoo, also connected the community to Mount Holly and other communities.

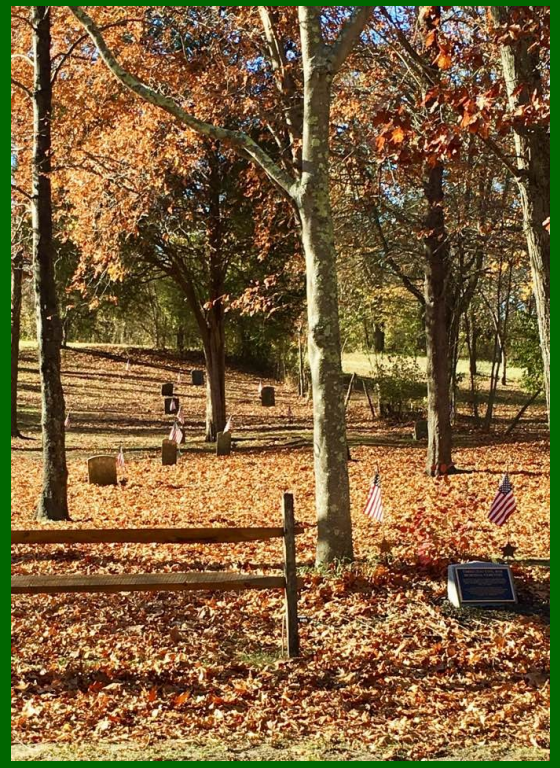
Timbuctoo is an unincorporated community in Westampton Township, Burlington County, New Jersey. Located along the tidal reaches of the North Branch Rancocas Creek Timbuctoo was settled by formerly enslaved and free Black people, beginning in 1826. At its peak in the mid-nineteenth century, Timbuctoo had more than 125 residents, a general store, a school, the AME Zion Church, and a cemetery of African American Civil War soldier's. Some current residents are descendants of early settlers.

High Tide. Grubbs Rub Outlet, Timbuctoo

HEADQUARTERS DISTRICT OF FLORIDA,
Jacksonville, Fla., August 4, 1864.

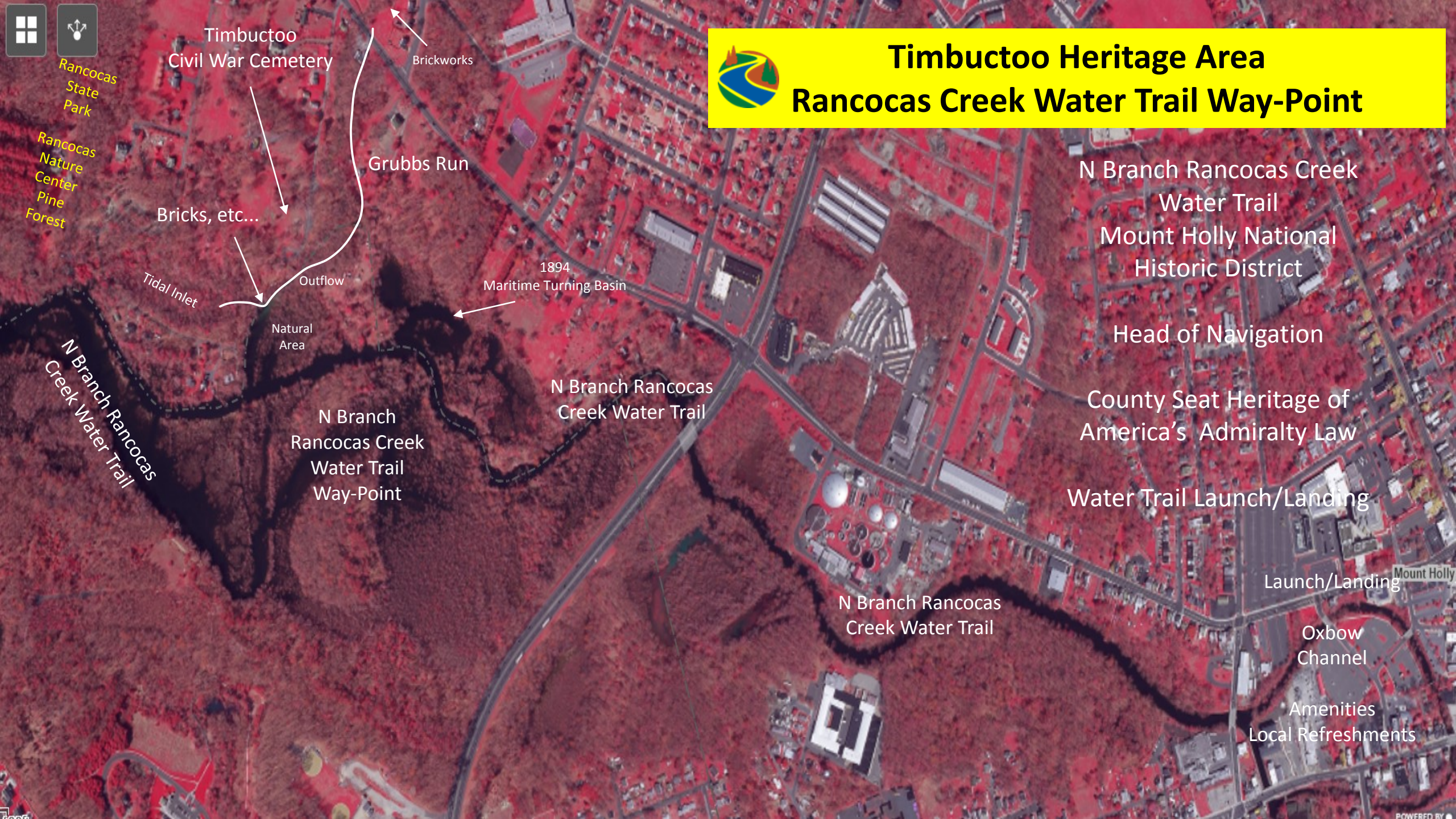
Maj. Gen. J. G. FOSTER,
Commanding Department of the South:

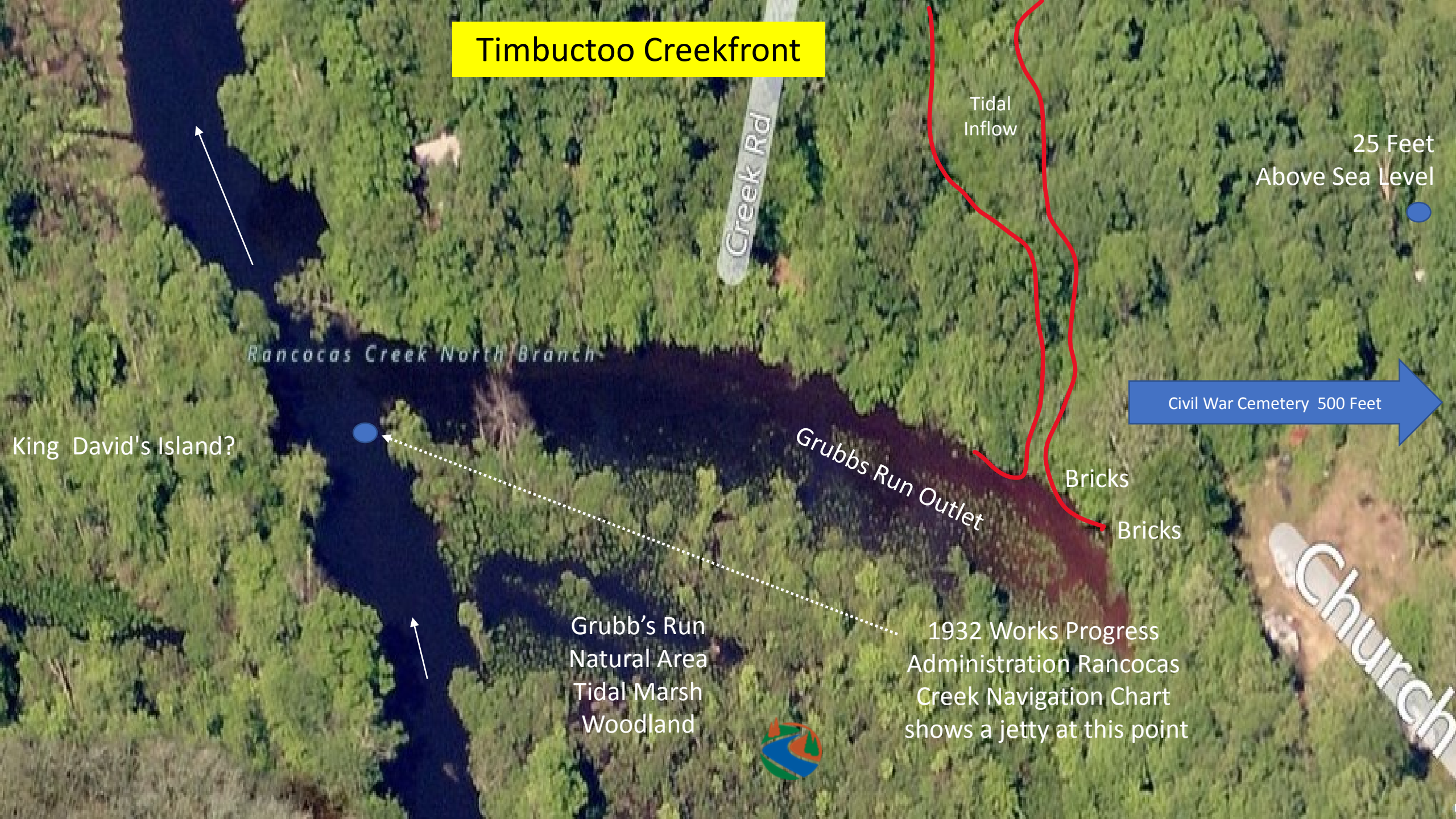
GENERAL: I arrived here last night, having changed at the bar onto the Mary Benton. The Delaware got aground coming up the river. I sent down the Canonicus to lighten her. She took off the troops but could not draw her off. The troops were brought up and the boat sent back to take out the cargo. I hope she will get off and up here to-night. The Eighth U. S. Colored Troops had been sent to Palatka, where they arrived just in time to save a detachment of 25 cavalry left at that place. They were driven into the intrenchments with a loss of 1 officer and 2 privates prisoners. All are now withdrawn. I have sent out to Baldwin the Thirty-fourth and One hundred and second U. S. Colored Troops, and ordered in the Seventh U. S. Colored Troops. They will be in and embark to-morrow for the Head.



Timbuctoo Heritage Area

Rancocas Creek Water Trail Way-Point

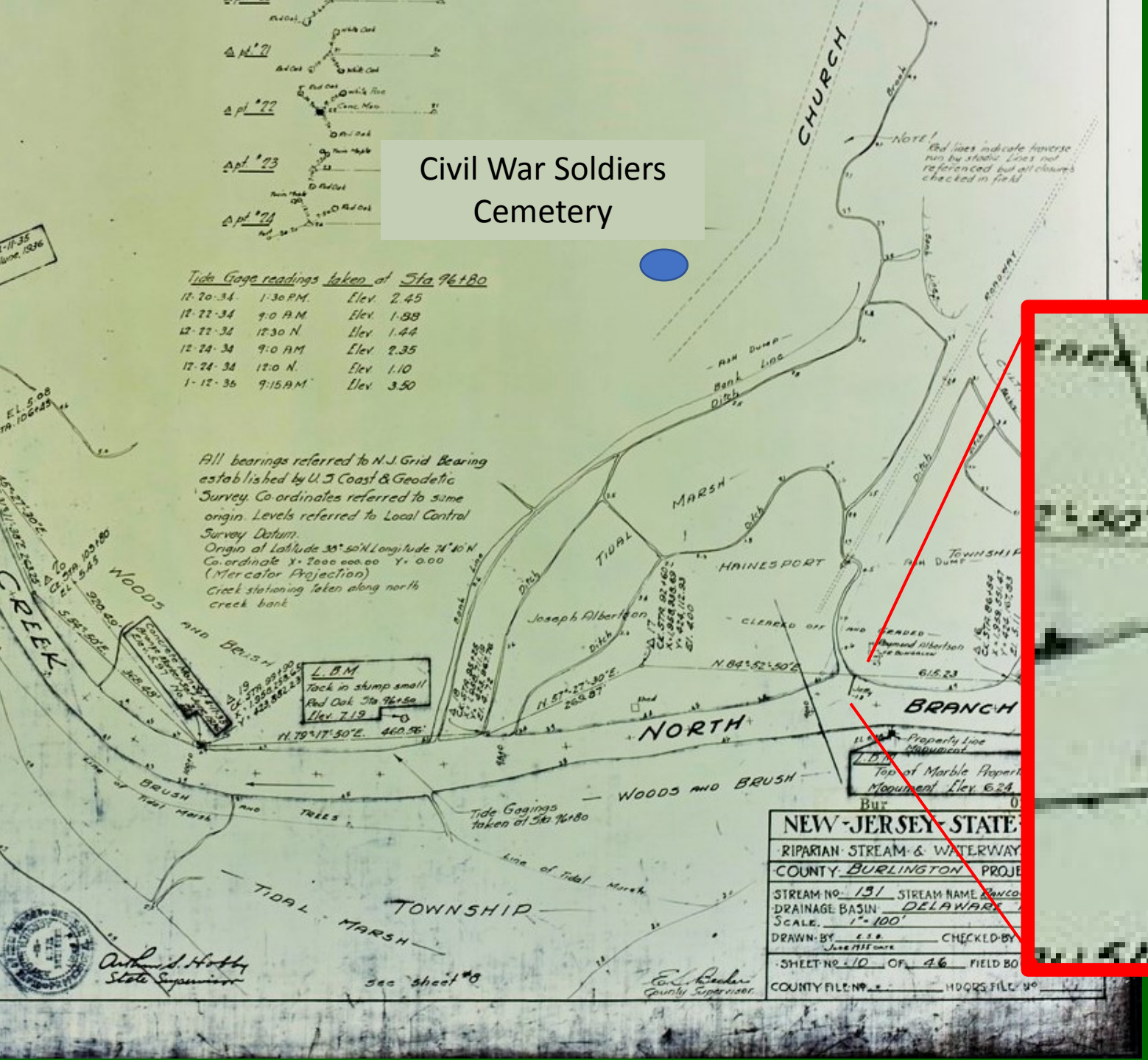

Timbuctoo Heritage Area
Rancocas Creek Water Trail Way-Point
Timbuctoo
Civil War Cemetery
Brickworks
Rancocas
State
Park
Rancocas
Nature
Center
Pine
Forest
Grubbs Run
Bricks, etc...
Tidal Inlet
Outflow
Natural
Area
1894
Maritime Turning Basin
N Branch Rancocas
Creek Water Trail
N Branch
Rancocas Creek
Water Trail
Way-Point
N Branch Rancocas
Creek Water Trail
N Branch Rancocas
Creek Water Trail
N Branch Rancocas Creek
Water Trail
Mount Holly National
Historic District
Head of Navigation
County Seat Heritage of
America's Admiralty Law
Water Trail Launch/Landing
Launch/Landing
Mount Holly
Oxbow
Channel
Amenities
Local Refreshments


Timbuctoo Creekfront
Creek Rd
Tidal
Inflow
25 Feet
Above Sea Level
Rancocas Creek North Branch
Civil War Cemetery 500 Feet
King David's Island?
Grubbs Run Outlet
Bricks
Bricks
Church
Grubb's Run
Natural Area
Tidal Marsh
Woodland
1932 Works Progress
Administration Rancocas
Creek Navigation Chart
shows a jetty at this point

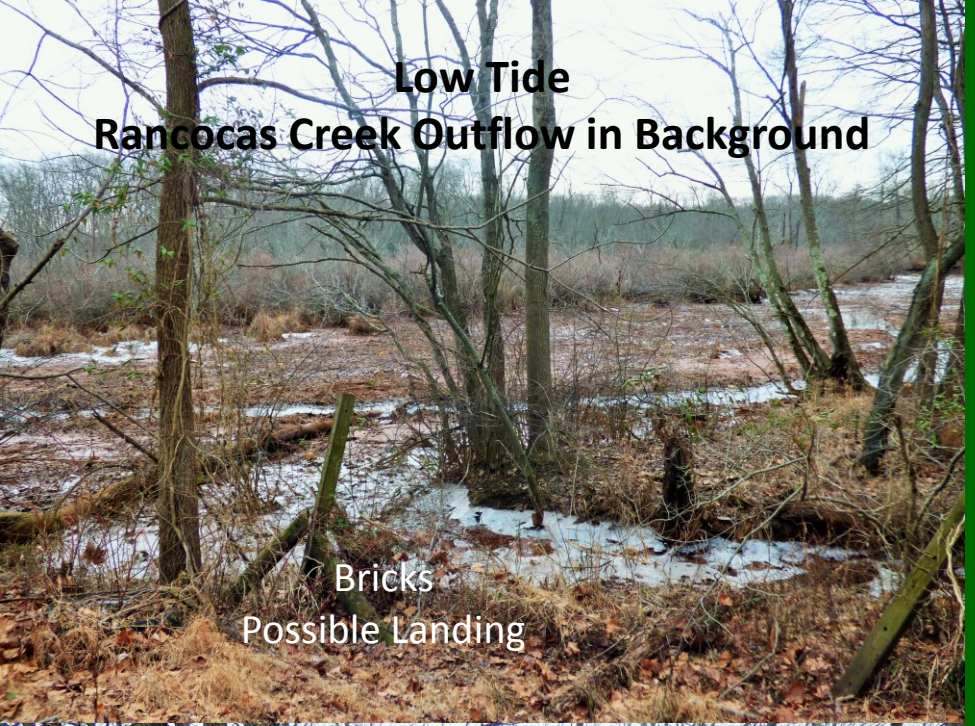
Timbuctoo - Jetty

1931 Works Progress Admiration Rancocas Creek Navigation Chart

Civil War Soldiers Cemetery



King David's Is
Rancocas Creek North Branch
Timbuctoo Creekfront
Grubbs Run Outlet
Wooden
Structure at Low
Tide
Grubbs Run
Outlet Natural Area
A
A
other
Grubbs Run
Creek Ro
100 fee



Rancocas Creek

Timbuctoo Inlet

Grubbs Run Outlet

Rancocas Pathways

A. Ice Shows Extent of High Tide

A. Bricks Possible Landing

Timbuctoo Creek Front

A. Bricks & Wooden Structure

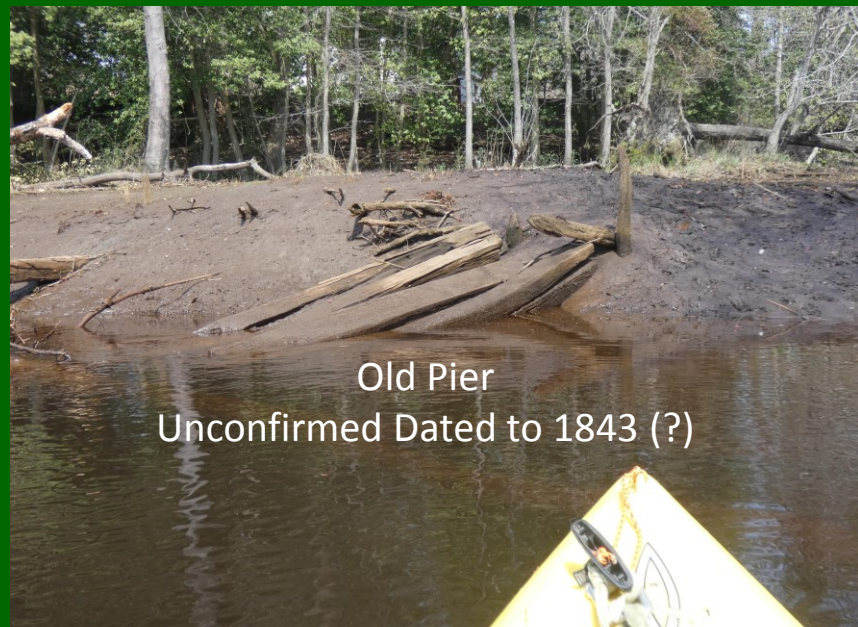
Timbuctoo bricks were handmade, from soft mud mixture. Salmon bricks, pink in color (Barton/Weston)

Old Pier
Unconfirmed Dated to 1843

Phosphorus Retort?

Overlapping Planks w Cut Nails

Submerged at High Tide


Old Pier
Unconfirmed Dated to 1843 (?)

Timbuctoo

Rancocas Creek Water Trail Heritage Area Way Point Creek Access

Lady Slippers at Timbuctoo Landing

Ashville, Pa. who hasn't decided on a major yet. The township passed a special ordinance allowing students access on township land to do their archaeology survey work.

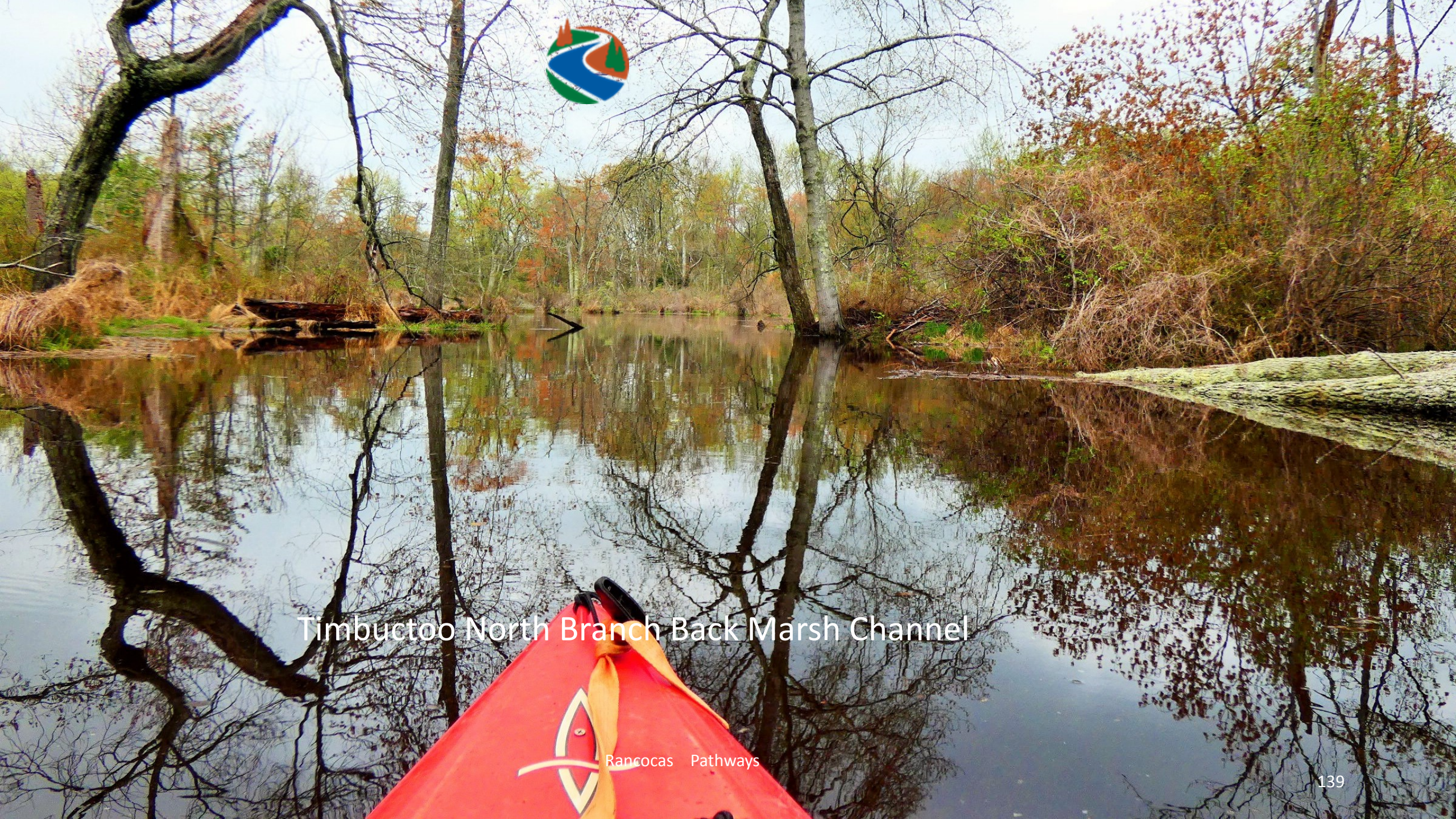
They mapped and survey the banks of Grubbs Run. Here we found evidence, wooden pilings possibly part of two old docks or piers, perhaps loading docks for the clay and brick to ship downstream. We also found several bricks buried in the steam some with markings along with pieces of concrete the content of which was indicative of the ear. Each site was careful recorded and imaged and geo-referenced. Both sites matched old maps of the area from the late 1800's.

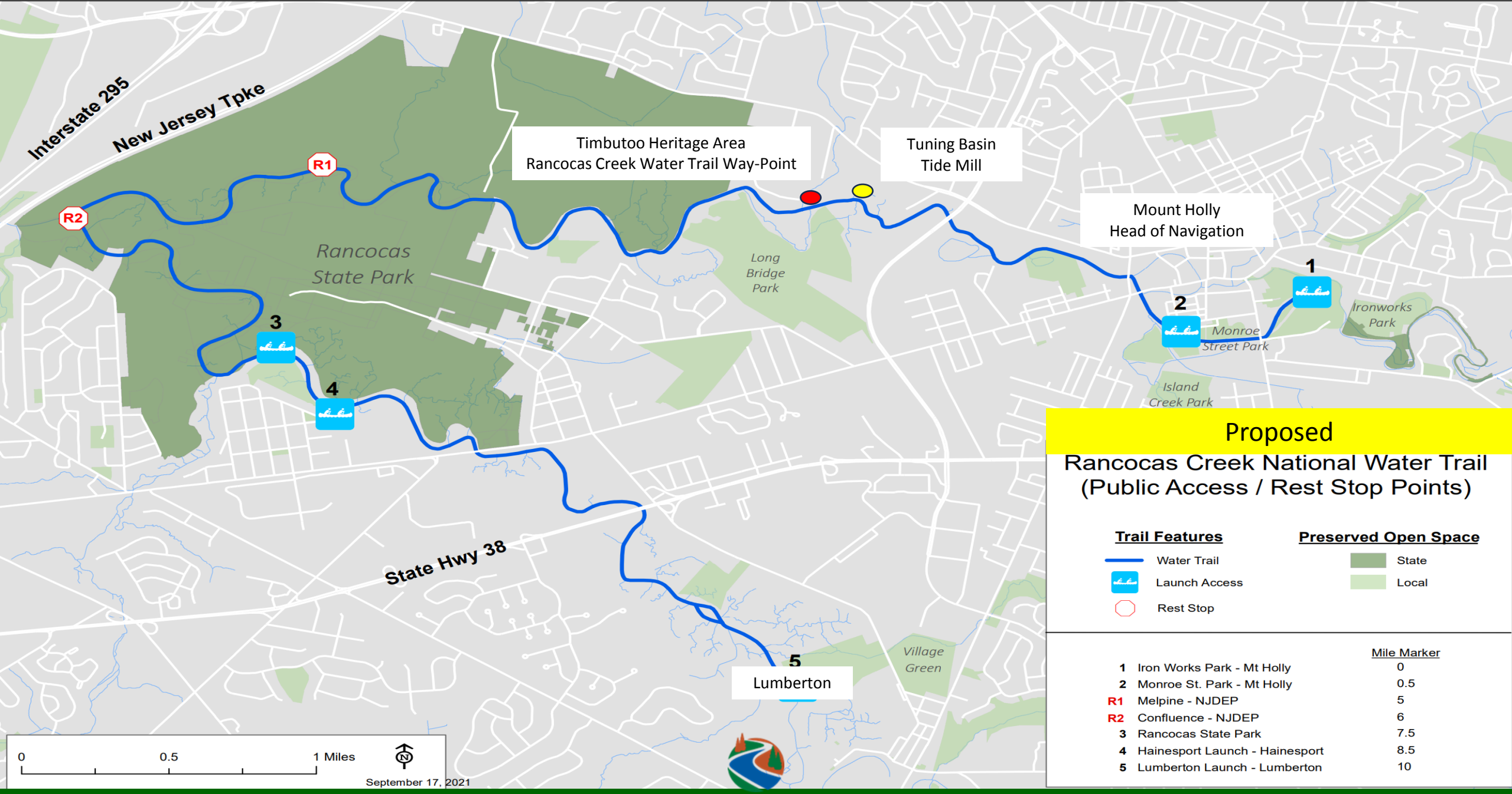
Figure 9. Stockton students taking measurements of the site.

The mapping experience was over two days and was meant to provide a real-life lab experience for students to practice class discussed procedures and practice in archaeological training. To extensively catalog and map this site will require more sampling at some future date. Preliminary results were encouraging in our being able to uncover evidence artifacts linked directly to hand struck brick manufacture of the period despite all the new housing developments in the Westampton-Mt. Holly area which covered over or destroyed areas around these sites. In figure xx above the students are working on the second clay site noted in figure 6. The images below are at the site approximated in Figure 2 nearest the creek. Our conclusion is that there is evidence to preliminarily state this was part of those clay mining/manufacture sites from late 1870's-1880's. Obviously more work needs to be done to survey and catalog this important historical area which would require permits from the Town of Westampton and the State DEP.

Figure 10 Four images of the dig site at Timbuctoo. Indicating potential evidence of clay and brick mining and features associated with pilings and dock or piers. Images from top left to bottom right: wood support pile, meter stick describing height of creek bank cut by currents and evidence of clay throughout, early concrete support (high rock particle content) and grey brick of apparent hand-struck formation. All items left in-situ on-site. The area today sits between housing developments.

STOCKTON UNIVERSITY


Timbuctoo North Branch Back Marsh Channel



Proposed

Rancocas Creek National Water Trail (Public Access / Rest Stop Points)

Trail Features

- Water Trail
- Launch Access
- Rest Stop

Preserved Open Space

- State
- Local

		Mile Marker
1	Iron Works Park - Mt Holly	0
2	Monroe St. Park - Mt Holly	0.5
R1	Melpine - NJDEP	5
R2	Confluence - NJDEP	6
3	Rancocas State Park	7.5
4	Hainesport Launch - Hainesport	8.5
5	Lumberton Launch - Lumberton	10

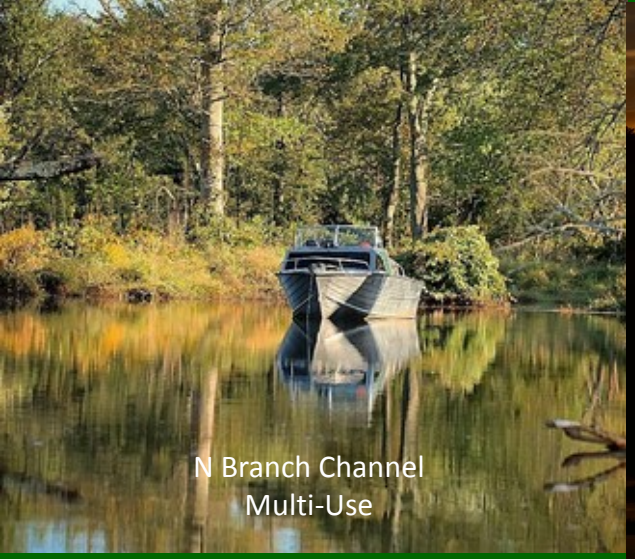
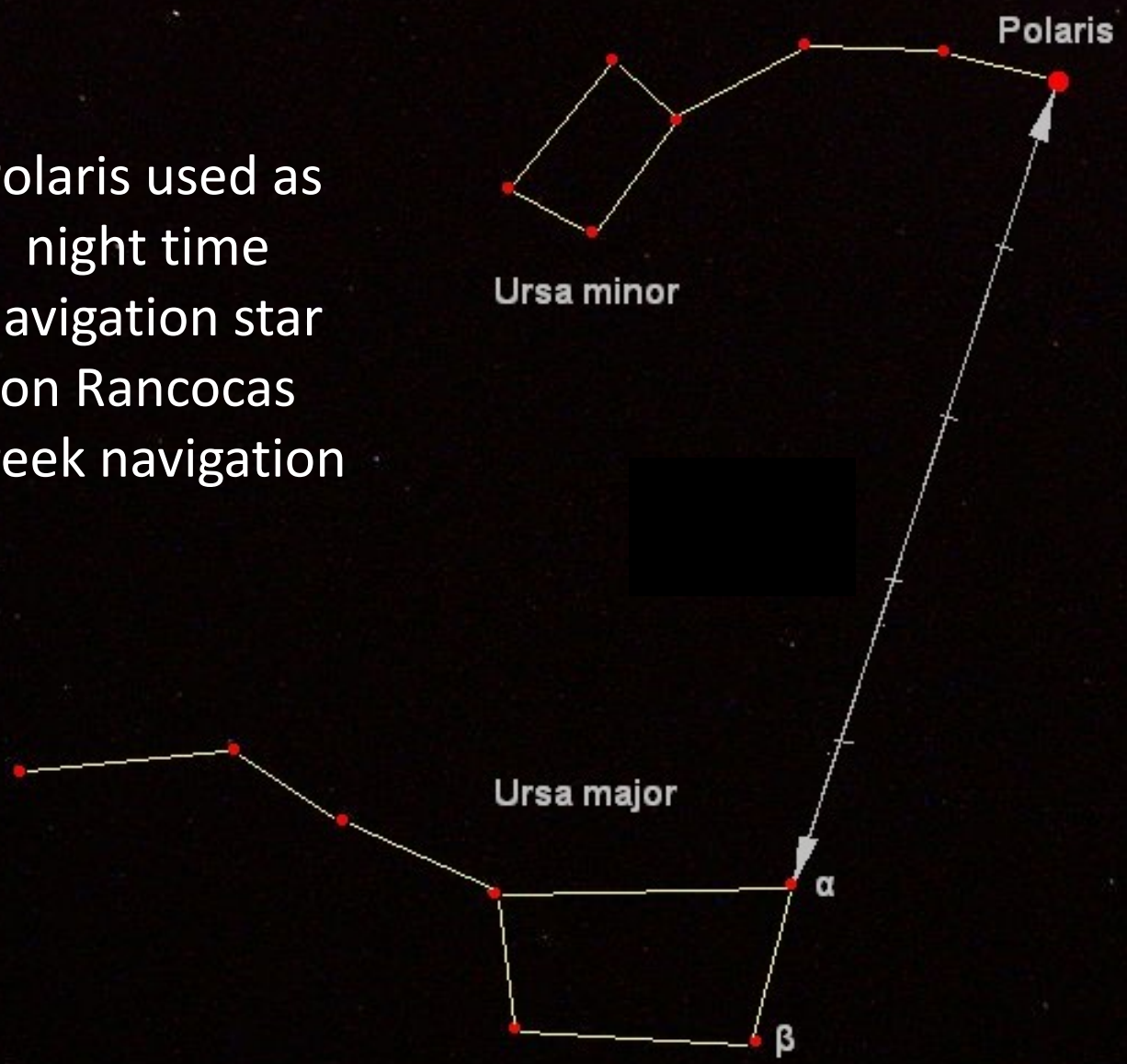


Photo credits #ks337pohoto

Timbuctoo...Fragility

Polaris used as night time navigation star on Rancocas Creek navigation



Timbuctoo
Is located under the North Star*

* A Guide Star of the Underground Rail Road

Polaris or the North Star is the last star in the constellation Ursa Minor. Polaris is the star at the tip of the handle of the "Little Dipper".

Polaris is considered a navigational star.

Polaris was used by sailing shallops, tugs, barges, yaliwackers, steam-boats and the like as they navigated Rancocas Creek tidal waters on night tides and currents.

Year Round Resident
American Bald Eagle

Timbuctoo Rancocas Creek Water Trail

Photo credit #ks337pohoto

Heritage
Stewardship

American
Bittern

Rancocas Pathways

Migratory Egrets

Migratory Yellow Leg Sandpipers

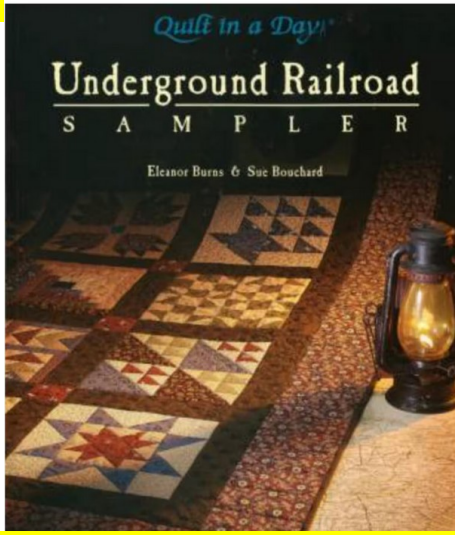
Underground Railroad Quilt Code

this code, named the Underground Railroad Quilt Code, led many to freedom.

The Quilt Code gives us access to some of the secrets still remaining about the early years of escape from the plantations. It allows us to see how ingenious were these fugitives in crafting their own escape. The code confirms the use of quilts as visual maps to freedom.

Forging a link between the past and the present, between Africa and America, between blacks and whites, and a route from the South to the North, Mrs. Ozella McDaniel Williams, a modern-day griot from South Carolina, reveals a story, the story told to her by her mother and grandmother before her, the story of the Underground Railroad Quilt Code. With the telling comes the responsibility to honor these African American ancestors, not just as slaves but also as masters of their own destiny.

Jacob Ladder Quilts - fifteen quilt blocks may have played a significant role in communication between the slaves and how it helped them on their way to freedom



The book has directions to make a miniature Underground Railroad quilt.

patterns represent certain meanings.

When Ozella first revealed the code to Jacki, she instructed her to write down the numbers one through ten. She then listed nine patterns and one phrase: Monkey Wrench, Wagon Wheel, Log Cabin, Shoofly, Bow Ties, Cathedral Church, Double Wedding Rings, Flying Geese, Drunkard's Path, and Tumbling Boxes. Then Ozella recited the code.

According to Ozella, there were ten quilts used to direct the slaves to take particular actions. Each quilt featured one of the ten patterns. The ten quilts were placed one at a time on a fence. Since it was common for quilts to be aired out frequently, the master and mistress would not be suspicious when seeing the quilts displayed in this fashion. This way, the slaves could nonverbally alert those who were escaping. Only one quilt would appear at any one time. Each quilt signaled a specific action for a slave to take at the particular time that the quilt was on view. Ozella explained that when the Monkey Wrench quilt pattern was displayed, the slaves were to gather all the tools they might need on the journey to freedom. The second quilt placed on the fence was the Wagon Wheel pattern, which signaled the slaves to pack all the things that would go in a wagon or that would be used in transit. When the quilt with the Tumbling Boxes pattern appeared, the slaves knew it was time to escape. How long each quilt remained on the fence before being replaced is not known. Ozella suspected that a quilt would remain up until all who were planning to escape had completed the signaled task. The code had dual meaning: first to signal slaves to prepare to escape and second to give clues and indicate directions on the journey.

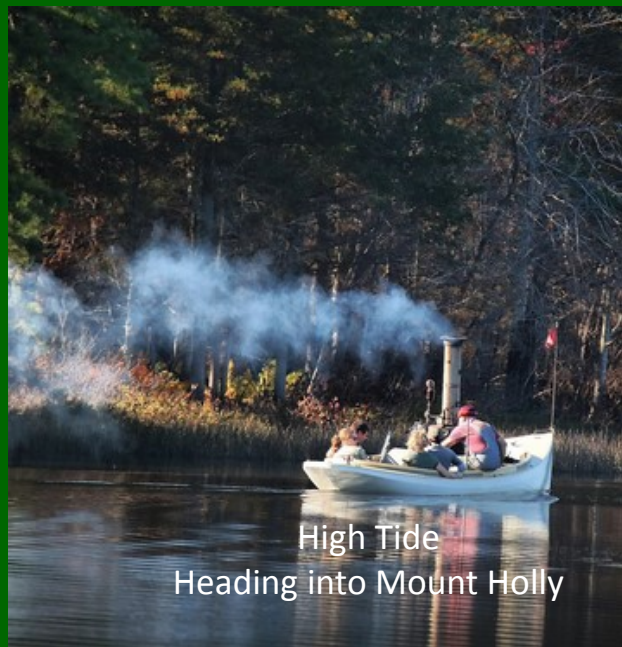
Leave Nothing But a Ripple Behind

Reflections

New Jersey State Bird
American Goldfinch

Indigo Bunting

Pileated Woodpecker



High Tide
Heading into Mount Holly

Timbuctoo Rancocas Creek Water Trail

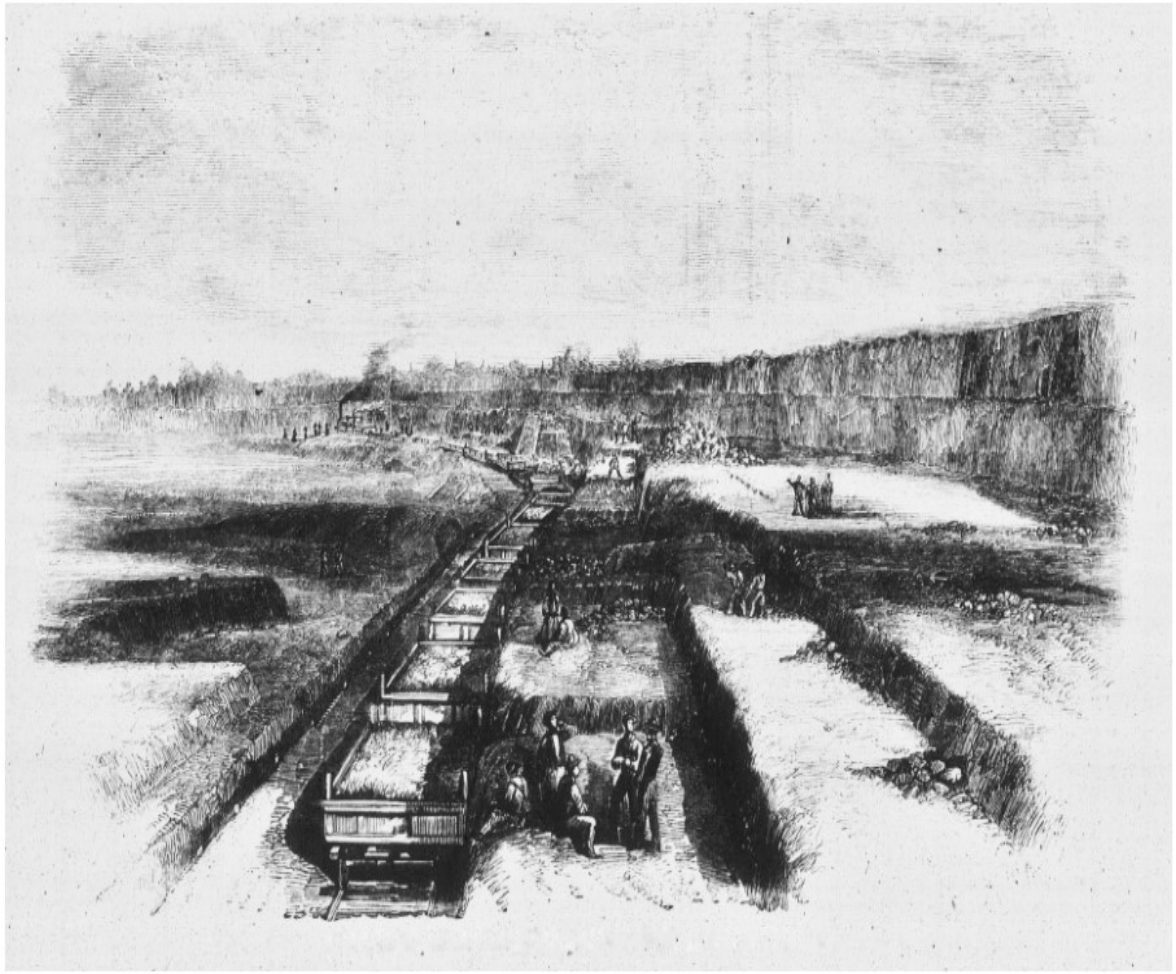
Photo credit #ks337pohoto

Rancocas Creek Water Trail Heritage Area Way Point

High Tide Access From Rancocas Creek Main Channel

ref: frank leslies weekly newspaper 9-1-1866

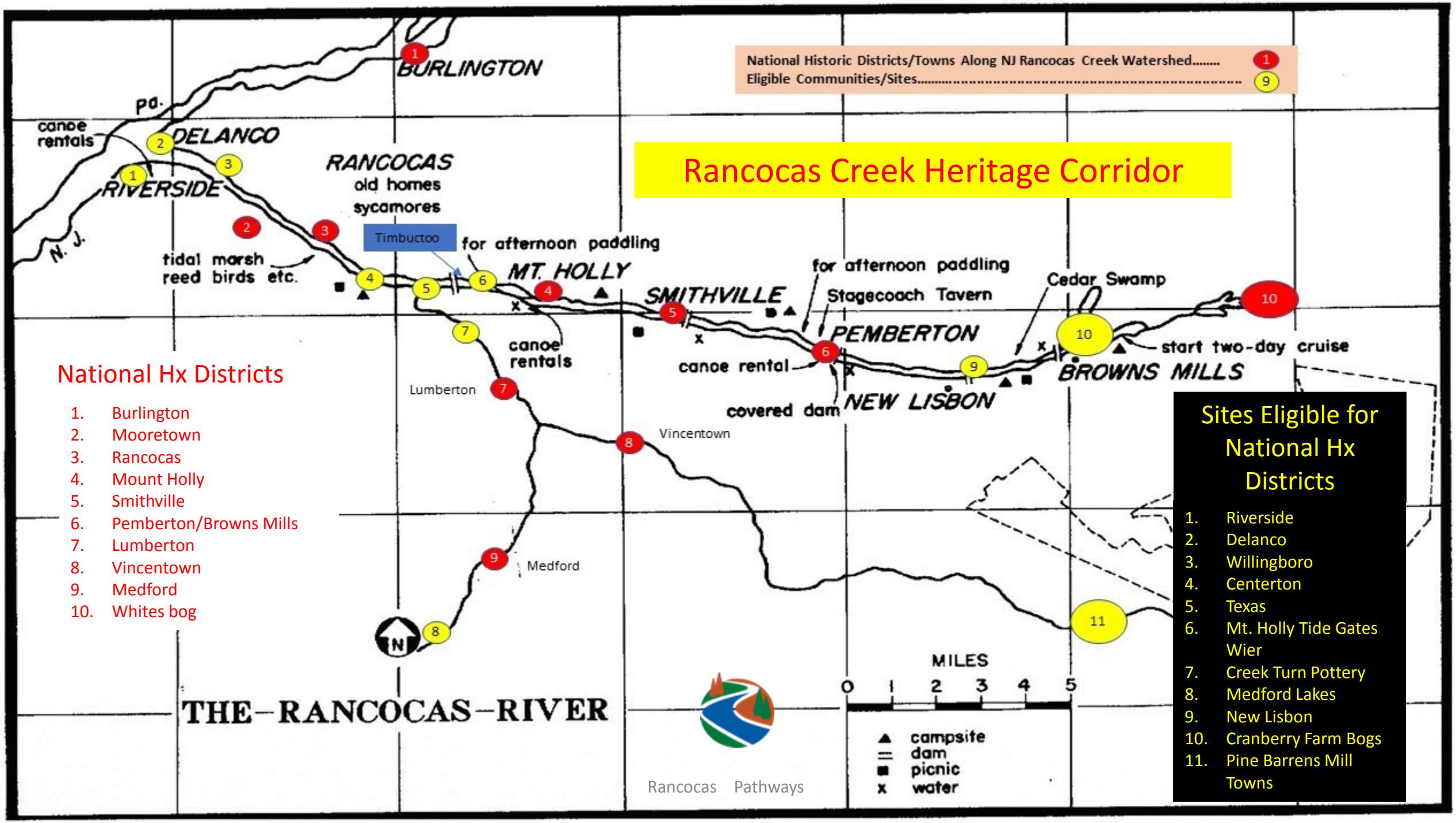
Near Timbuctoo



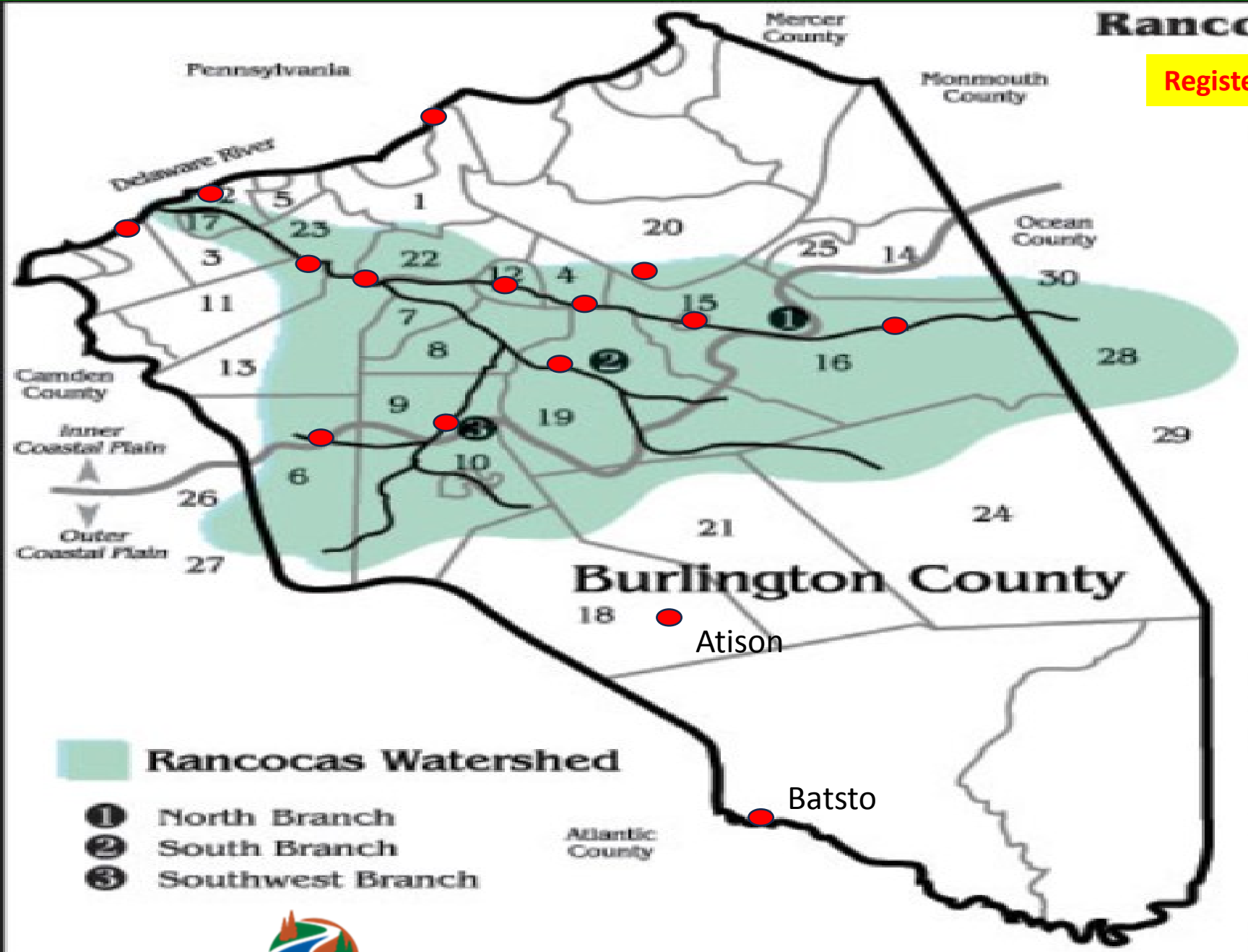
MARL PITS ON THE *RANCOCAS* RIVER, NEAR MOUNT HOLLY, NEW JERSEY.-

NEW JERSEY MARL PITS.

THE advantages of marl as a fertilizer have been greatly overlooked in this
ntry until within a very recent period. With our immense territory of
h soil in the new States, we had little care to improve lands worn out
ith long cultivation, and so neglected the means of maintaining the
tility of our farms, although they were often quite available. Of late
ars it has been found more advantageous to make lands adjacent to
ket as productive as possible, and immense sums have been expended
the various appliances which subserve that end. Among these, marl
ıpies a prominent place. It is found in almost inexhaustible quantities
ıany Parts of the country, and can be profitably applied to almost any
The lower portions of New Jersey contain immense quantities of marl,
our illustration shows the manner of digging and sending it from the
It is easily cut out, and is thrown directly into the cars, which stand on
ıvenient tracks, by which it is taken wherever it is needed. By its use
lands that were quite barren have been made to produce liberally,
rewarding amply the labor and money *expended upon them.*


National Historic Districts/Towns Along NJ Rancocas Creek Watershed..... 1
Eligible Communities/Sites..... 9
Rancocas Creek Heritage Corridor
BURLINGTON
Pa.
canoe rentals
DELANCO
RIVERSIDE
N. J.
RANCOCAS
old homes
sycamores
Timbuctoo
for afternoon paddling
tidal marsh
reed birds etc.
MT. HOLLY
canoe rentals
Lumberton
SMITHVILLE
for afternoon paddling
Stagecoach Tavern
PEMBERTON
canoe rental
covered dam
NEW LISBON
Cedar Swamp
start two-day cruise
BROWNS MILLS
Vincentown
Medford
THE–RANCOCAS–RIVER
MILES
0 1 2 3 4 5
campsite
dam
picnic
water
Rancocas Pathways
National Hx Districts
1. Burlington
2. Mooretown
3. Rancocas
4. Mount Holly
5. Smithville
6. Pemberton/Browns Mills
7. Lumberton
8. Vincentown
9. Medford
10. Whites bog
Sites Eligible for National Hx Districts
1. Riverside
2. Delanco
3. Willingboro
4. Centerton
5. Texas
6. Mt. Holly Tide Gates Wier
7. Creek Turn Pottery
8. Medford Lakes
9. New Lisbon
10. Cranberry Farm Bogs
11. Pine Barrens Mill Towns

Rancocas Creek Watershed



Registered National Historic Districts and Sites

Burlington County
1. Burlington
2. Delanco
3. Delran
4. Eastampton
5. Edgewater Park
6. Evesham
7. Hainesport
8. Lumberton
9. Medford
10. Medford Lakes
11. Moorestown
12. Mount Holly
13. Mount Laurel
14. New Hanover
15. Pemberton Borough
16. Pemberton Township
17. Riverside
18. Shamong
19. Southampton
20. Springfield
21. Tabernacle
22. Westampton
23. Willingboro
24. Woodland
25. Wrightstown

Camden County
26. Voorhees
27. Berlin Township

Ocean County
28. Manchester
29. Lacey
30. Plumsted

Coastal Privateers
Mount Holly and Other Admiralty Courts

The British brig Molly, was driven ashore in a snow storm near Barnegat; her prize crew were taken prisoners by the militia and sent to Philadelphia.

"The privateer Blacksnake was captured by the British, but in April, 1780, Captain William Marriner, with nine men in a whale boat, retook her. Captain Marriner then put to sea in his prize, and captured the Morning Star, of 6 swivels and 33 men, after a sharp resistance, in which she lost three killed and five wounded; he carried both prizes into Egg Harbor."

About the middle of December, 1780, a British brig in the West India trade, was captured and brought into Toms River. This brig was short of water and provisions and mistaking the land for Long Island, sent a boat and four men ashore to obtain supplies. The militia hearing of it manned two boats and went out and took her. She had on board 150 hhds of rum and spirits, which our ancestors pronounced "excellent," by which we conclude they must have considered themselves competent judges of the article! With the British, rum must have been a necessity, as in every prize taken from them rum was an important part of the cargo.

Female Wood Duck - Old Mill - Mount Holly - N Branch - Rancocas Creek Water Trail

Mount Holly and Other Admiralty Courts

CAPTAIN JACKSON.

"December 18th, 1782.—Capt. Jackson of the Greyhound, in the evening of Sunday, last week, with much address, captured within the Hook, the schooner Dolphin and sloop Diamond, bound from New York to Halifax, and brought them into Egg Harbor. These vessels were both condemned to the claimants, and the sales amounted to £10,200.

ried on in the vicinity.

In the latter part of 1780, Captain Joshua Studson of Toms River took two prizes, the schooner "John" and sloop "Catherine," in Raritan Bay, near south side of Staten Island. The prizes were taken to Middletown Point. The Admiralty Court to adjust claims for these prizes was held at the house of Isaac Wood, Mount Holly, and the vessels were advertised to be sold at Monmouth Court House, January 1, 1781. Just a month before this, Captain Studson was killed by the Refugee Bacon at the inlet, opposite Toms River.

them in a separate article.

May 22d, 1778, it is announced that a British vessel with a cargo of fresh beef and pork, was taken by Captain Anderson and sixteen men in an armed boat, and brought into Toms River.

Captain Bigelow also made a prize of another vessel called the "Betsey," which had belonged to citizens of Delaware, where she was taken by the British out of a place called Muskmelon Creek. On her way to New York she was driven in a storm ashore near the bar of Cranberry, where Captain Bigelow recaptured her. His prize claim was adjusted at a Court held at the house of Isaac Woods, Mount Holly.

North Branch Rancocas Creek
Headwaters to the Delaware River Tides
1870’s - 1890’s steam boat landing - North Branch Rancocas Creek - Mount Holly National Historic District

Roads from NJ Pine Barrens Rancocas Creek and Delaware River Ports n Navigable Waters

1846

Florence

North Branch Rancocas Creek

Hanover Furnace

South Branch Rancocas Creek

Maryann Furnace

Mt. Misery Furnace

Atsion Furnace

Hanover Furnace, also known as Hanover Iron-Works, was begun in 1791. The location capitalized on several important natural features: a quick-running stream, the North Branch of the Rancocas Creek; an excellent supply of timber; and an abundance of bog iron. It was a few miles east of Browns Mills and just west of Hartshorne's Mill.

4 and 12 lb. Cannon Balls found on site are documented forged from go iron for US Navy during the War of 1812

Reference: Boyer/US Army Cultural Resource Inventory

Benjamin Jones was instrumental in establishing the road from Hanover to the "Old Monmouth Road," which was long known as the "Gun Road." After the war, large quantities of iron pipe were made for the Philadelphia Water Works and were, in the early days, either carted to the landing at Florence and transported by boat to Philadelphia or hauled by mule teams over the "Great Road" to that city. Later, through the energy of Benjamin Jones, a railroad was constructed from Kinkora to New Lisbon.

Whites Bog State and National Historic Village

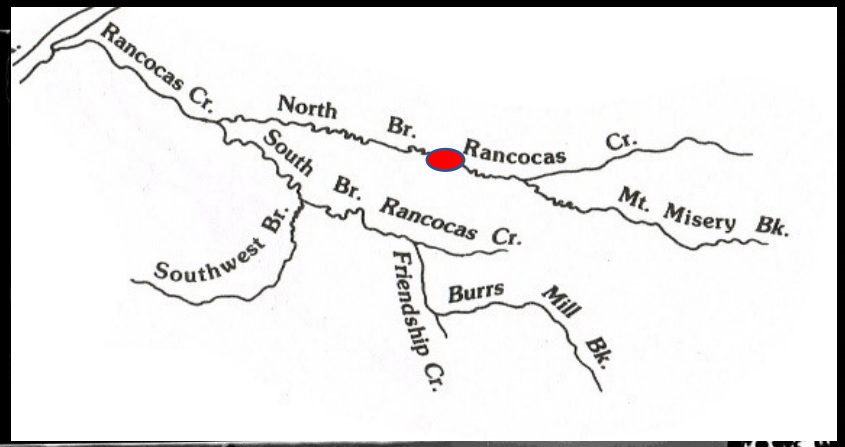
North Branch Rancocas Creek

14 Miles to the Delaware River Tide

Centennial Recreation on the Rancocas

Rancocas Creek Photos around 1910 Browns Mills to Smithville

New Lisbon



New Lisbon Camping

Pemberton

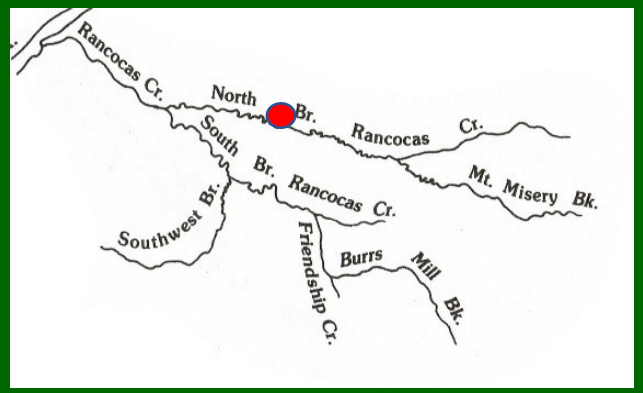
Pine Barrens Canoe Shuttle

Old Mill

Reference: Library Company of Philadelphia

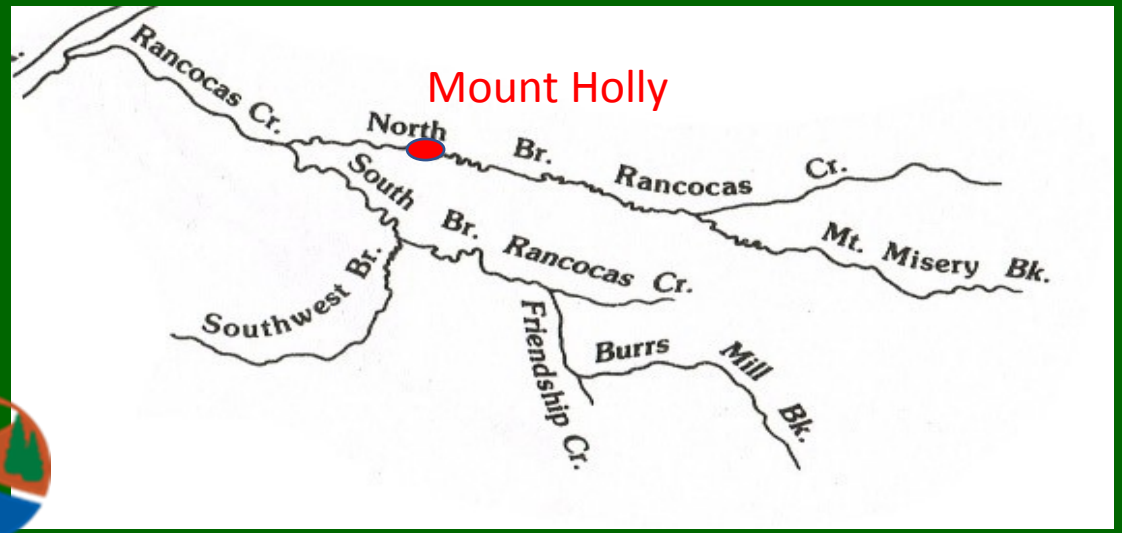
Historic Smithville: Industrialization of the Rancocas

National Historic Industrial Village
North Branch Rancocas Creek



Head of tide North Branch Rancocas Creek Water Trail

Head of tide but not the limit of navigable waters.



Grass-Roots Civic Engagement

Awareness

Interests

Community

Diversity

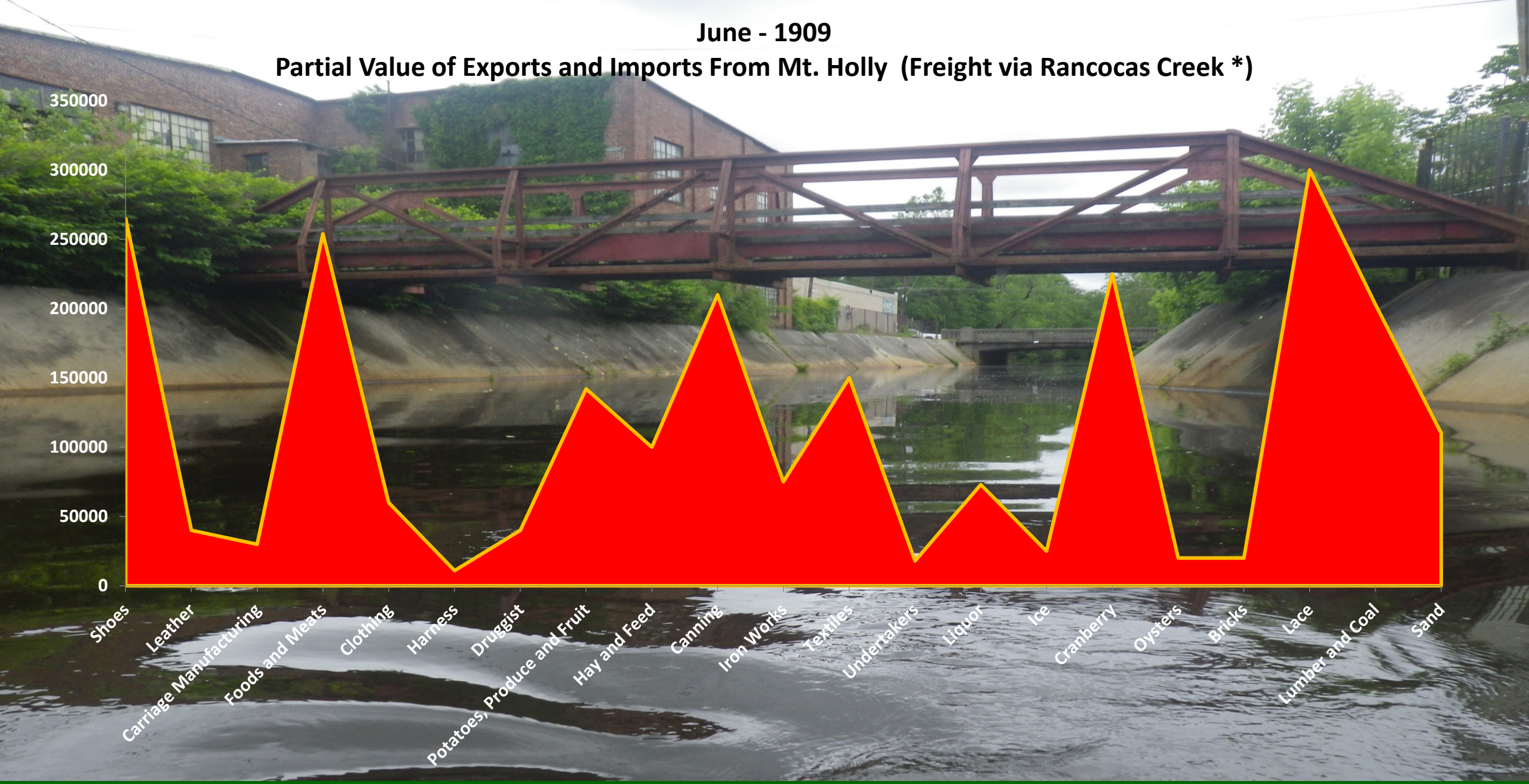
Ownership

Mount Holly

Mount Holly National Historic District
North Branch Rancocas Creek Head of Tide
Oxbow and Flood Channel

June - 1909

Partial Value of Exports and Imports From Mt. Holly (Freight via Rancocas Creek *)

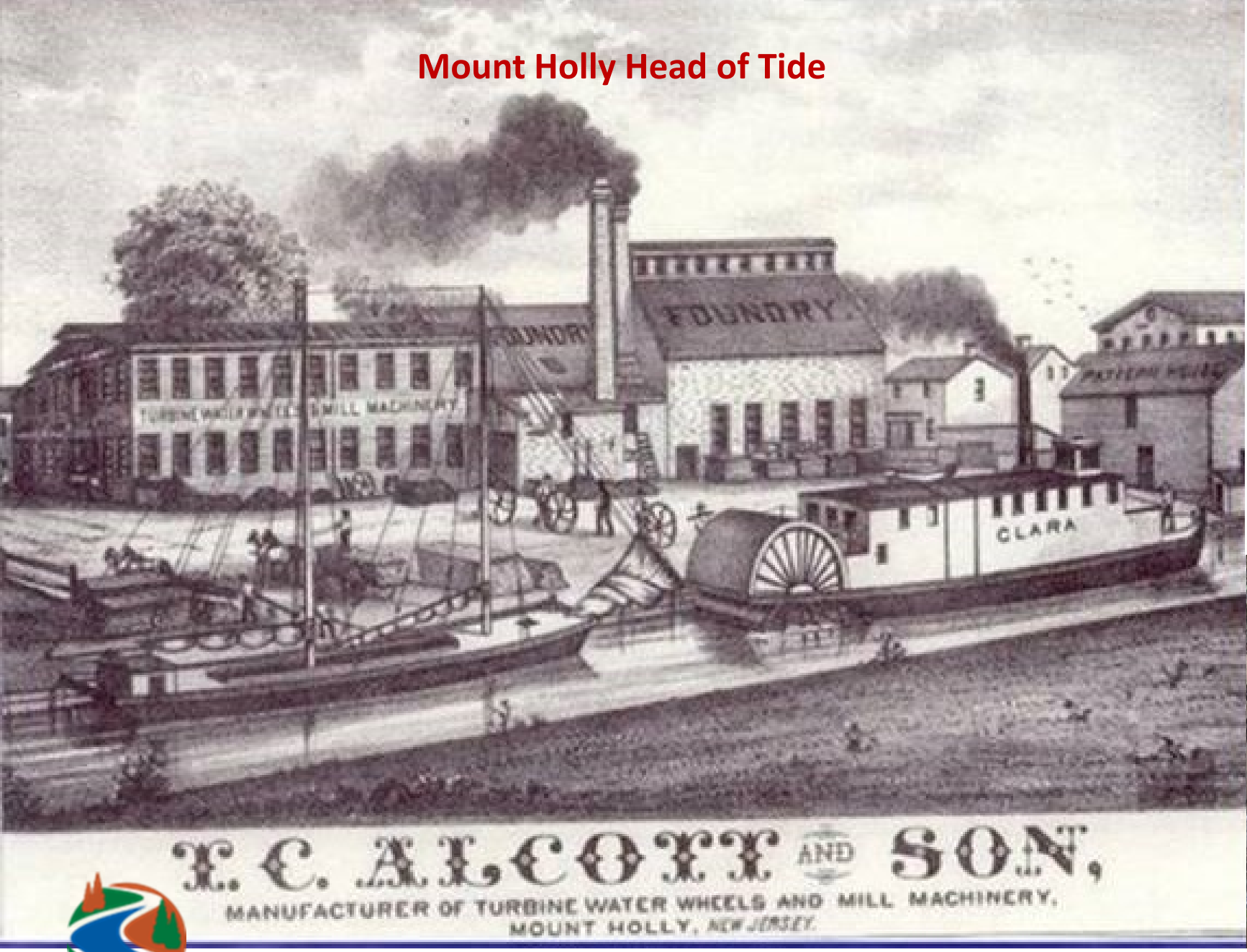


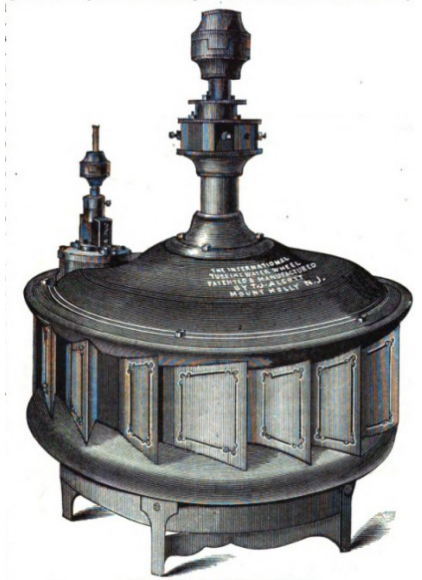
* Freight via Boat - Rail – Truck: .12 cents per 100 pounds vs Freight Via Boat: .09 cents per hundred pounds

Reference: WS Rendell-Chairman of Mt. Holly Committee on Rancocas Creek Improvements

Sec of War Rancocas Creek Report , New Jersey 1910

Mount Holly Head of Tide

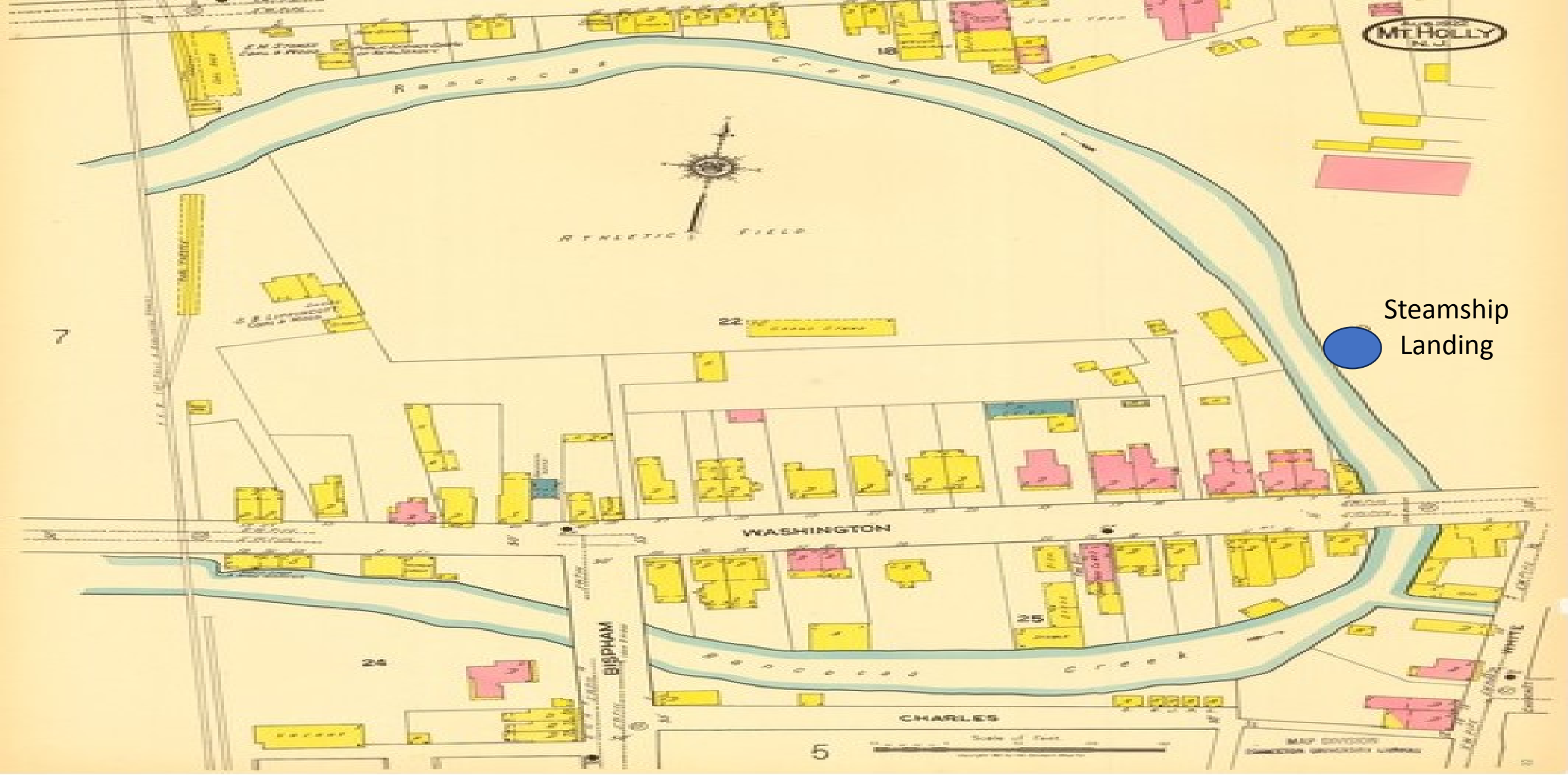




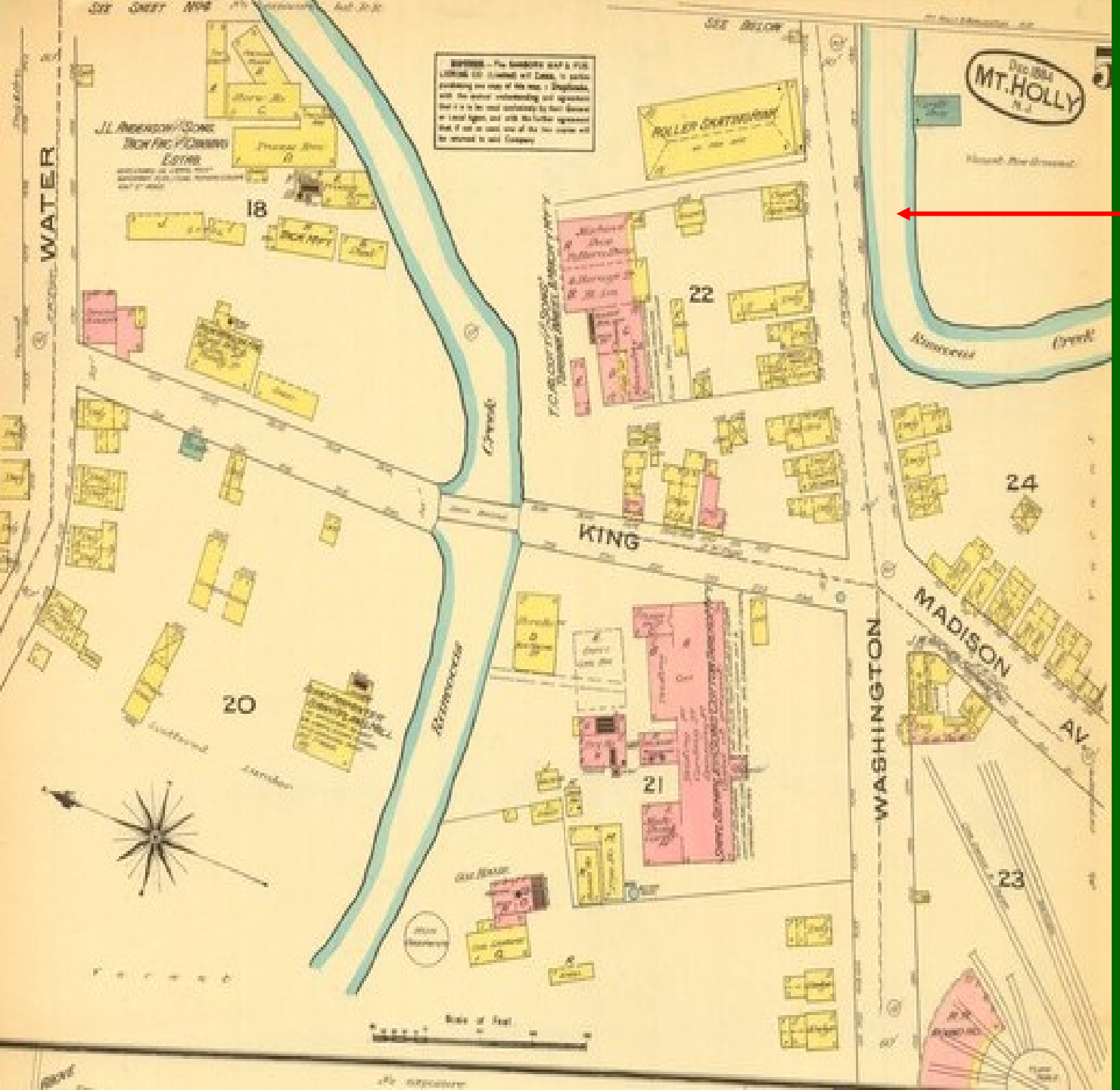
IMPROVED TURBINE WHEEL.

The price of this wheel varies from $150 to $1,100; the first price corresponds with wheels of 9 inches in diameter and discharges 9 square inches of water; the latter with those of 5¼ feet in diameter and discharging 525 square inches of water.

Centerton Phosphorous Works

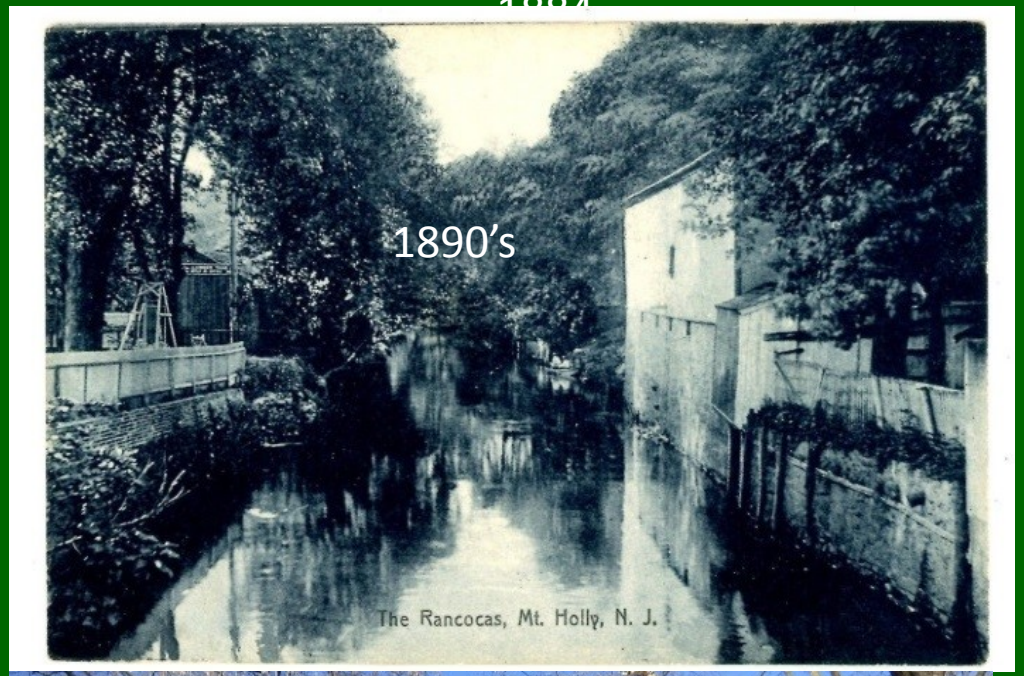


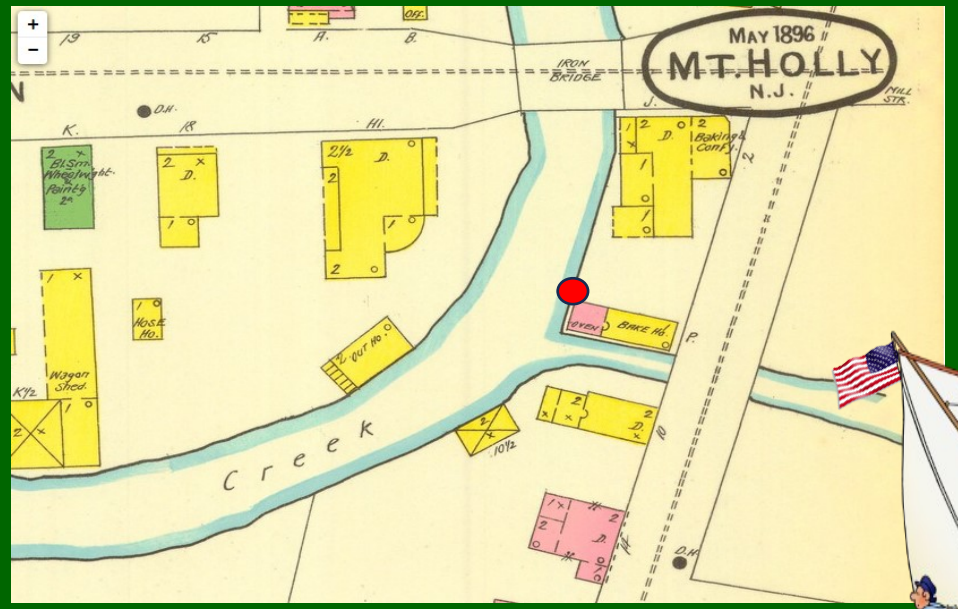
Rancocas Creek N Branch Oxbow Channel
1890's Sanborn Insurance Maps



Rancocas Creek N Branch Oxbow Channel
1890's Sanborn Insurance Maps

Exploring Historic Pathways, Discovering New Understandings





Vessel Tie Off Ring

Rancocas Creek N Branch Oxbow Channel

1890's Sanborn Insurance Maps

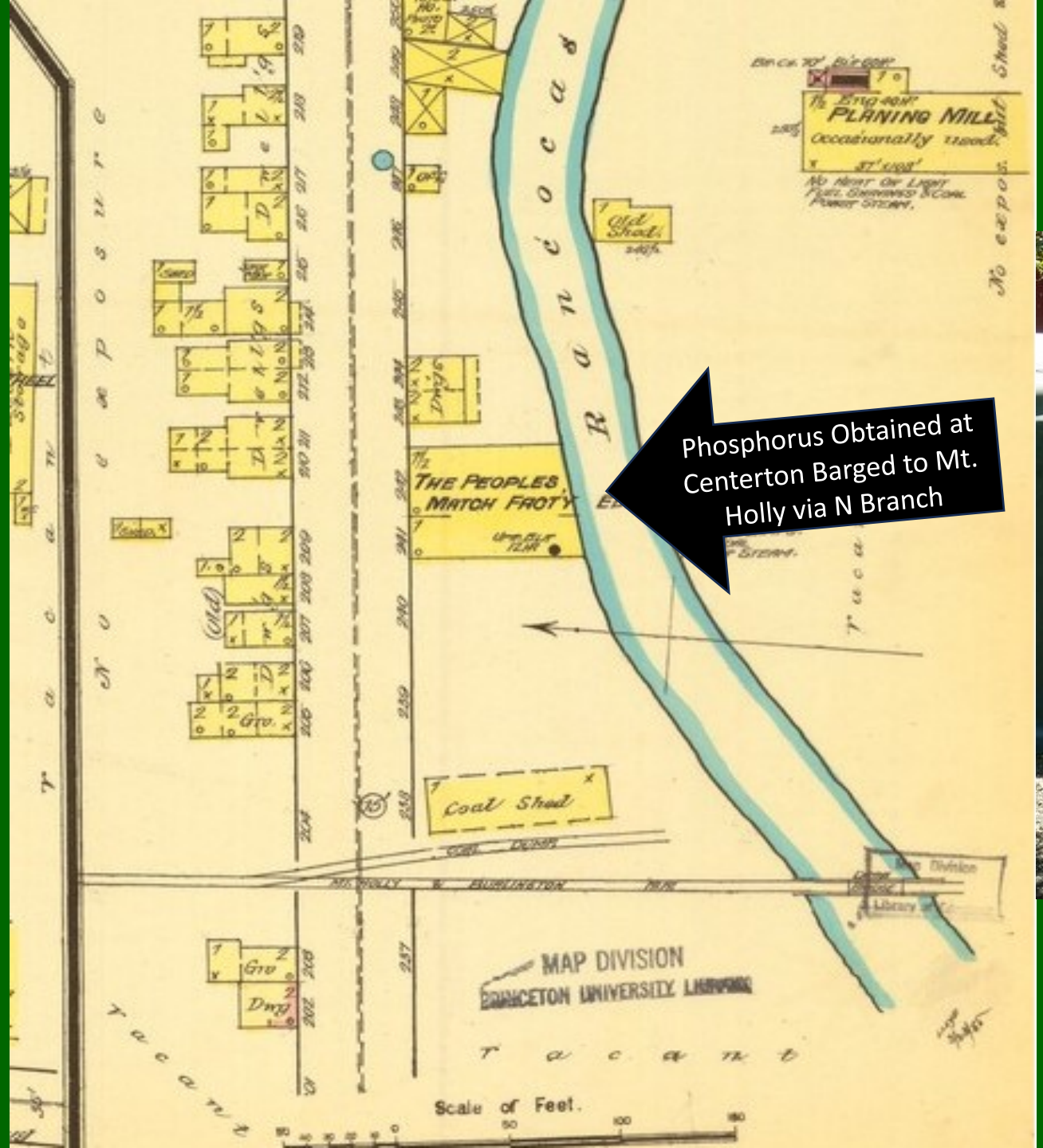
Leave No Trace - Mount Holly Iron Works Park...

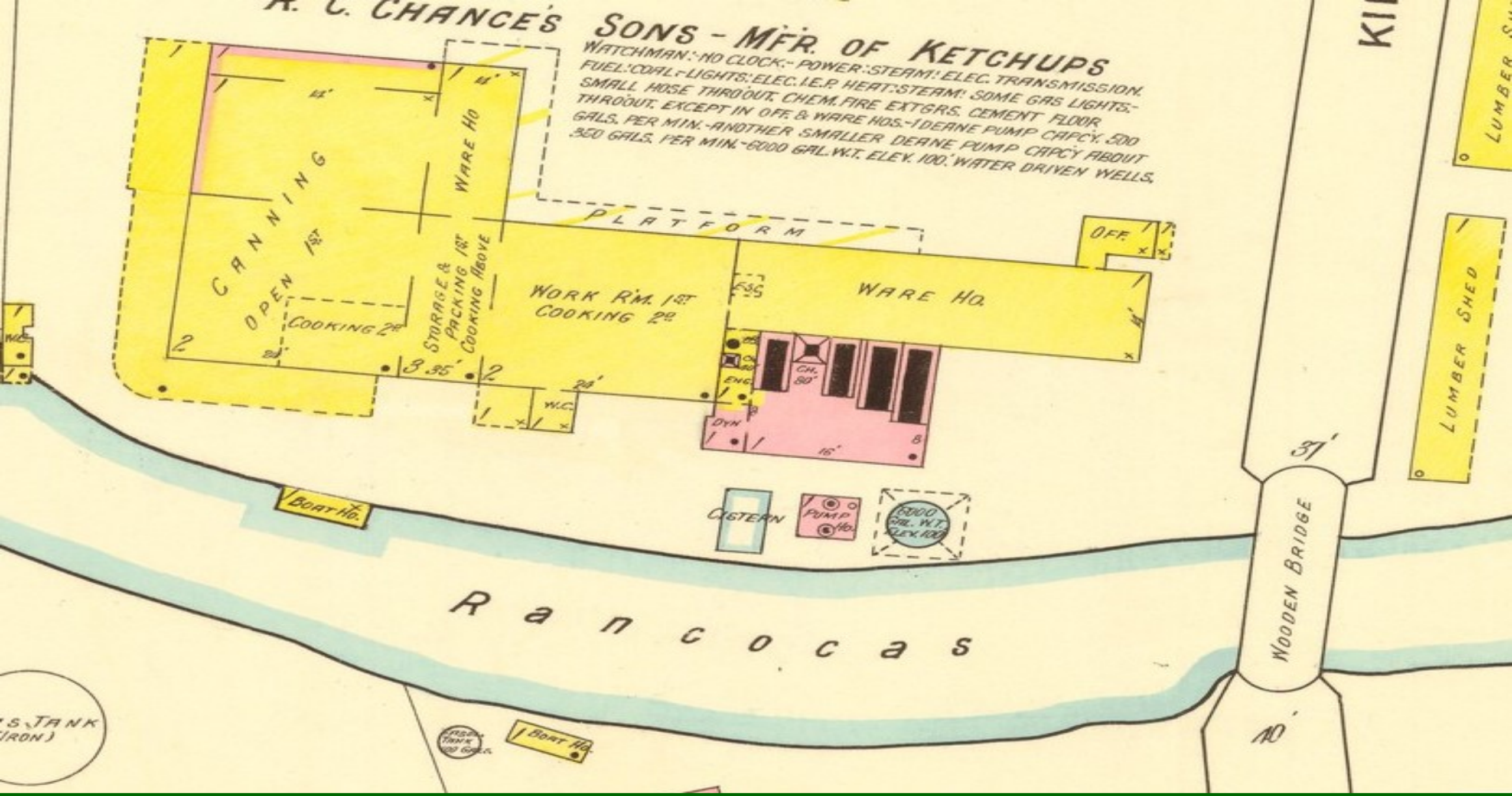
...Where the Tide join Pine Barrens Fresh Water

Rancocas Pathways

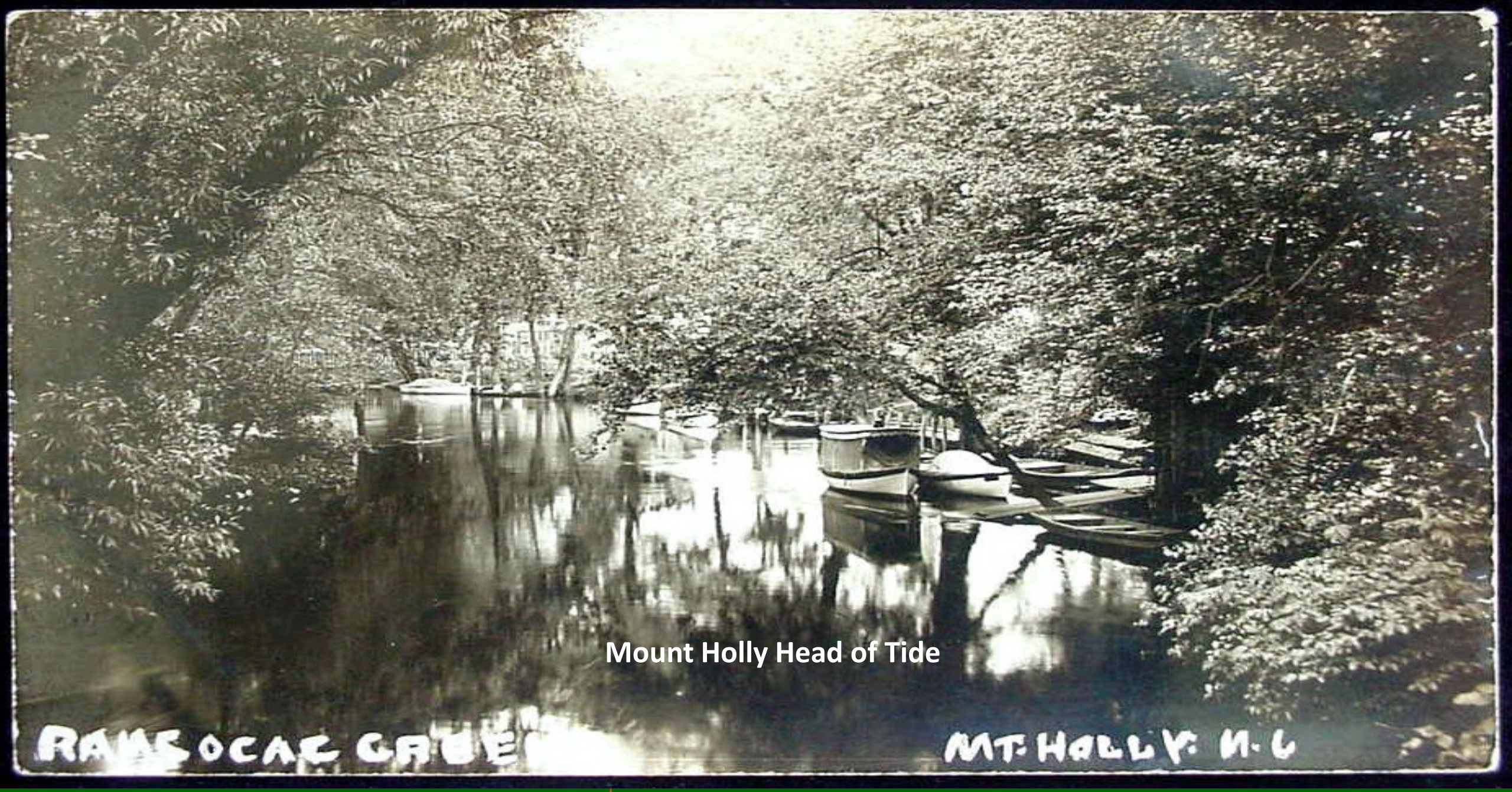
Rancocas Creek Canoeing
Mount Holly

Circa - 1902

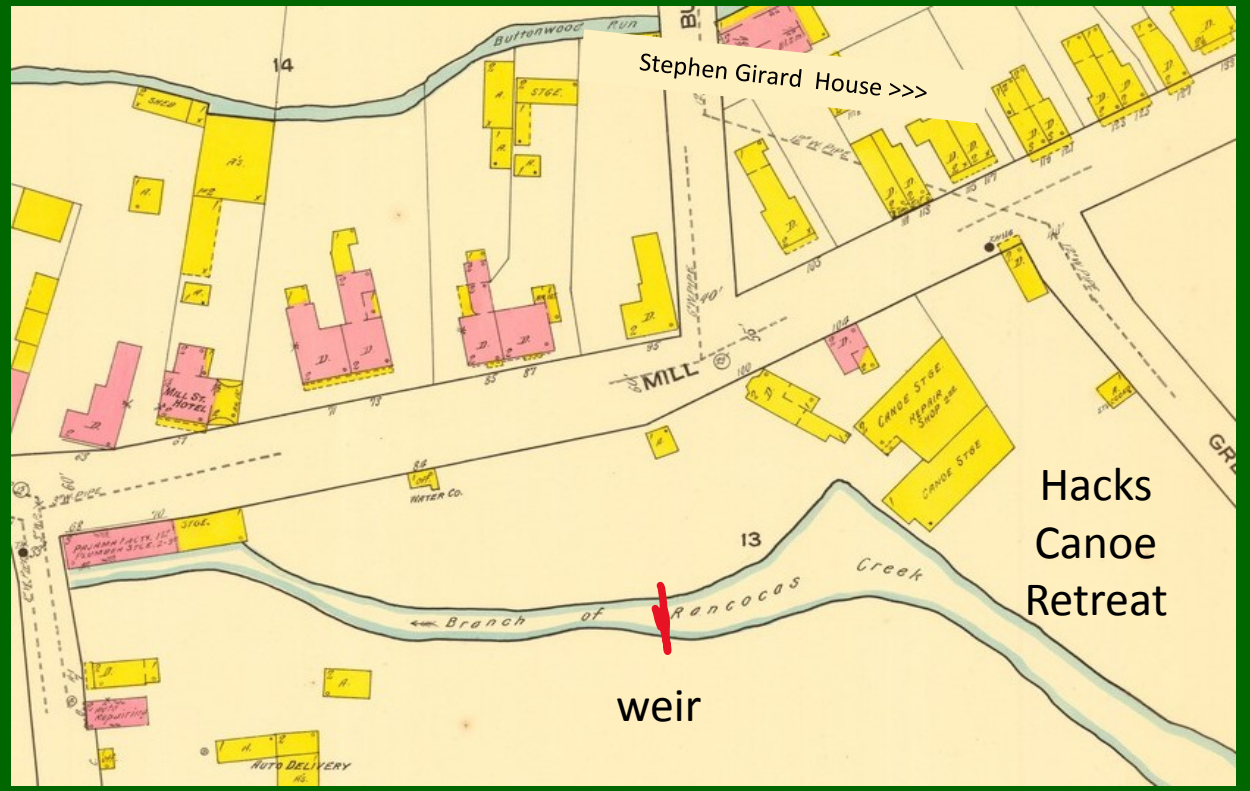



A. C. CHANCE'S SONS - MFR. OF KETCHUPS
WATCHMAN:-NO CLOCK:- POWER:STEAM:ELEC. TRANSMISSION.
FUEL:COAL:-LIGHTS:ELEC. I.E.P. HEAT:STEAM: SOME GAS LIGHTS:-
SMALL HOSE THRO'OUT. CHEM. FIRE EXTGRS. CEMENT FLOOR
THRO'OUT. EXCEPT IN OFF. & WARE HOS.-1 DEANE PUMP CAPC'Y. 500
GALS. PER MIN.-ANOTHER SMALLER DEANE PUMP CAPC'Y ABOUT
350 GALS. PER MIN.-6000 GAL. W.T. ELEV. 100'. WATER DRIVEN WELLS.
CANNING
OPEN 1st
COOKING 2d
STORAGE & PACKING 1st
COOKING ABOVE
WARE HO
WORK RM. 1st
COOKING 2d
PLATFORM
OFF.
WARE HO.
ENG.
DYN
CH. 80'
W.C.
CISTERN
PUMP HO.
6000 GAL. W.T. ELEV. 100
BOAT HO.
BOAT HO.
WOODEN BRIDGE
LUMBER SHED
Rancocas

Meet Me in Mount Holly
N Branch Rancocas Creek Water Trail

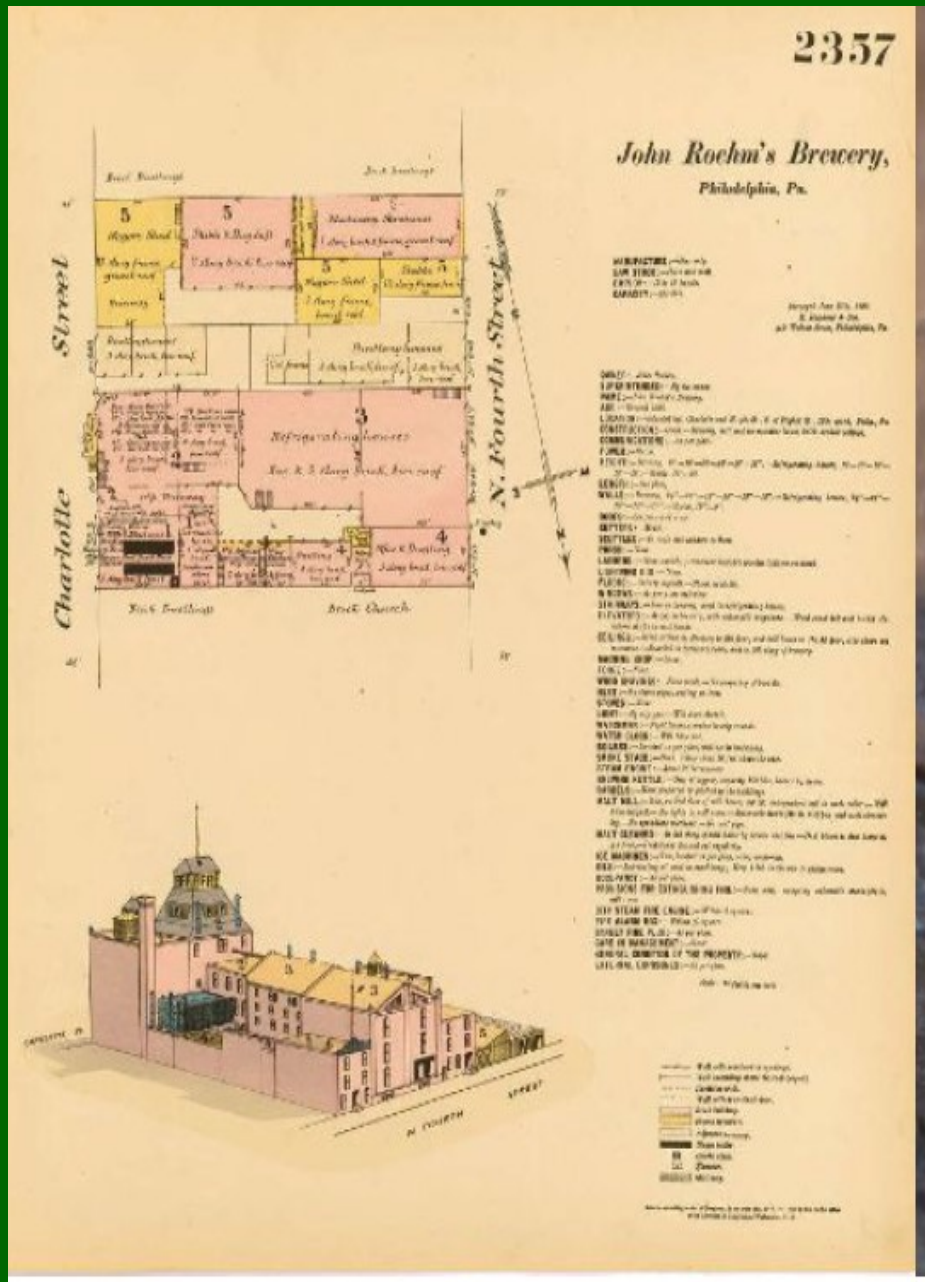


Mount Holly Head of Tide



Hacks Canoe Retreat

1890 - 1976



GOOD BEER SECURED FROM U.S. GUARDED BREWERY

Philadelphia, May 1.—An investigation into the illegal flow of high powered beer from breweries here that are legally closed will be started today according to federal and municipal authorities, following the discovery of the trucks laden with "high voltage" as they were driving away from the "Padlocked" Roehm brewery, late yesterday.

District Attorney Coles will examine the three agents assigned to the brewery. Upon the statements of the guards depends the action by the government, the district attorney said.

According to detectives the seized trucks were loaded through a hole

Notice

IS hereby given, that application will be made to the Legislature of New-Jersey, on the third Thursday of their next session, for leave to present a Bill to incorporate a Company to improve the Navigation of the North Main Branch of Rancocas Creek, between Mount Holly and the Forks of the said creek, by locks or otherwise, of which all persons concerned are requested to take notice accordingly. Dated 4th October, 1824.

Market Access

Mount Holly Water Powered Mill Town

Head of Tide/Navigation

Iron Works Hill – N Branch Rancocas Creek Water Trail
Mount Holly - Revolutionary War Battle - December 22/23, 1776

Revolutionary War Reference to the Rancocas Creek by Hessian Colonel von Donop in reference to the Revolutionary War Battle of Mt. Holly (December 22 and 23, 1776

Battle of Mt. Holly, also known as the Battle of Iron Works Hill

Map of Rancocas Valley, Rancocas Creek and Mt. Holly
Hessian Captain J. Wald – 1776
Ref: NJ State Museum

Rancocas Creek - March 21, 1817
Sailing Shallop "Good Intent"

One Deck-One Mast
Length: 52 feet – 8 inches
Width: 18 feet 6 inches
Dept: 4 feet
Weight: 30 tuns
Ref: Decou

to o'clock in the morning.

No. 13. Colonel von Donop to General Grant.

Bordentown, December 18, 1776.

Sir:

I have this moment received your letter of the 17th instant. Since I had the honour to advise you that there were 4000 of the enemy at Cooper's Creek the best report I can obtain reduces the number to 500. I do not care to take the trouble to march with all my force for these gentlemen will not wait for me. I believe however that it would be a good thing to establish a post at Mount Holly and to push on from there, and place a guard at the bridge between that place and Moorestown. From thence we could send out patrols to Rancocas Creek and then with troops around Busseltown. I could send patrols to Burlington. You will see by the map which I send you that I will then be able to get information of the enemy on both my flanks and at the same time deprive them of the plan of making a descent from Rancocas Creek. There is another report concerning the rebels which I get from Mr. Smith, and a messenger just from the General-in-Chief reports the same thing from Philadelphia. This man informs me that they are hard at work fortifying the city but a man residing there has assured me that from the way they

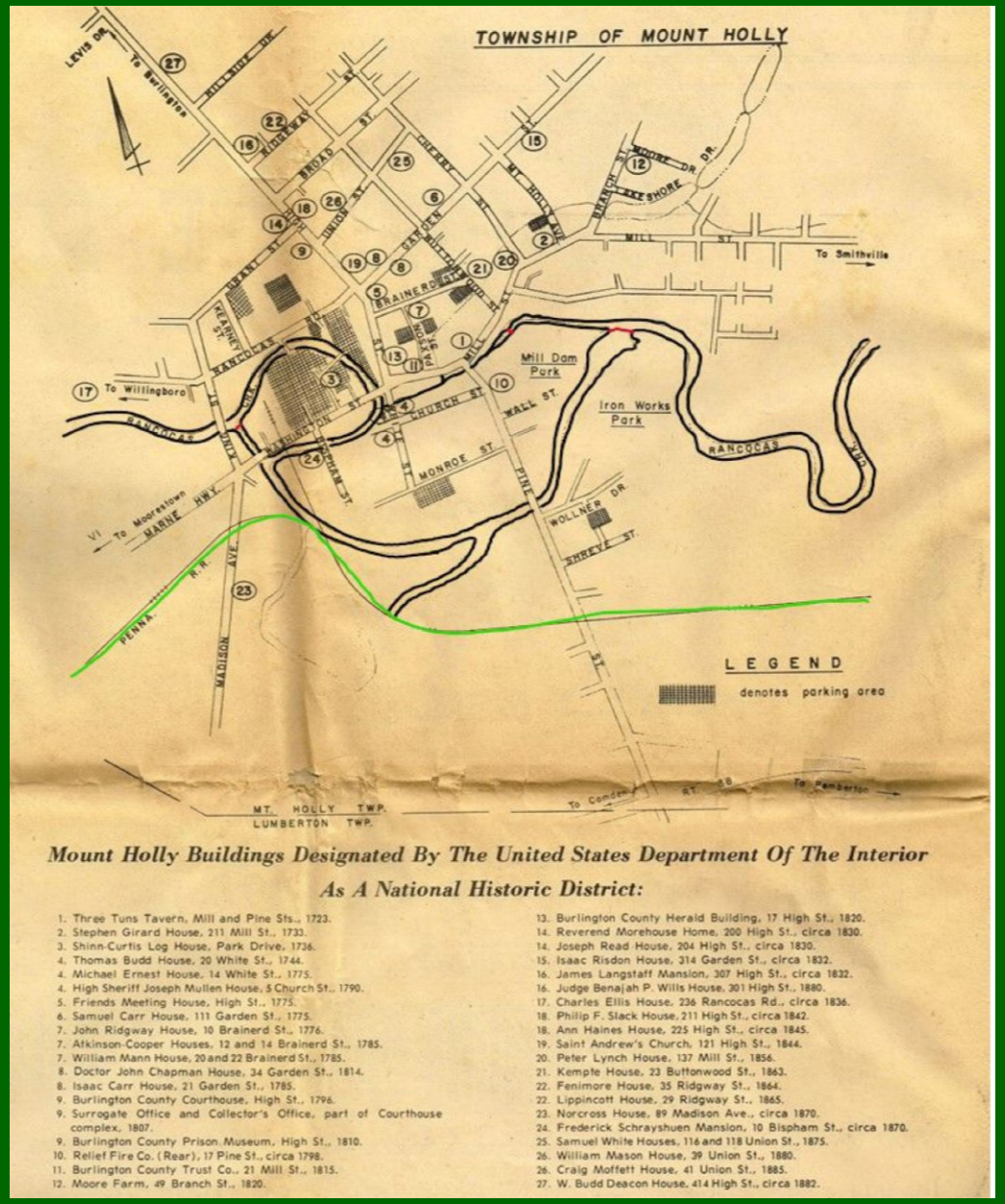
6/23/2020

Exploring Historic Pathways, Discovering New Understandings

Historic Court House and Prison

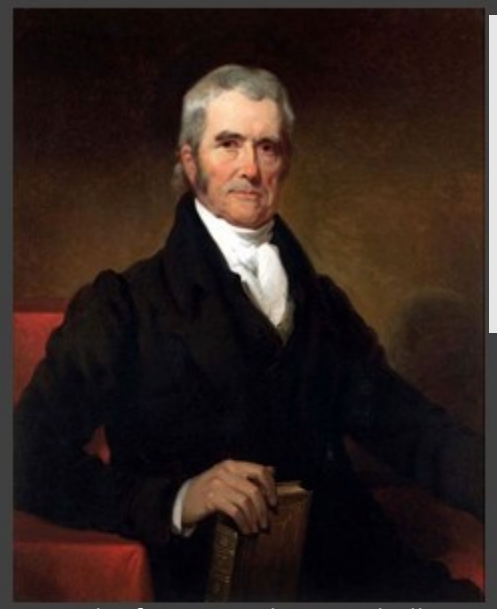
National Historic District

1841 Ink Shop Now Robin's Nest Restaurant



Mount Holly Buildings Designated By The United States Department Of The Interior As A National Historic District:

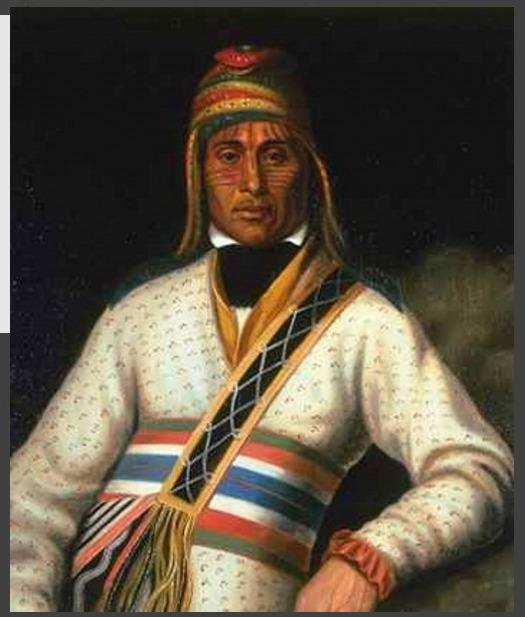
1. Three Tuns Tavern, Mill and Pine Sts., 1723.
2. Stephen Girard House, 211 Mill St., 1733.
3. Shinn-Curtis Log House, Park Drive, 1736.
4. Thomas Budd House, 20 White St., 1744.
4. Michael Ernest House, 14 White St., 1775.
4. High Sheriff Joseph Mullen House, 5 Church St., 1790.
5. Friends Meeting House, High St., 1775.
6. Samuel Carr House, 111 Garden St., 1775.
7. John Ridgway House, 10 Brainerd St., 1776.
7. Atkinson-Cooper Houses, 12 and 14 Brainerd St., 1785.
7. William Mann House, 20 and 22 Brainerd St., 1785.
8. Doctor John Chapman House, 34 Garden St., 1814.
8. Isaac Carr House, 21 Garden St., 1785.
9. Burlington County Courthouse, High St., 1796.
9. Surrogate Office and Collector's Office, part of Courthouse complex, 1807.
9. Burlington County Prison Museum, High St., 1810.
10. Relief Fire Co. (Rear), 17 Pine St., circa 1798.
11. Burlington County Trust Co., 21 Mill St., 1815.
12. Moore Farm, 49 Branch St., 1820.
13. Burlington County Herald Building, 17 High St., 1820.
14. Reverend Morehouse Home, 200 High St., circa 1830.
14. Joseph Read House, 204 High St., circa 1830.
15. Isaac Risdon House, 314 Garden St., circa 1832.
16. James Langstaff Mansion, 307 High St., circa 1832.
16. Judge Benajah P. Wills House, 301 High St., 1880.
17. Charles Ellis House, 236 Rancocas Rd., circa 1836.
18. Philip F. Slack House, 211 High St., circa 1842.
18. Ann Haines House, 225 High St., circa 1845.
19. Saint Andrew's Church, 121 High St., 1844.
20. Peter Lynch House, 137 Mill St., 1856.
21. Kempte House, 23 Buttonwood St., 1863.
22. Fenimore House, 35 Ridgway St., 1864.
22. Lippincott House, 29 Ridgway St., 1865.
23. Norcross House, 89 Madison Ave., circa 1870.
24. Frederick Schrayshuen Mansion, 10 Bispham St., circa 1870.
25. Samuel White Houses, 116 and 118 Union St., 1875.
26. William Mason House, 39 Union St., 1880.
26. Craig Moffett House, 41 Union St., 1885.
27. W. Budd Deacon House, 414 High St., circa 1882.



Chief Justice John Marshall

Mount Holly Artist Henry Inman (1831-1834)
Leading American portraitist of his time.

Inman contributed illustrations to gift books. He lived on a farm that he purchased across the river from Philadelphia, in Mt. Holly, New Jersey.



Yoholo-Micco

Clara Barton

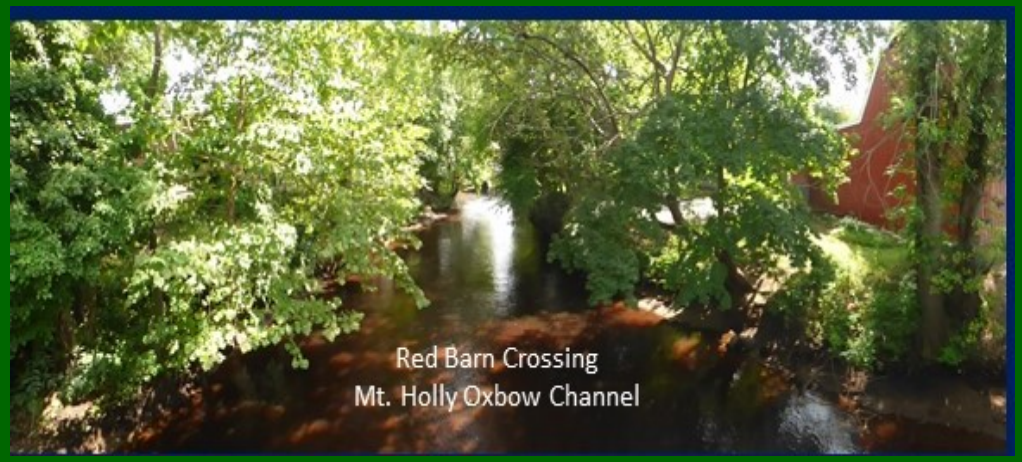
Sequoyah

These years were busy for Inman. His major project was copying over 100 paintings of Native Americans (the originals were mainly by Charles Bird King) for lithographic reproduction. These today are found placed in the US Capital Building.

Payta-Kootha

Burlington County Lyceum and Widow's Walk.

Here back in the day of sail and steamer folks kept an eye on Rancocas Creek vessel traffic.



Downtown Creekside Access
High Street Brew Pub, Pizza, Eateries, Entertainment

Respect

Private

Property

Stephen Girard was born in Bordeaux, France on May 20, 1750, into a wealthy family in the shipping business. Stephen himself first set out to sea at age 14, and he continued in the shipping business, which took him to New York in 1774.

His shipping business was negatively affected by the British blockade during the Revolutionary War. He moved to Philadelphia in 1776 where he married Mary Lum. When Philadelphia was occupied by the British troops in 1777, Stephen and Mary moved to this house in Mount Holly, where they also operated a retail store.

During his time here, the native Frenchman became increasingly interested in the cause of the American Revolution going on around him. In Philadelphia, on October 27, 1778, Girard signed an oath of allegiance and became an American Citizen.

In 1779, he moved back to Philadelphia, concentrating again on his shipping business. After the Revolutionary War, Girard's shipping business grew dramatically, along with his wealth.

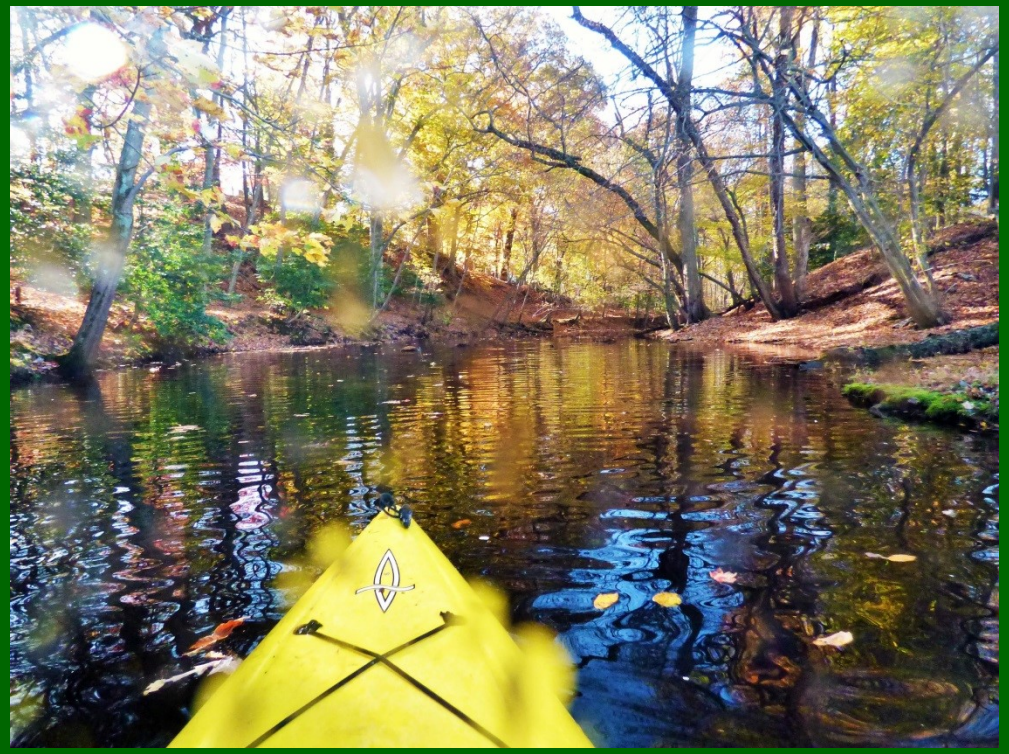
Decades later, he became a major financier to the United States government for the War of 1812. Upon his death on December 26, 1831, he left a majority of his fortune to charitable institutions

Mount Holly new Jersey
A National Historic Distrct

Congressman Andy Kim

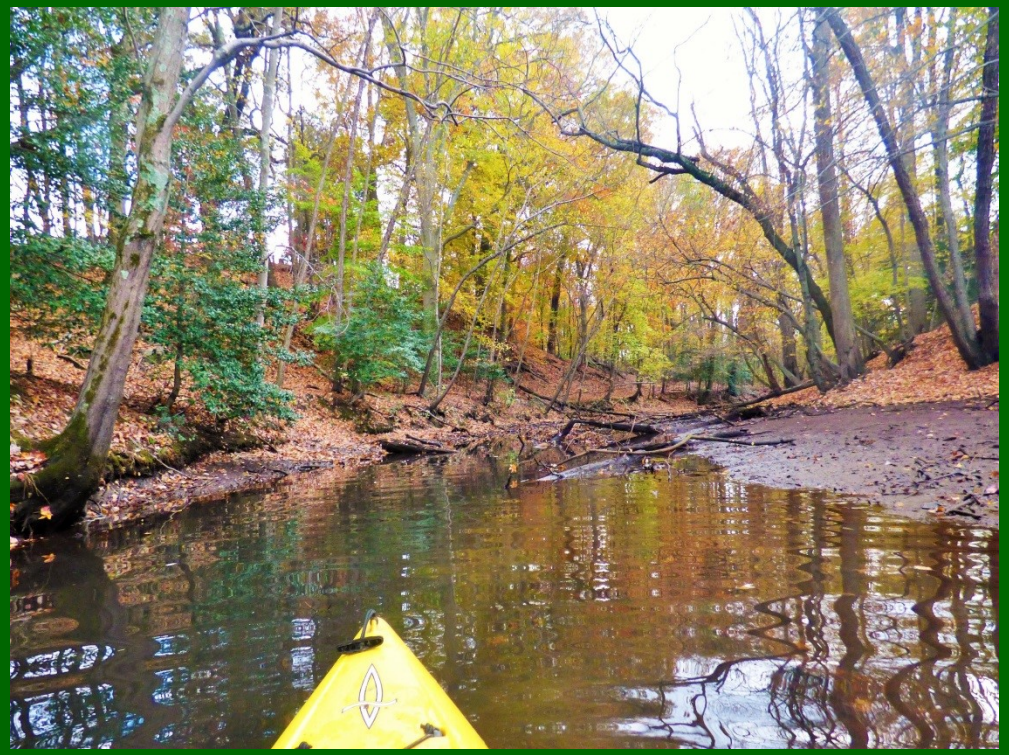
Art by Luke

High Tide



1000
11-9-2017

Low Tide



1600
11-8-2017

N Branch - Incoming Tide
Original N Branch Channel

Rancocas Creek Cleaved by Mt. Holly 1941 Flood Bypass Channel

www.rcnwt.com

. Holly's Flood Control Bypass Channel 1941- 1944

October 2, 1940 at 11:45 AM

Mr. Mark Reynolds, Chair of Mt. Holly, NJ Flood Committee accompanied by NJ Senators and Representatives meet with President Franklin Roosevelt and others to capture and control floods that commonly ripped through the Rancocas Valley community of Mt. Holly.

The result the Mt. Holly Flood Control Bypass Channel

Reference: Pare Lorentz Center, FDR Library

only restored the item but upped the cash sum to $40,000,000. . . . Edward H. McCrahan, World War veteran, has proposed a new Army decoration to the War Department—a "Good Conduct Medal" that would be given to all honorably discharged veterans and draftees.

GEOGRAPHY SHARK

One thing that never fails to dazzle White House callers is the President's remarkable knowledge of geography. He seems to have at his finger tips the location of small towns and streams almost anywhere in the country.

Latest to get a demonstration was young Representative Lane Powers of New Jersey, who called with Senators William Smathers and Warren Barbour regarding a flood control project on Rancocas Creek, near Mount Holly.

"Where is Mount Holly in relation to Morristown?" queried Roosevelt.

"About 70 miles south," replied Powers.

"It must be near Camden, then."

"It's exactly 20 miles northeast of Camden, Mr. President."

"That would make it about 10 miles west of Fort Dix. Right?"

"It certainly is," said Powers. "Gosh, you must carry a map around in your mind."

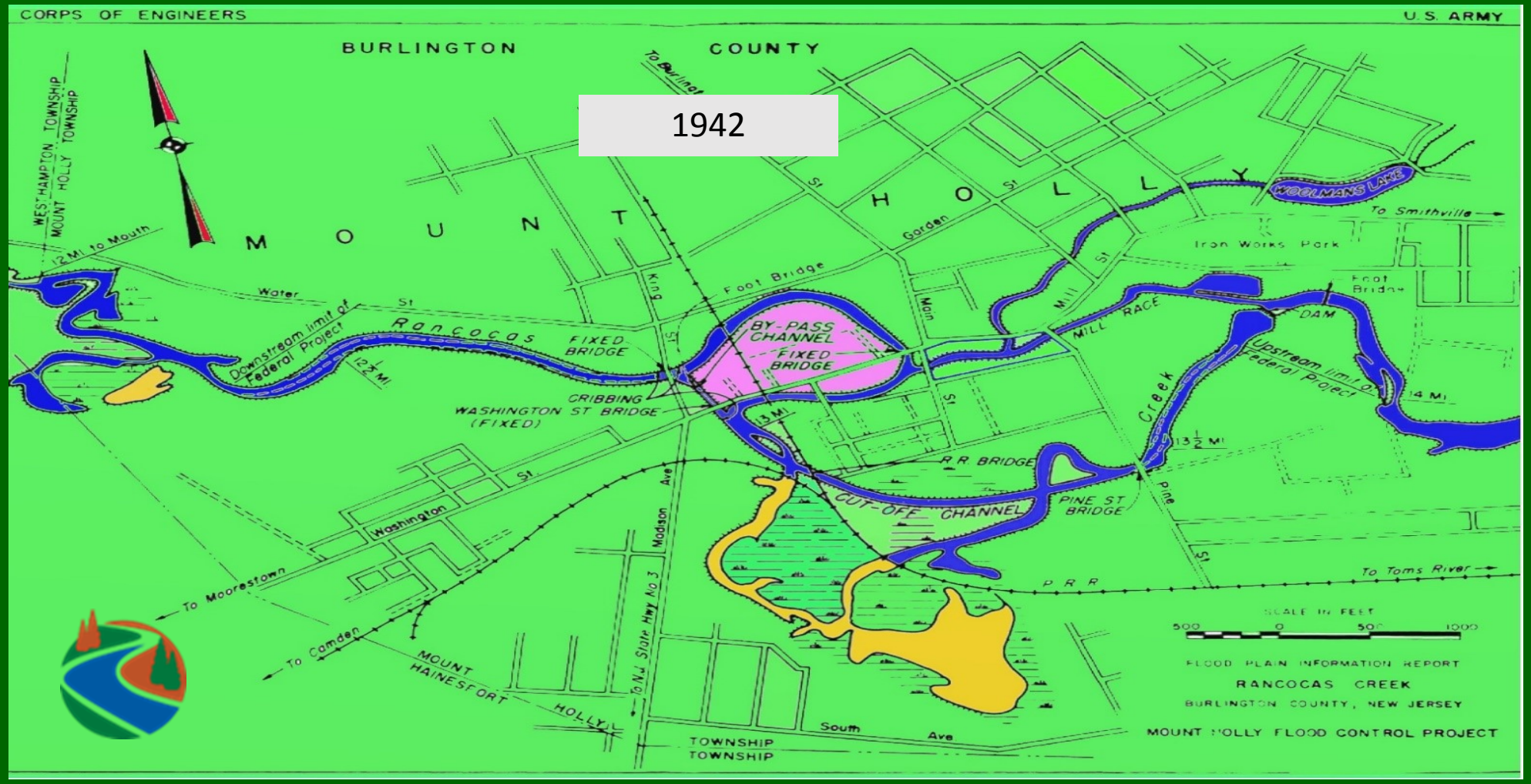
Note—The flood control project will be built, but not with flood control funds. The money will come from the defense account because of the project's proximity to Fort Dix, where draftees will be trained.

OHIO POLITICS

1938 Mt. Holly Flood Photos Courtesy of Larry Tigar, Mt. Holly Historical Society

Note: Mount Holly Flood Channel Maintenance Schedules "Omitted" from Final Federal Contract.

Maintenance Schedules Sent to Mt. Holly in 1947 in a letter of US Army Apologizing for "Omission". See National Archives Files Flood Mt. Holly Flood Channel



Octo

Mr.

IJ Flood

enators

entatives

osevelt.

Reference

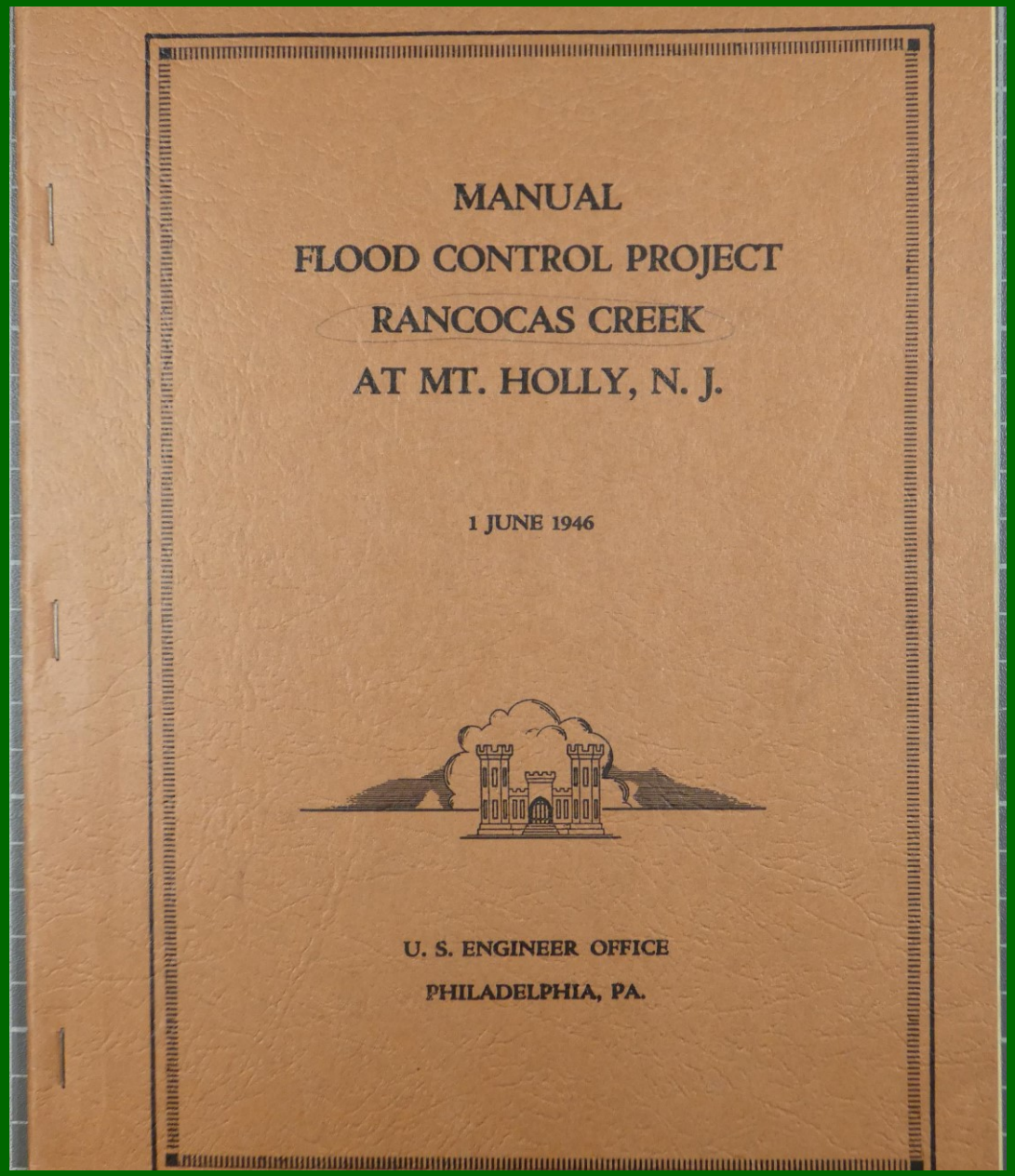
TOWNSHIP OF MOUNT HOLLY N.J.
1677

Mount Holly

N Branch Rancoas Creek

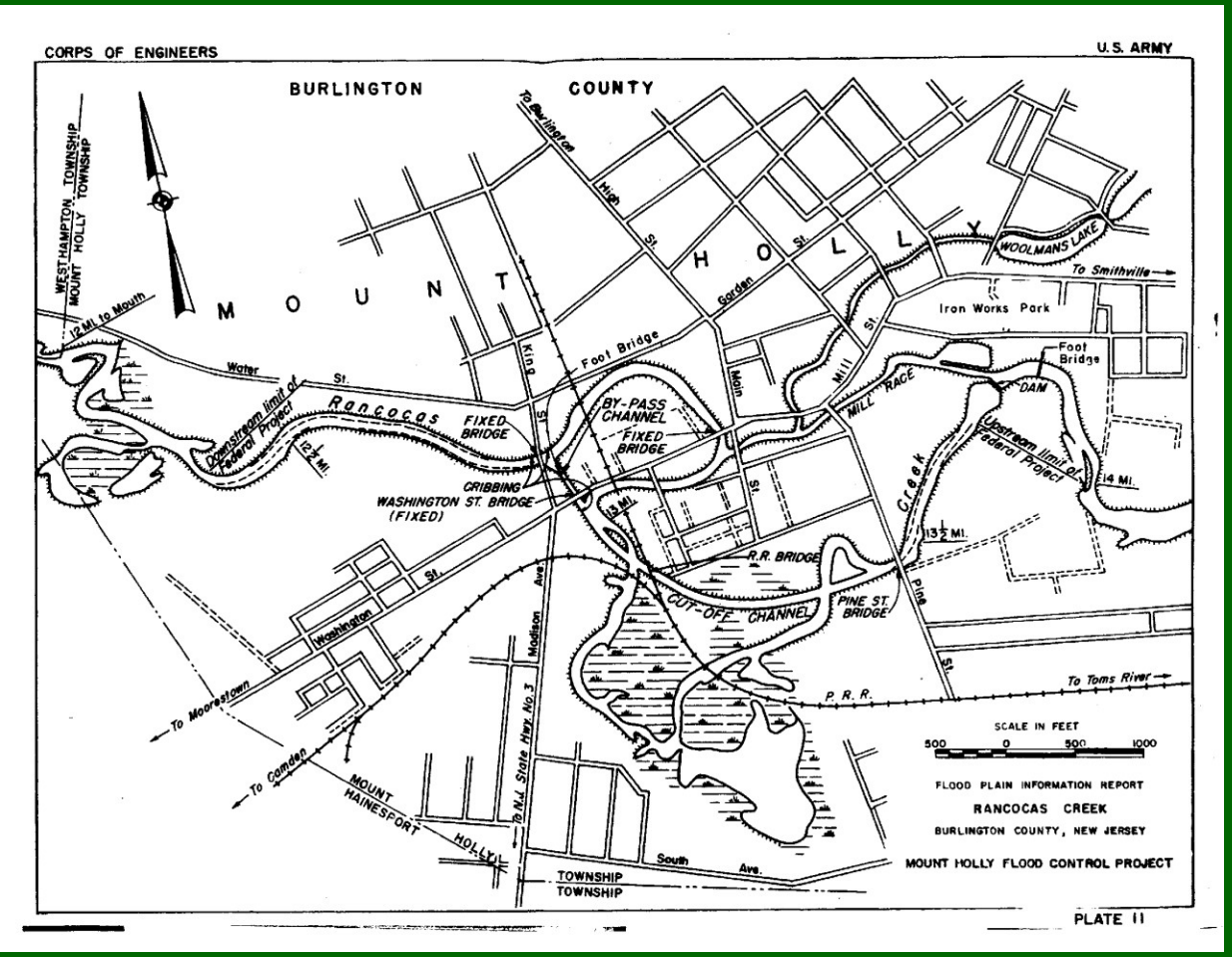
Head of Tide

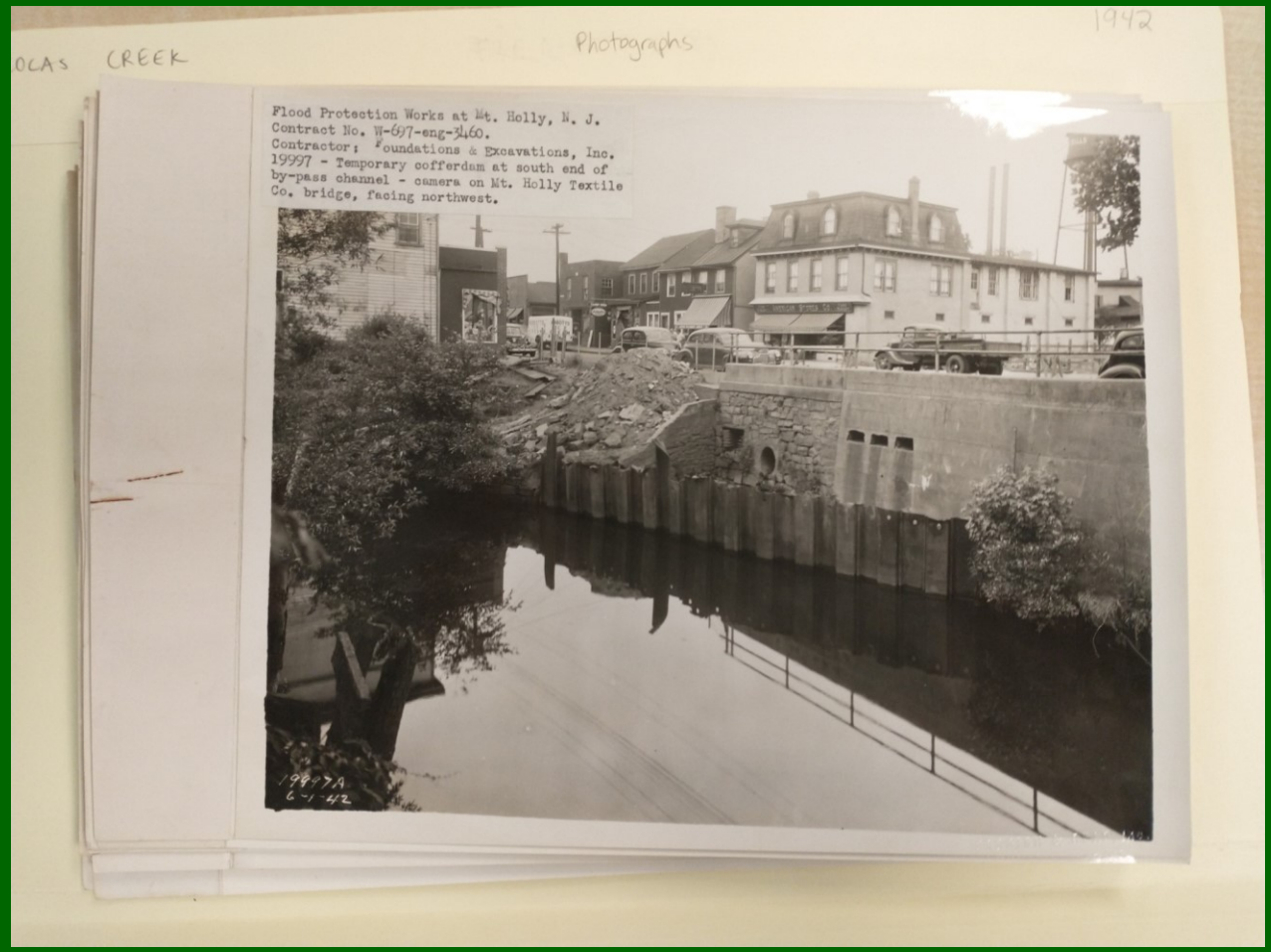
147 Miles Inland of the Delaware Capes: May and Henlopen. Beyond safe harbor open ocean and coastal trade winds



Published 1941

MCL Mt. Holly National Archives
Flood Channel - 1941





SUPERSEDED
Timbuctoo
CONSTRUCTION UNDER INITIAL CONTRACT SHOWN IN RED
CONSTRUCTION UNDER SECOND CONTRACT SHOWN IN GREEN
To accompany Definite Report on Flood Protect
Approaches to Fort Dix, N
dated October 1941

Rancocas Creek Oxbow Lights

Mill Race

Mount Holly National Historic District

Rancocas Creek Mill Race Lights

Downtown Marsh Hawk

1796 Court House

1843 Foundry

General George Washington was already aware of privateers. (ref - National Archives)

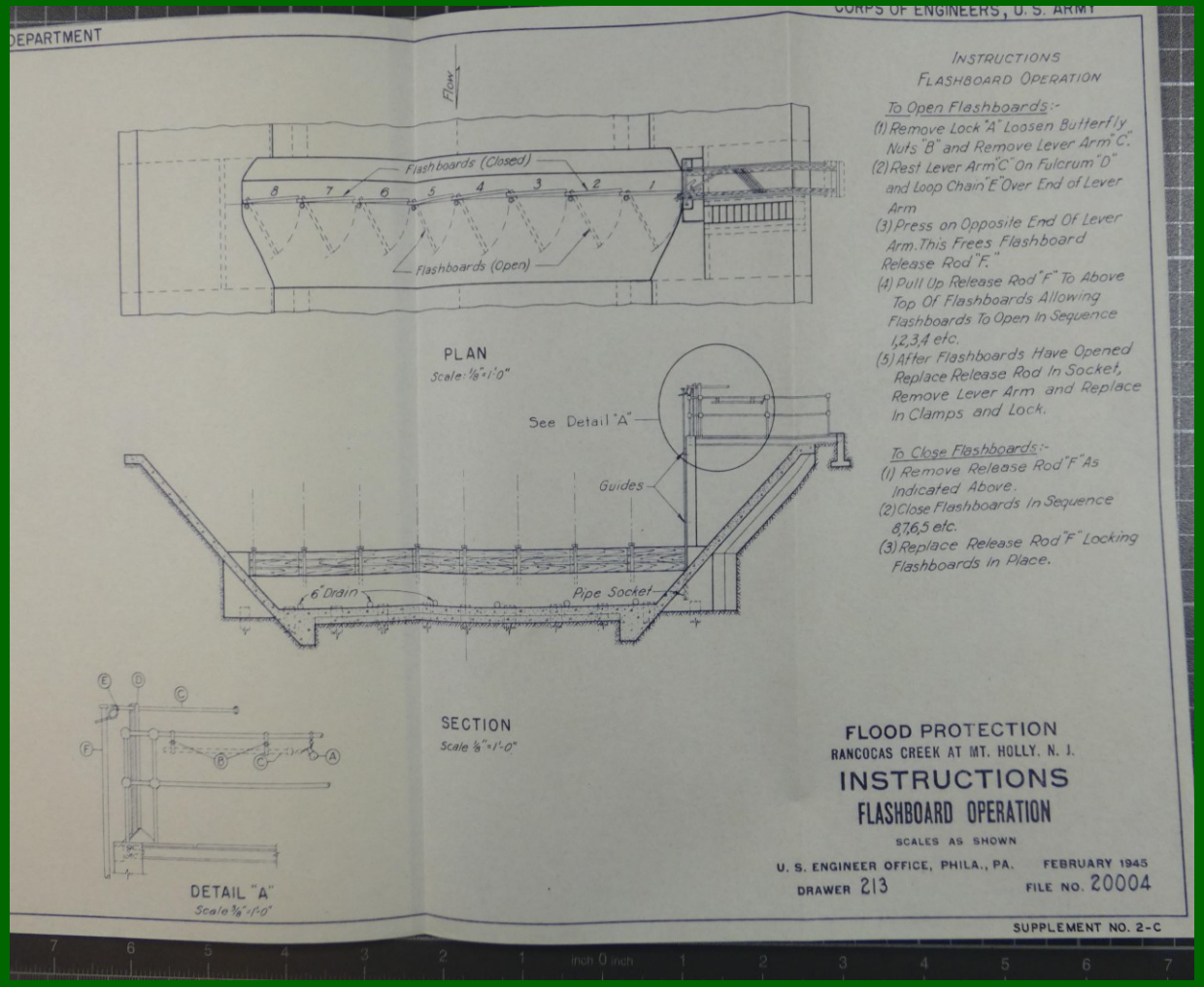
On April 6th 1778, John Chaloner, an assistant commissary of purchases at Valley Forge, wrote New Jersey governor William Livingston,

“I have the Honor of informing you that it is the order of His Excellency the Commander in Chief to the purchasing Commissary of the Middle Department to purchase the Cargo of the prize lately arrived into Egg harbour consisting of Butter Beef Pork &c&c to have the same immediately removed to a place of safety & brought on for the use of the Army with all possible expedition & as the effecting of this with that dispatch the nature of the case requires may interfere with the Laws of the state of N. Jersey in two Instances . . . His Excellency has desired me to solicit your aid to Justify Jos. Hugg Esqr. Colo. Blaines Assistant for purchasing the Cargo before Condemnation as also to advice with you the respecting the Continuance of the Waggons in the service for the Necessary duty”

(Ephraim Blaine Papers, DLC: Peter Force Collection). The Forks of Little Egg Harbor was a shipbuilding and privateering settlement on the Mullica (Little Egg Harbor) River above Chestnut Neck. The prize was probably the brig *Carolina Packet*, which had been captured by the sloop *Scorpion* commanded by John Brooks. That brig’s captain, William McCollam, was sent to George Washington’s headquarters in early April

Reference: *N.J. Council of Safety Minutes*, 221–23; see also *New-York Gazette and the Weekly Mercury*, 27 April.

N Branch Rancocas Creek Tide Gates and Tidal Flash Boards



N Branch Rancocas Mill Dam

Highly Proable Tidal Flash Boards are the last remaining tidal flashboards in USA

Henry Inman 1832

Born into a prominent Eagle clan family of the Jiwere-Nut'achi (Otoe-Missouria) people, Hayne Hudjihini, Eagle of Delight, has a blue tattoo on her forehead denoting her royal status. Her marriage to Bear clan Chief Sumonyeacathee formed an Eagle-Bear union—a high honor among the Jiwere-Nut'achi people. Following a peace treaty in which the Jiwere-Nut'achi agreed to an alliance with the United States government, in 1822 she and her husband traveled as ambassadors and protectors of Jiwere-Nut'achi sovereignty from their home in present-day Nebraska to Washington, D.C., to meet with President James Monroe. She died of measles shortly after she returned home.

Veronica, Rock, and Wolf Pipestem (Otoe-Missouria), descendants of Hayne Hudjihini

Ref: Metropolitan Museum of Art Native American Perspectives

1941 Flood Channel - Mount Holly - Heading Up Stream

1942

Tidal Weir and Flood Channel under Construction

Reference: National Archives

1942

Tidal Weir under Construction

Photo Used w Kind Permission
of
Byer Family

Mt. Holly

N Branch 1941 Flood Control Weir Tidal Flash Boards
N Branch Rancocas Creek, Mt. Holly, NJ
Low Tide

Mt. Holly Tidal

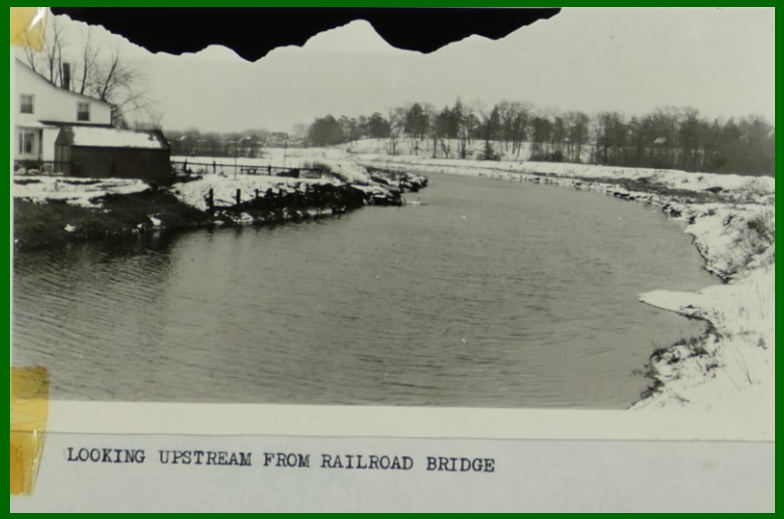
Tidal Flash Boards Weir

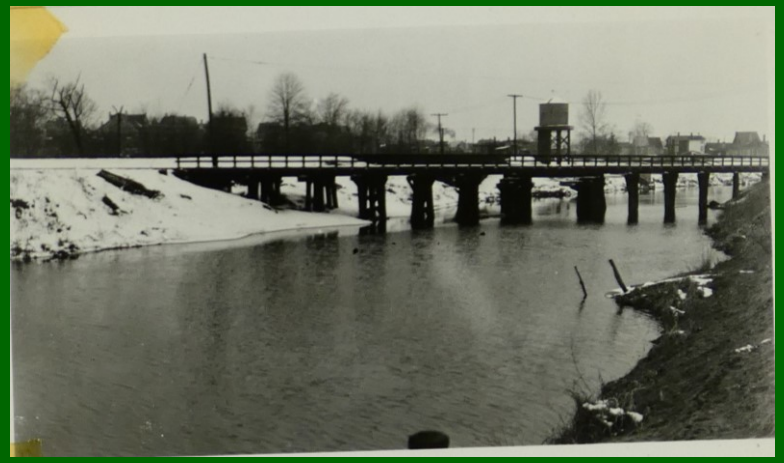
High Tide

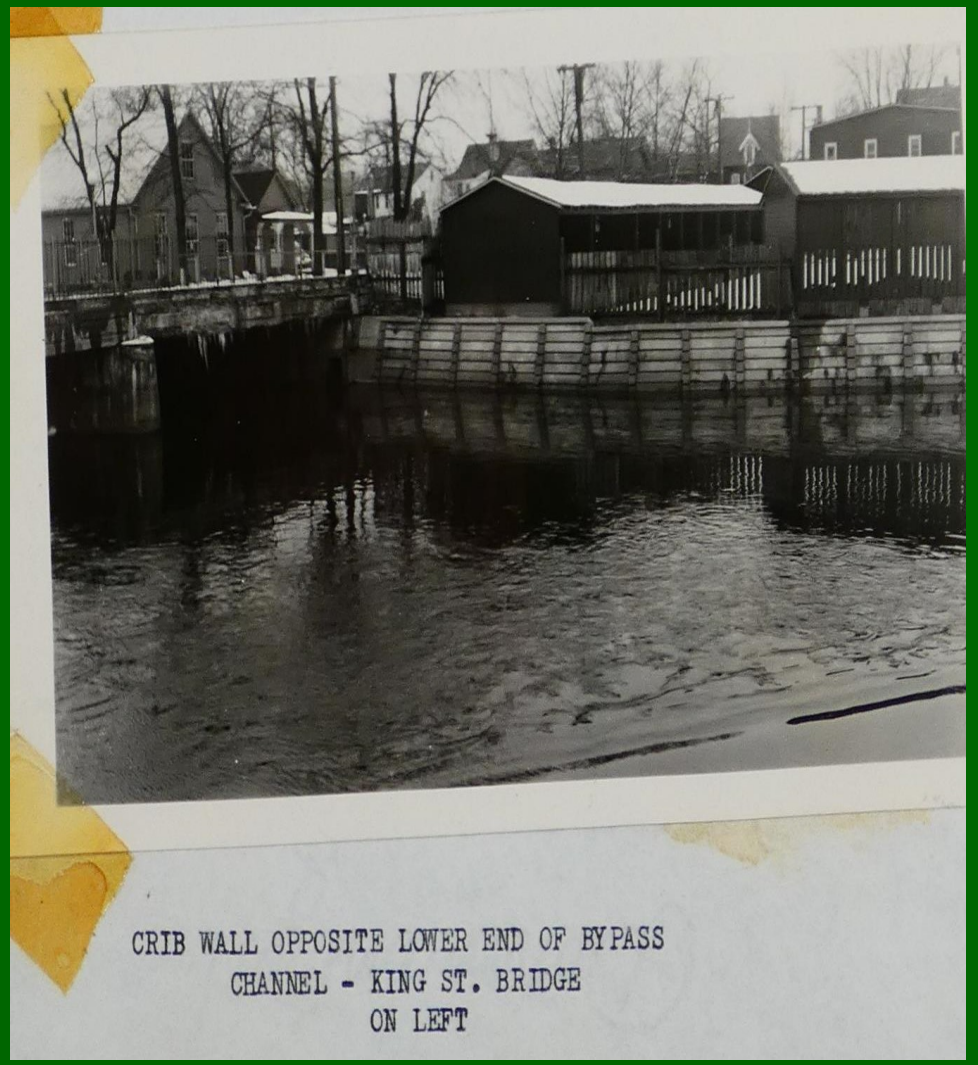
N Branch 1941 Flood Control Weir
N Branch Rancocas Creek, Mt. Holly, NJ
High Tide

Tides Riding Over Top of Weir and Flash Boards

Mt. Holly 1946 Post Tide-Water Construction N Branch







Michigan State Building From Philadelphia Centennial Exhibition of 1876 Barged into Mt. Holly

1913 Through 1973

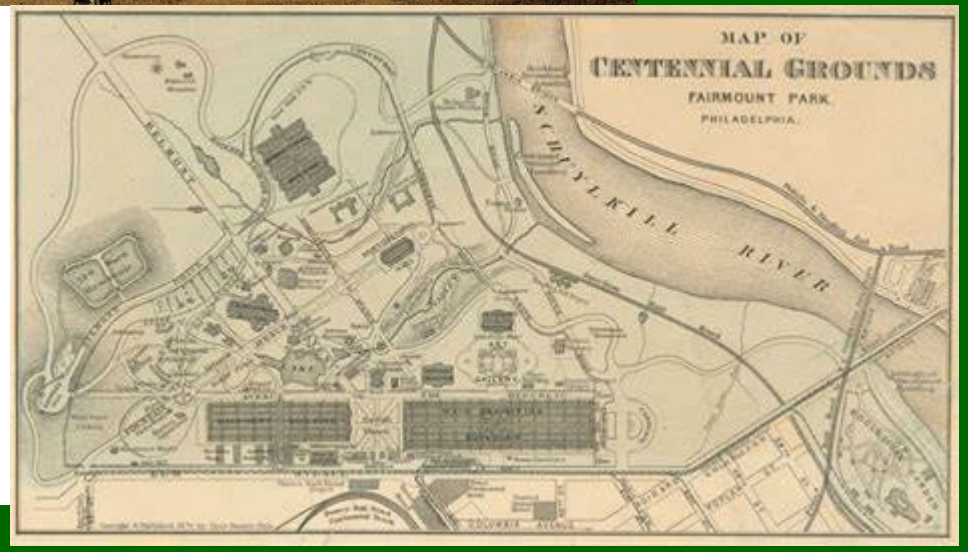
A lot of water has spilled over Mill Dam since the original French Lumber Company building floated up the Rancocas Creek from Philadelphia.

The French Lumber Company is celebrating its sixtieth year of business in Mount Holly, in June. All conducted from the King Street structure that once was the Michigan State Exhibit Building at the Philadelphia Expositions Centennial of 1876.

The business was founded by George W. A. French in 1913, and was succeeded by his son, James H. French. After operating it for forty-three years, James passed away, and George W. French assumed the operation. George has now been joined by his son, James R., and from an unlikely beginning in a 19th Century exposition, the French Lumber Company has emerged today as a testimonial to the pioneer spirit of four generations of a family named French.

French Lumber

located on King Street, Mount Holly



Kayaking West - Leaving Mount Holly
N Branch Rancocas Creek Water Trail

Historic Land Owners Rancocas Creek
Courtesy Tidewaters North Branch

Property-Owner **Notes:**

---

1. **Mary Perkins…… Trust deed. Widow.**

2. **Anthony Elton……. Land owner. Present day Rancocas State Park.**

3. **R. Fenimore…… Road from Creek to Great Meadow. Connection to to B. Devonish. Brick-Layer, Distiller (possible location of N. Branch distillery ? May 17, 1783).**

4. **Lawrence Morris…… Sawyer, on Town-line at Grubb's Meadow (p. 471).**

5. **John Cripps…… Mt. Holly Connection/Wool comber. Land abuts Morris.**

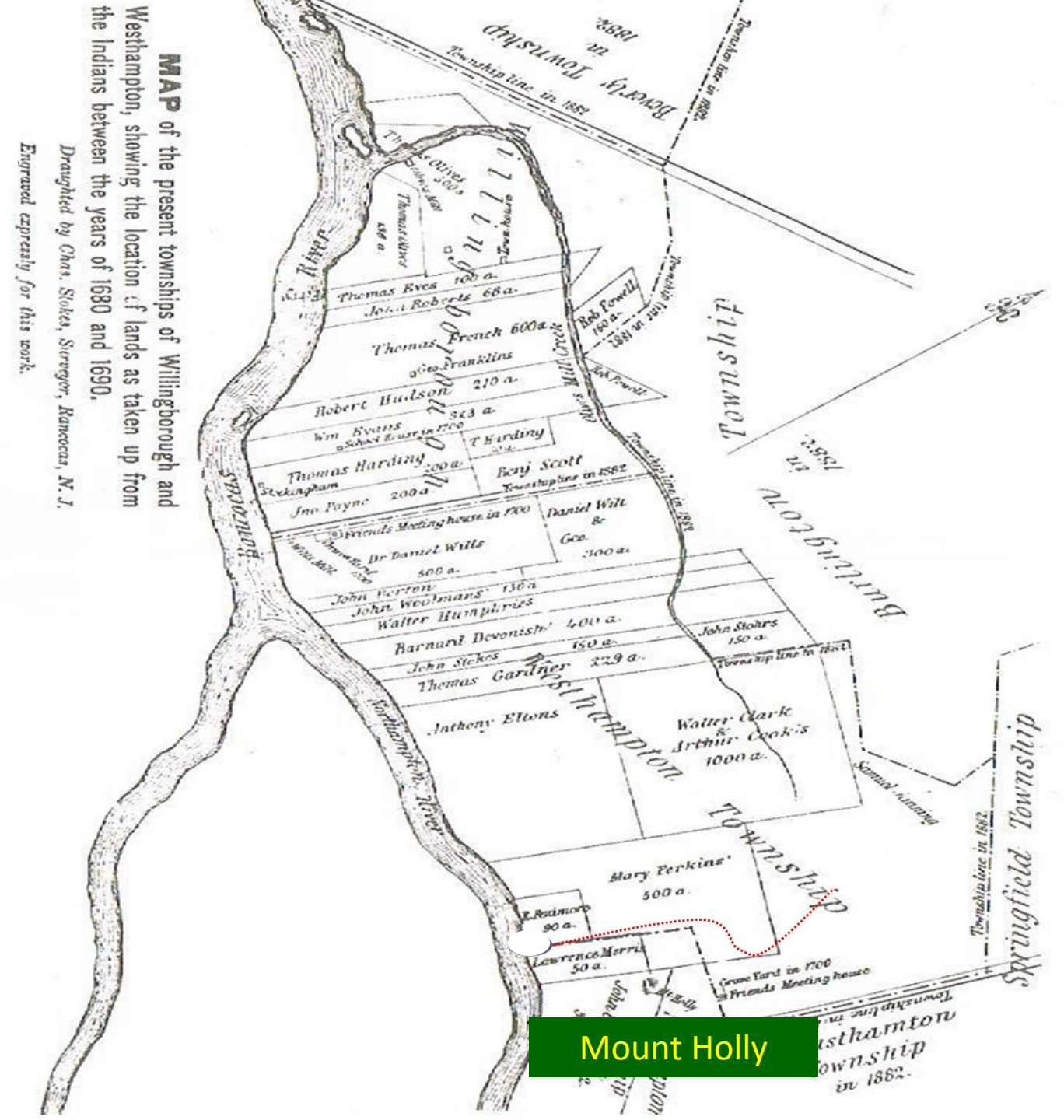
6. **Thomas Gardiner……. Surveyor .**

7. **Grubb's Run …… Henry Grubb: Innkeeper/Butcher, Family Well Known Quaker Abolitionists. Local inn-keeper. Is Grubb's Run named for Grubb ? See connection to Burlington City. (P. 483 --- Perkins Land Deal)**

8. **Buctoe Residents…… Freedmen/Escaped Slaves, See "Davis Site" references.**

9. **Interview…… w/ Local, long-time residents.**

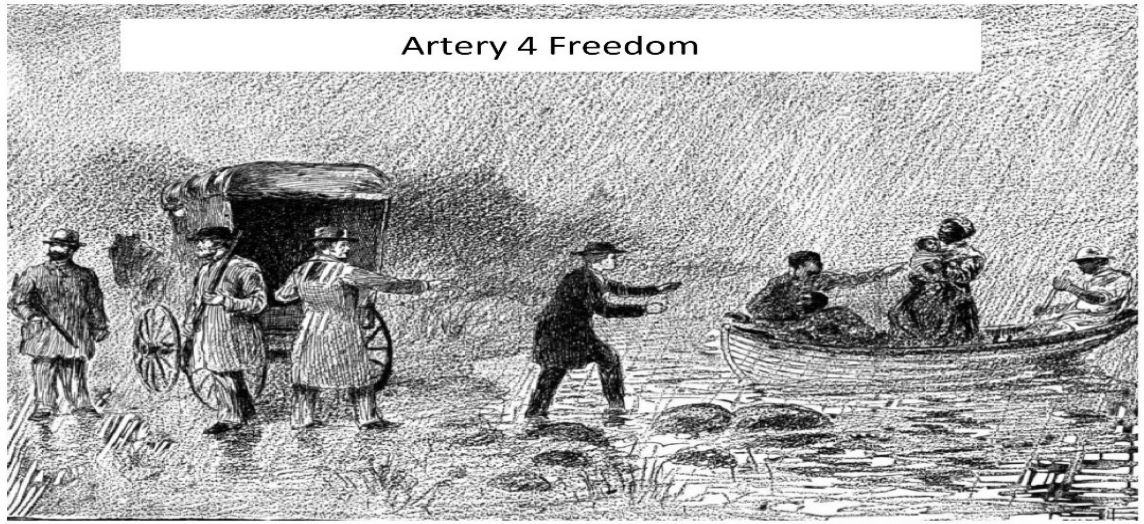
Ref: Nelson, William/Personal Interviews



Remains of 1700’s Tidal Tide Mill

Timbuctoo, Westampton Township

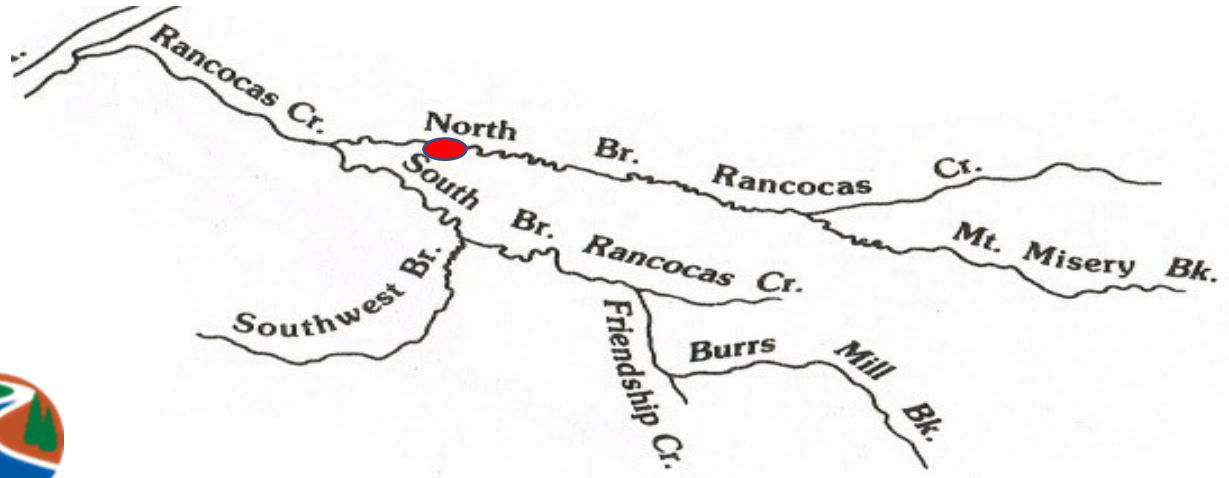
N Branch Historic Timbuctoo Heritage Area Water Trail Way Point



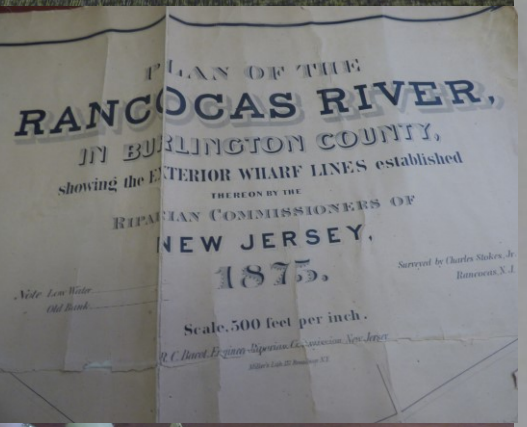
Marsh Environment and Eco-System

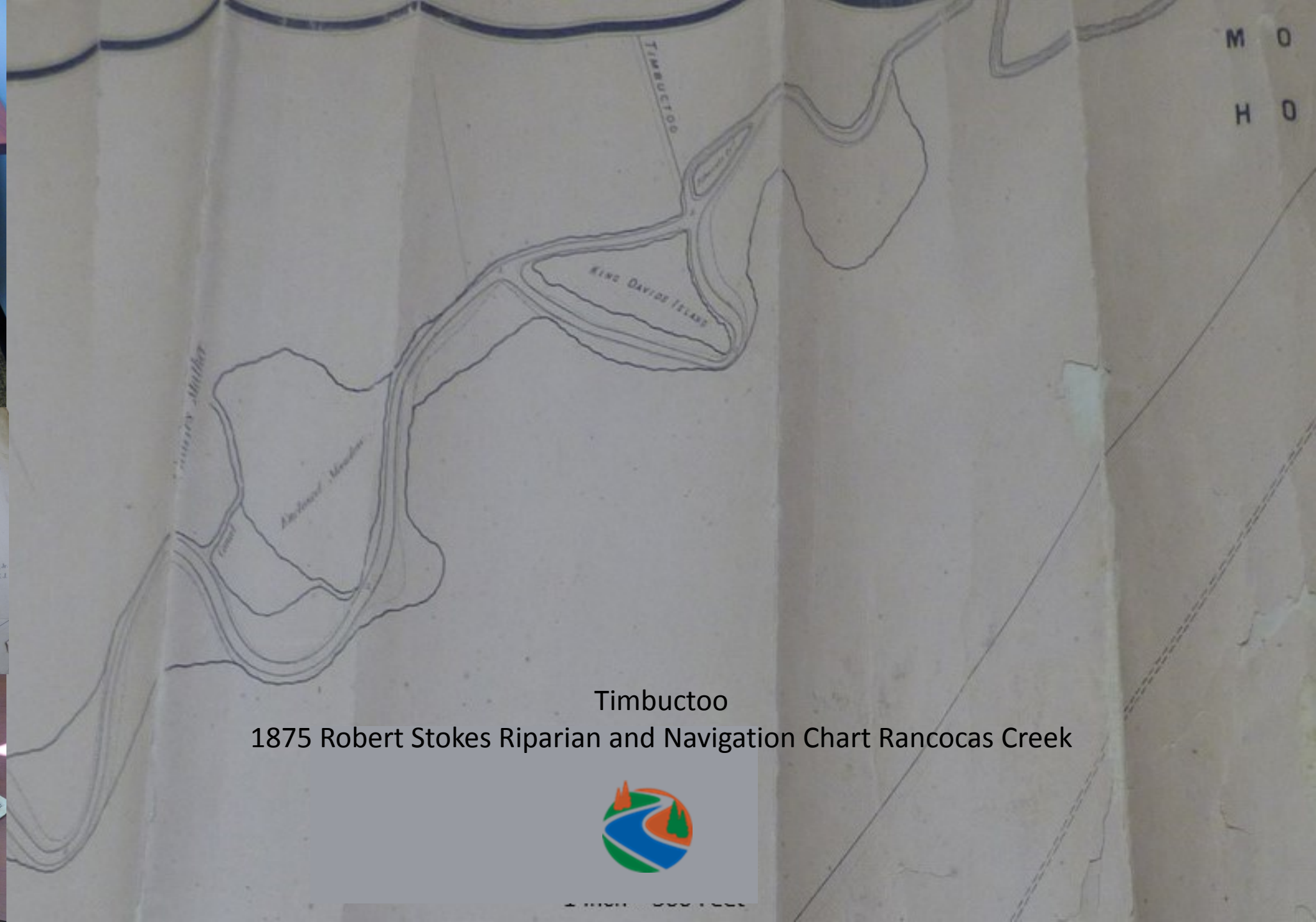
Legacy Resource

Upon a cool misty creek shore bank, a hand reaches out , across a void, unsteady steps ashore from yon creaky oared jolly boat , from a furled in shallop, a quiet voice echoes, here you are safe, here we are friends.



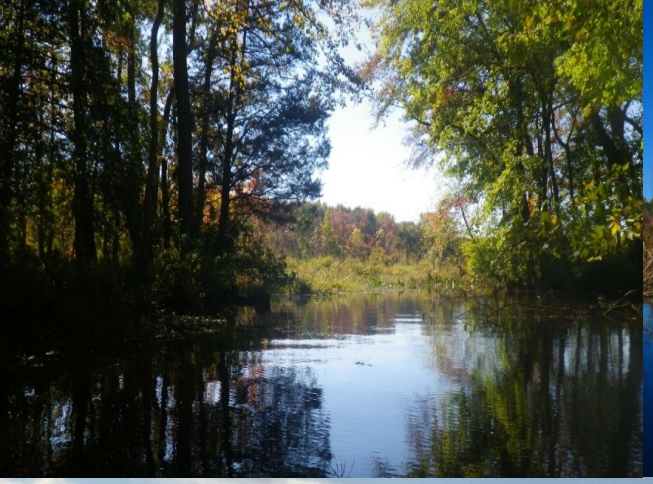
Timbuctoo Heritage Area Way Point
N Branch Rancocas Creek Water Trail





Timbuctoo
1875 Robert Stokes Riparian and Navigation Chart Rancocas Creek

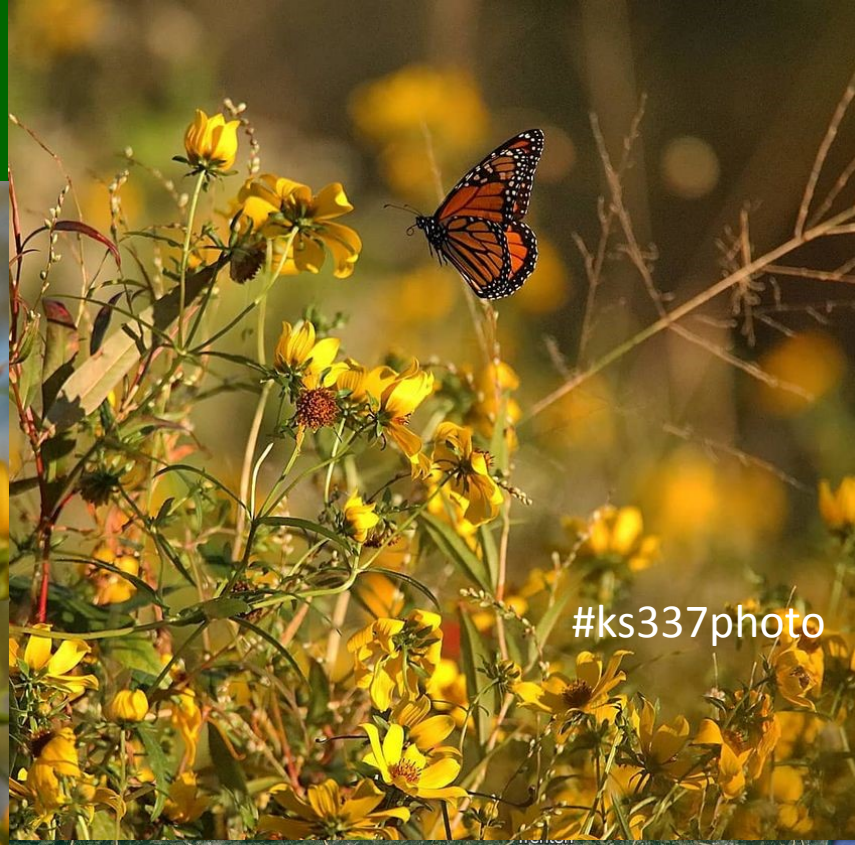
North Branch Remains of Hainesport Sand Mine

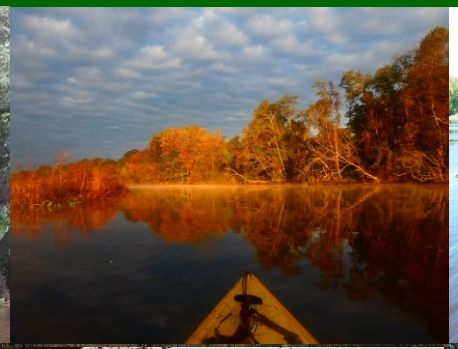


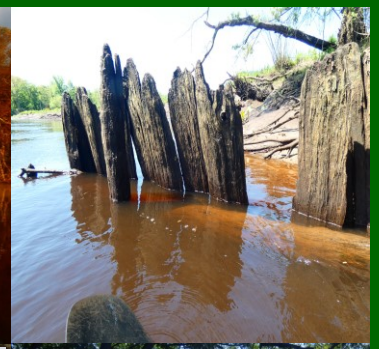
State of New Jersey Rancocas State Natural Area

Tidal ands Forested Wetlands N. Branch Rancocas Creek Water Trail

Rancocas Creek Migratory Pathway Monarch Butterfly
Tidewater Beggar tick Marsh and Natural Area







North Branch Melpine Landing

Melpine Landing has one of the last remains of a Rancocas Creek tidewater farm that lined the Rancocas Creek going back to date 1600's. These creek front landings allowed sail and steam vessel to load/discharge cargo, crops, sundry items. It is estimated by the late 1800's there were over 43 different creek front tidewater landings.

North Branch Rancocas Creek Water Trail Mile 19

RARE AND ENDANGERED PLANTS OF THE INTERTIDAL ZONES OF THE RANCOCAS CREEK

Smith's Club-rush, *Schoenopectus smithii* S2 (imperiled because of rarity; 6 to 20 occurrences).

Awl-leaf Arrowhead, *Sagittaria subulata* S3 (rare in the state, with 21 to 50 occurrences).

Parker's Pipewort, Eriocaulon parkeri S2 (imperiled because of rarity; 6 to 20 occurrences).

Shore Quillwort, *Isoetes riparia* S3 (rare in the state, with 21 to 50 occurrences).

American Waterwort, *Elatine americana* S2 (imperiled because of rarity; 6 to 20 occurrences).

Mississippi Arrowhead, *Sagittaria calycina* S2 (imperiled because of rarity; 6 to 20 occurrences).

REFERENCES:

Ferren, Wayne R., and Alfred E. Schuyler. 1980. Intertidal Vascular Plants of River Systems near Philadelphia. Proceedings of the Academy of Natural Sciences of Philadelphia, Vol. 132.

NJ Department of Environmental Protection. List of Endangered Plant Species and Species of Concern, May 2016.

For explanation of the State ranks (S2,S3) see above NJDEP publication.

1875 Charles Stokes Rancocas Creek Riparian Chart

Melpine Landing

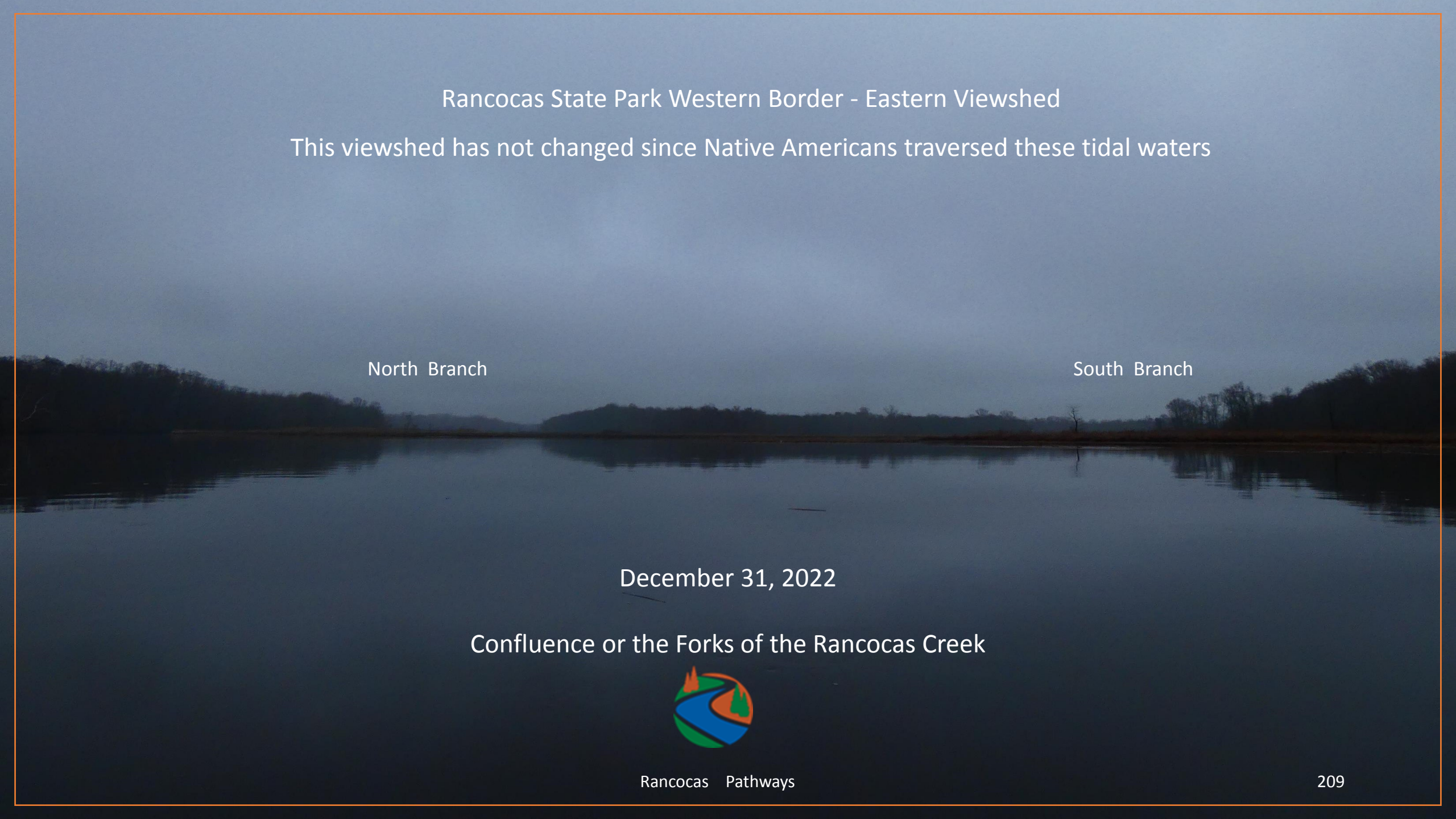
Westampton

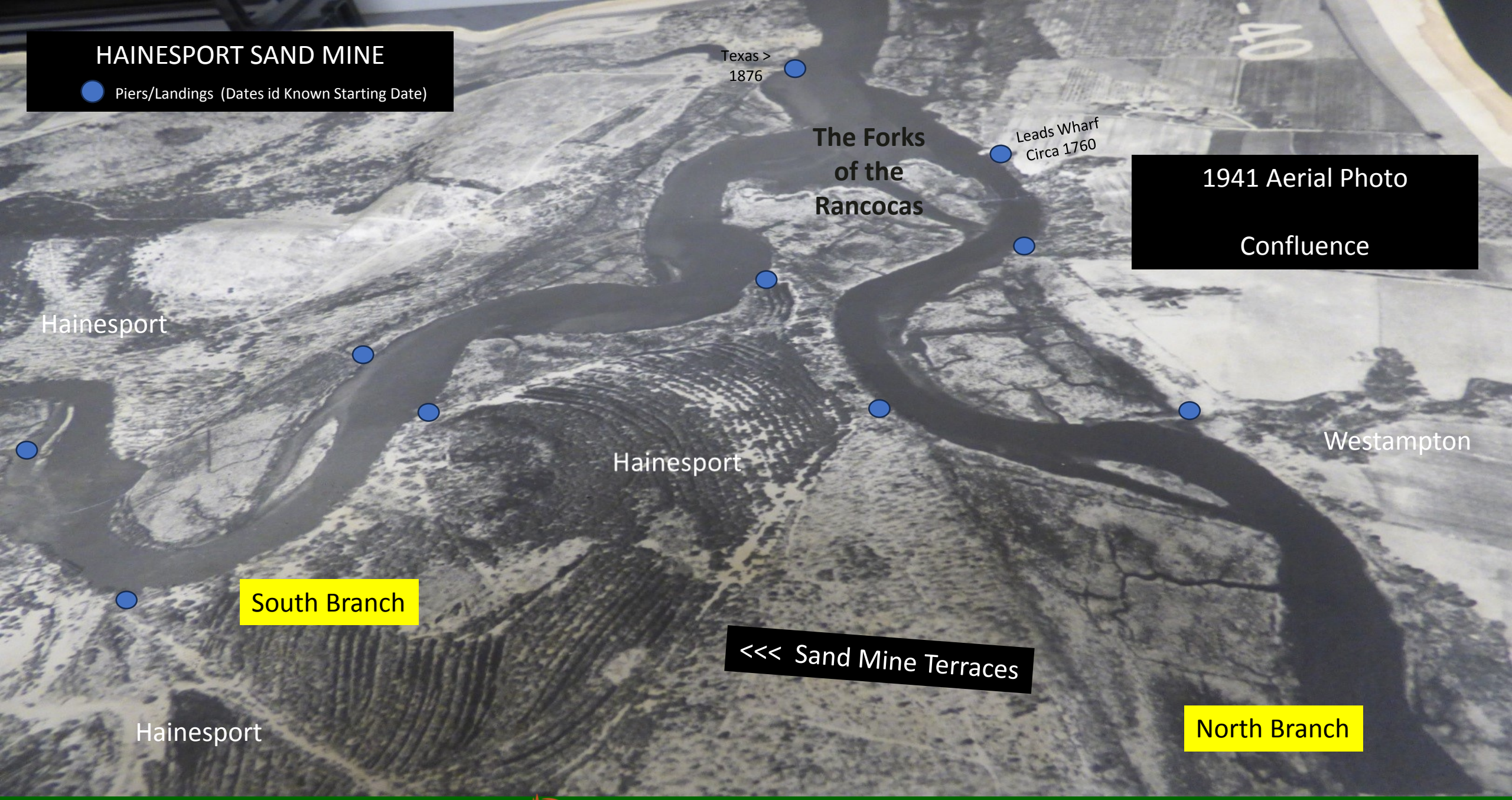
Leed's Wharf

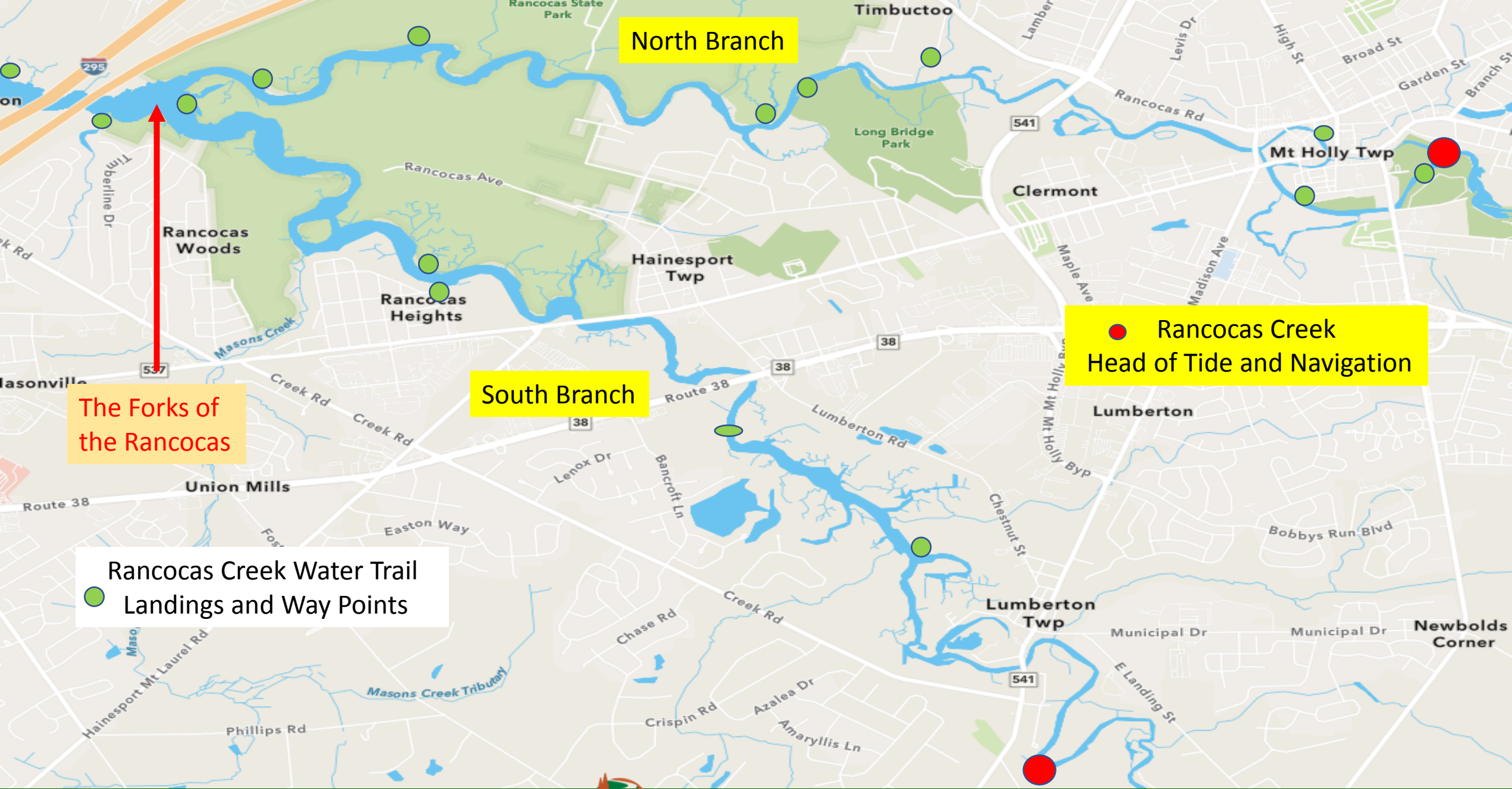
Hainesport

Mount Laurel

Hainesport Public Launch


Rancocas State Park Western Border - Eastern Viewshed
This viewshed has not changed since Native Americans traversed these tidal waters
North Branch
South Branch
December 31, 2022
Confluence or the Forks of the Rancocas Creek


HAINESPORT SAND MINE
Piers/Landings (Dates id Known Starting Date)
Texas > 1876
The Forks of the Rancocas
Leads Wharf Circa 1760
1941 Aerial Photo
Confluence
Hainesport
Hainesport
Westampton
South Branch
<<< Sand Mine Terraces
Hainesport
North Branch


North Branch
South Branch
The Forks of the Rancocas
Rancocas Creek
Head of Tide and Navigation
Rancocas Creek Water Trail
Landings and Way Points
Rancocas State Park
Timbuctoo
Long Bridge Park
Rancocas Ave
Rancocas Woods
Rancocas Heights
Hainesport Twp
Clermont
Mt Holly Twp
Lumberton
Lumberton Twp
Union Mills
Masons Creek
Masons Creek Tributary
Route 38
Creek Rd
Lumberton Rd
Rancocas Rd
Mt Holly Byp
Municipal Dr
Bobbys Run Blvd
Newbolds Corner
Hainesport Mt Laurel Rd
Phillips Rd
Chase Rd
Crispin Rd
Azalea Dr
Amaryllis Ln
Easton Way
Lenox Dr
Bancroft Ln
Chestnut St
E Landing St
Maple Ave
Madison Ave
Levis Dr
High St
Broad St
Garden St
Timberline Dr
295
537
38
541

From the Forks of the Rancocas Heading Up the South Branch Rancocas Creek Water Trail into Hainesport

New Jersey’s Rancocas State Park

Township of Hainesport

100 YEARS

1924 - 2024

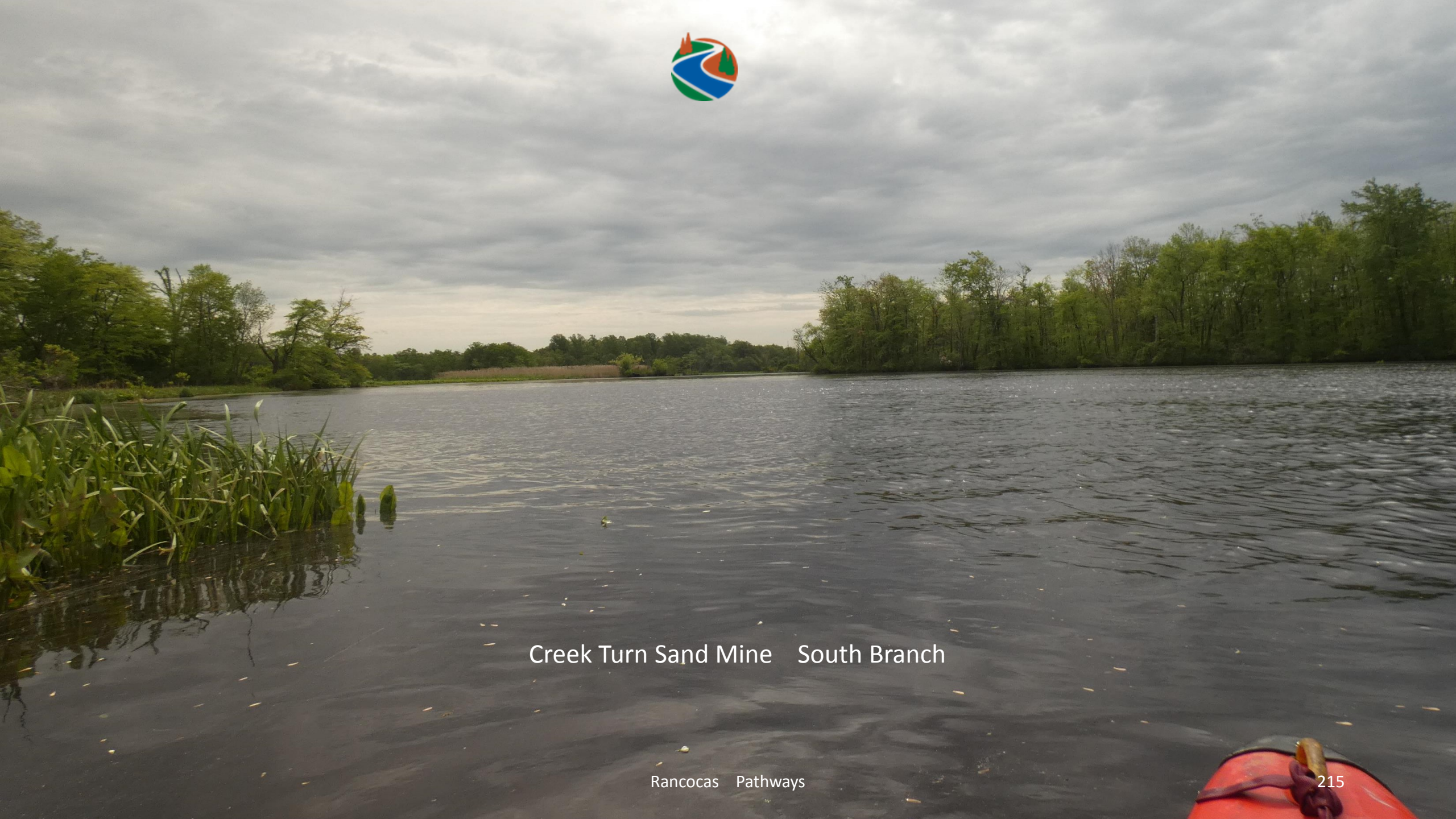
Artwork by Hainesport resident Frank Vellucci

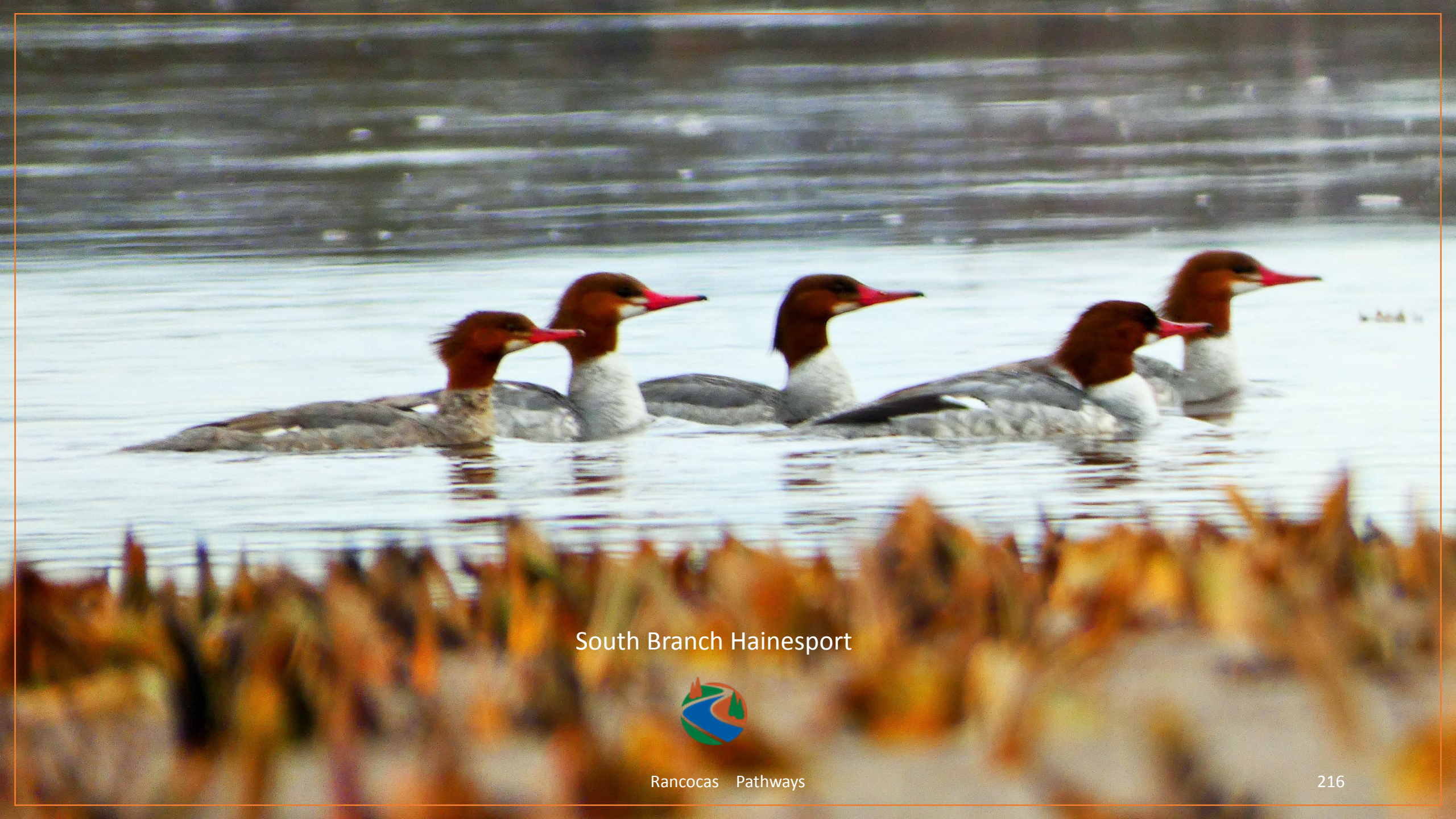
March 1909 >>>

South Branch Rancocas Creek

Hainesport to Lumberton

The vicinity of Hainesport is probably the greatest sand shipping center on the Rancocas. Here, farms that were abandoned for agricultural purposes are daily turning earth to gold and amassing fortunes for their owners. It is not unusual for these mines to ship twenty barges, each containing 600 tons, a day. At this point more pretentious and labor-saving methods are in use. Huge steam shovels, reminding one of those used on the Panama canal, are continually eating into and down the sand banks until the water line is reached, and which compels them to stop. The ground all around is scattered with the roots of trees, reminding one of the huge spiders, and on the edge of the mine is a growth of small pines and scrub oak, which gives the scene a picturesque appearance


Creek Turn Sand Mine South Branch


South Branch Hainesport

March

1909

NEW JERSEY SANDS YIELDING FORTUNE

Soil Never Thought of Value Is Making Many Men Rich.

MOLDING AND FILTERING

Shipped to Large Factories or City Water Plants and Gets a Price.

Moorestown, N. J., March 19.—"Yes," said a prominent Moorestown capitalist, "instead of investing in gold mines I put my money right here in Jersey, and I am mighty glad I did, judging by the unhappy experience of some of my friends." And this is the opinion of a goodly number of shrewd investors who own stock in the various sand mining companies operating around this section of Burlington county.

MEMORANDA.

HAINESPORT is a point on the South Rancocas Creek, at the head of steamboat navigation, two miles west and in sight of Mount Holly, and fifteen miles from Philadelphia. It is on the line of the Camden and Mount Holly Turnpike, and also on the Camden and Burlington County Railroad—recently opened—and now running two passenger trains daily, each way. Time, by railroad, forty minutes, from the upper ferry, foot of Market street, Philadelphia. More frequent trains will be run after a time, similar to the Germantown Railroad.

Philadelphia greatly needs a *first-class* FAMILY HOTEL *within convenient reach of the city*, for the accommodation of business men and their families, during the summer months, and, in many cases, all the year round. It is now proposed to supply that want.

The point selected is high ground, in a grove of spruce pines, overlooking the Rancocas Creek, and a highly cultivated and beautiful region of country, with pure air and good water, fishing and sailing on the Rancocas, and turnpikes and other roads furnishing delightful drives in every direction. The steamer *Barclay* plies daily, each way, between this point and Philadelphia.

Gentlemen who prefer to drive in and out will have a good, smooth turnpike, on which to try the mettle of blooded horses, with the sun on their back in the morning, and the same on their return in the evening. Good stabling will be provided, on a liberal scale.

Sand Mining

Defrain Sand Mines are found along Rancocas Creek Mile 24.3. Remains of the 1890's barges, tugs and scows surface at a low tide.

Sand was the extractive maritime commerce of the Rancocas Creek.

Mount Holly, N Branch; Hainesport, Lumberton South Branch;
Defrain, Mt. Laurel, Willingboro, Moorestown, Delran, Riverside on the Main Stem

Sand barged to Delaware River Port of Philadelphia/Camden piers and landings.

Rancocas Creek Tethered Barge Reference: Tracy Muller Photo

MARSHAL'S SALE.—By virtue of a Writ of Sale by the Honorable John K. Kane, Judge of the District Court of the United States, in and for the Eastern District of Pennsylvania, in admiralty, to me directed, will be sold at Public Sale, to the highest and best bidder FOR CASH, at the First Wharf below Market street, on the River Delaware, on WEDNESDAY, October the 25th, 1854, at 12½ o'clock, P. M., the Iron Steamboat BARCLAY, her Tackle, Apparel and Furniture, as she now lies at said wharf.

The Steamboat Barclay is one hundred and twenty feet long, and twenty-eight feet in breadth. Was built by Reannie, Neafie & Co.; has two high pressure Engines; was thoroughly rebuilt and refurnished this Summer, and is in first-rate running order.

F. M. WYNKOOP, U. S. Marshal,
E. Dist. of Pennsylvania.

MARSHAL'S OFFICE,
October 16, 1854.

FOR SALE.

FOR SALE, TO CLOSE A concern, the steamboat BARCLAY, as she now lies, at the wharf at Hainesport, N. J., with all her tackle and appurtenances.

Iron hull, 124 8-10 feet long; 15 feet breadth of beam; depth of hold, 6 2-10 feet; width of deck, 24 feet; measurement, 166 84-100 tons, with two iron bulkheads; 2 metallic life-boats, life preservers, anchor, boilers, &c., &c.; trimming box under deck, 2 high pressure engines, 17 inches diameter of cylinder, and 3 feet stroke; 1 fire and 2 feed pumps. Commodious passenger saloon, fitted up, and draws about 2 feet water light; has been kept in good repair and painting, and can be examined on application to B. HAINES, Agent in Charge, at Hainesport, N. J.

The steamboat "Barclay," which had previously run up Rancocas Creek, was bought, but later a new steamboat named the "Pohatcong" was built. When the Tuckerton Railroad purchased locomotives in 1871 they bought them from Burnham, Parry, Williams & Company (Baldwin Locomotive Works), and immediately thereafter Charles T. Parry's name appeared as a member of the Tuckerton Railroad Board of Directors. Mr. Parry subsequently became greatly interested in Beach Haven.

April 20, 1848: Notice

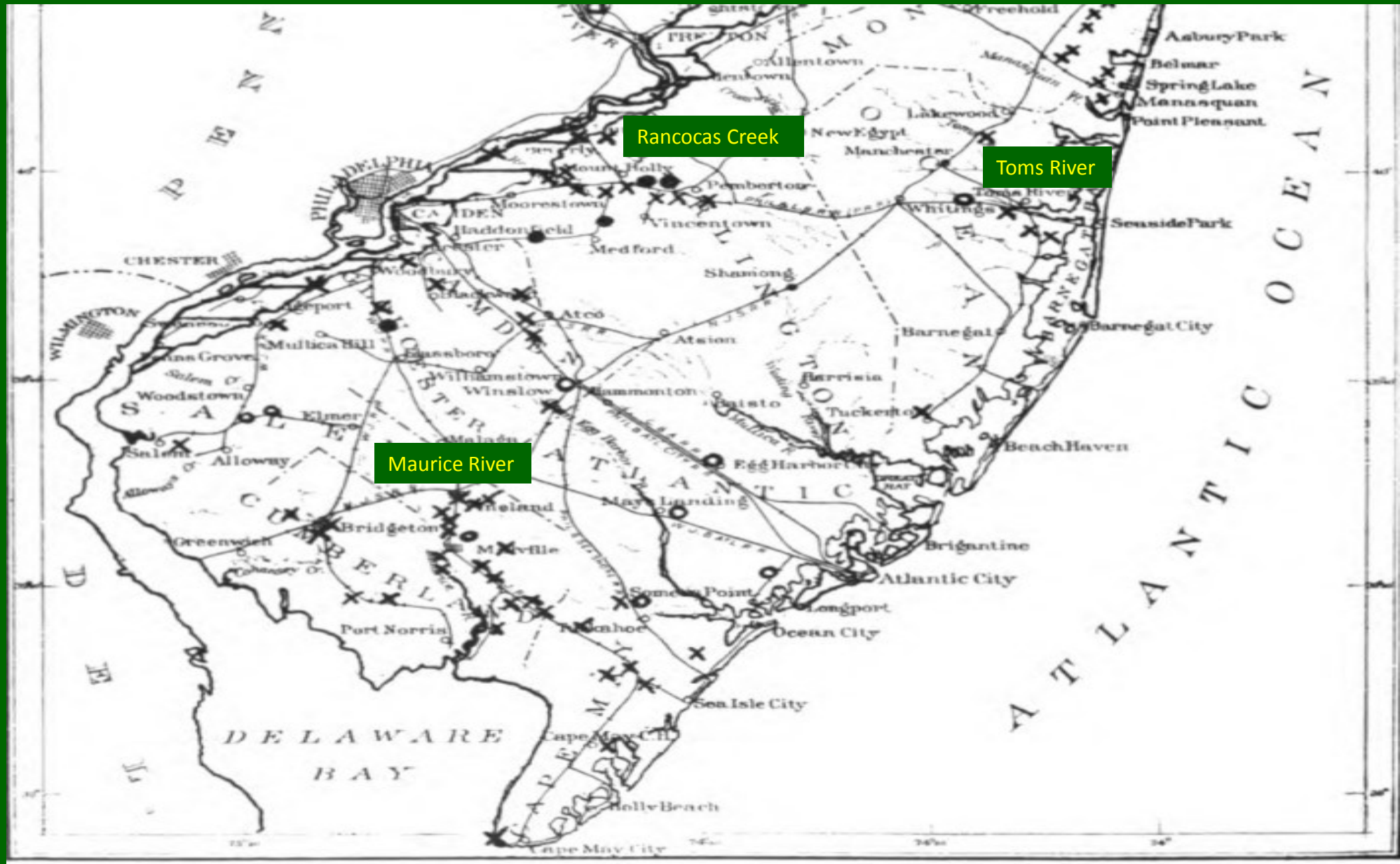
Steamboat Barclay

The "Barclay," Captain Peak, commenced running her regular trips on the 23d day of March, and will continue during the season--leaving Lumberton at 6 o'clock and New Long Bridge at half past 6 A.M. Returning--leaves Arch Street wharf at 2 o'clock P. M. Passengers and freight taken at the usual rates. A stage will leave the **hotel of John Sailer**, every morning at 6 o'clock, to convey passenger to and from the boat.

NJ Pine Barrens

Sand and Molding Sand Mines

Mote Locations Sit Along Pine Barrens Waterways



Map Showing the Location of the Mineral Industries in New Jersey.

X – Sand and Molding Sand Mines 1922

Rock products. v.16 no.2 May 22 1915.

SAND DREDGE "INDEPENDENCE" OF THE HAINESPORT MINING & TRANSPOR
..TION CO.

Sand Mines

Hainesport Mining and Transportation Company Tug “Maurice”

OCTOBER, NINETEEN HUNDRED AND TWENTY-THREE

Service

Means
Stabilized Costs

MACHINERY for dredging, grading, sizing, and washing sand and gravel, designed by Van Sciver engineers and constructed under their guidance, has reduced production costs to a minimum.

The location of all plants at most advantageous points on both the Delaware River and main lines of the railroads means the shortest routing of shipments to the advantage of the consumer.

Storage facilities of large capacities at all centers of production as well as at distribution yards eliminates possible losses that might be caused by delay. The results of decreased production during the winter months is also overcome by ground and well storage.

The construction industry is reaping the benefits through stabilized prices for which this company, alone, is responsible.

Concrete Sand Dredge "Philadelphia"

Concrete Sand Plant Van Sciver, Pa.

CORPORATION

Associate Companies:

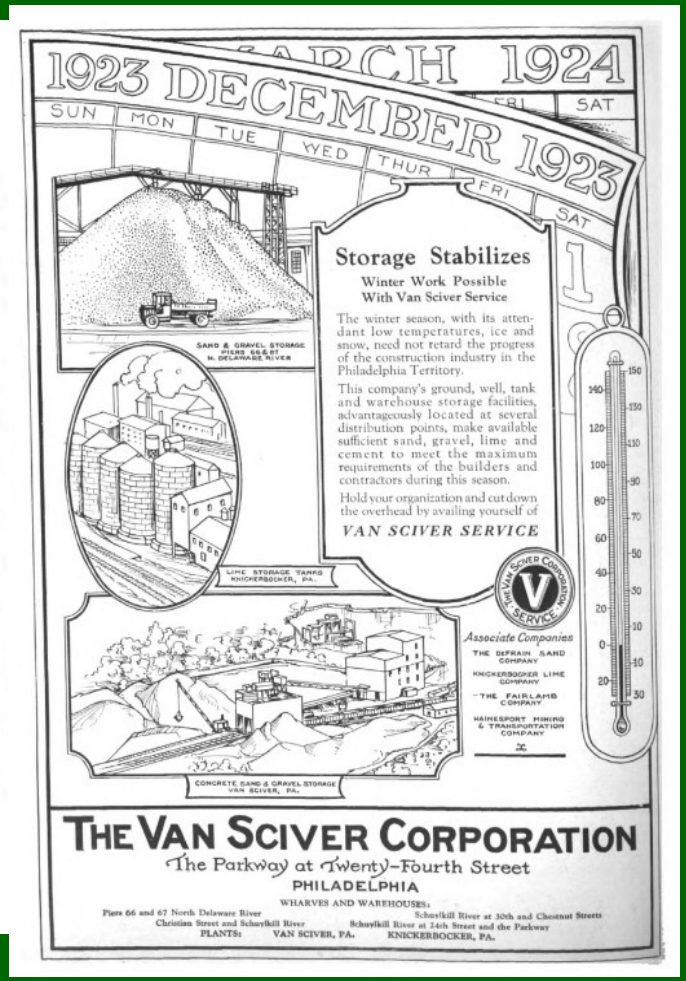
The DeFrain Sand Company - The Fairlamb Company
Hainesport Mining & Transportation Co.
Knickerbocker Lime Company

ENGINEERS AND ENGINEERING 265

The Tug “MAURICE.”

And now, George D. Van Sciver, President of the Hainesport Mining and Transportation Company, owners of the tug “Maurice,” intervening for the interest of said owners, appears before the Honorable Court and makes claim to the said tug, her tackle, apparel and furniture, as the same are set forth in the Libel filed in this case, at the instance of James Stricker, owner of the barge “Peter A. Rodgers,” and the said George D. Van Sciver, avers that he is President of the said Company owning the tug at the time of the issuance of the attachment thereof, and that the said Company above named is the true and *bona fide* owner of the said tug, and that no other person is the owner thereof; and that he, the said George D. Van Sciver, is the true and lawful bailee thereof for the said owner; wherefore he prays to be admitted to defend accordingly.

GEO. D. VAN SCIVER.



MARCH 1924

1923 DECEMBER 1923

SUN MON TUE WED THUR FRI SAT

Storage Stabilizes

Winter Work Possible
With Van Sciver Service

The winter season, with its attendant low temperatures, ice and snow, need not retard the progress of the construction industry in the Philadelphia Territory.

This company's ground, well, tank and warehouse storage facilities, advantageously located at several distribution points, make available sufficient sand, gravel, lime and cement to meet the maximum requirements of the builders and contractors during this season.

Hold your organization and cut down the overhead by availing yourself of

VAN SCIVER SERVICE

SAND & GRAVEL STORAGE PIERS 66 & 67 N. DELAWARE RIVER

LIME STORAGE TANKS KNICKERBOCKER, PA.

CONCRETE SAND & GRAVEL STORAGE VAN SCIVER, PA.

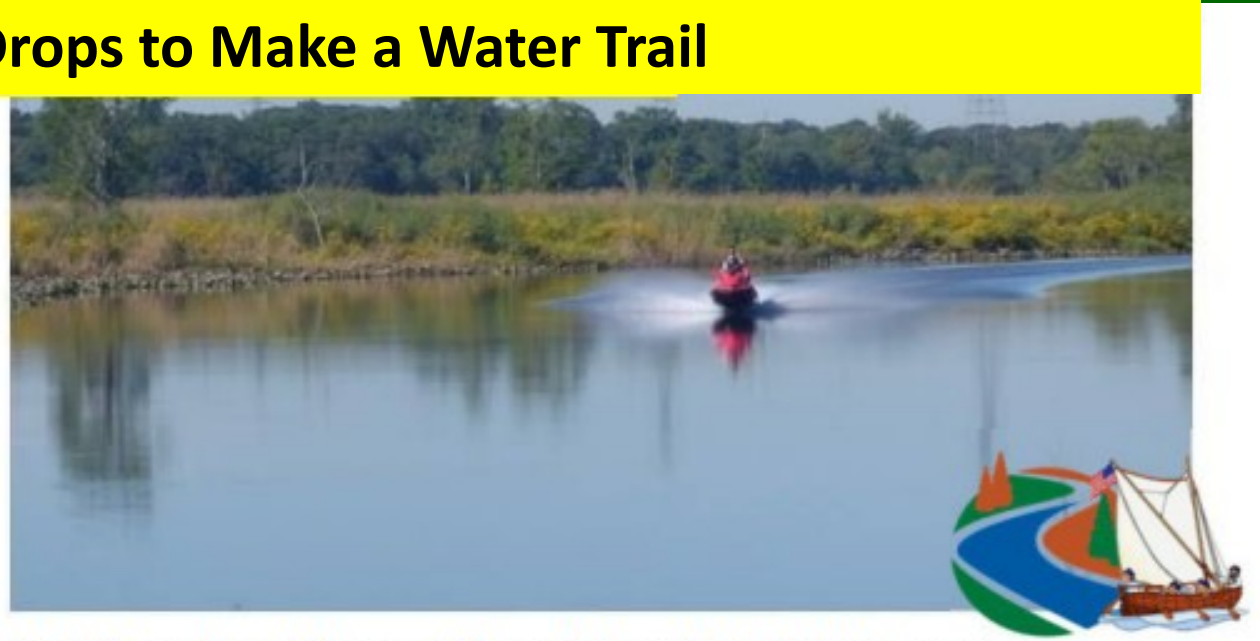
Associate Companies
THE DEFRAIN SAND COMPANY
KNICKERBOCKER LIME COMPANY
THE FAIRLAMB COMPANY
HAINESPORT MINING & TRANSPORTATION COMPANY

THE VAN SCIVER CORPORATION
The Parkway at Twenty-Fourth Street
PHILADELPHIA

WHARVES AND WAREHOUSES:
Piers 66 and 67 North Delaware River
Christian Street and Schuylkill River
Schuylkill River at 30th and Chestnut Streets
Schuylkill River at 24th Street and the Parkway

PLANTS: VAN SCIVER, PA. KNICKERBOCKER, PA.

Multi-Use - It Takes Many Drops to Make a Water Trail



Listen - Share the Tide - Look - Kayaking Alert - You Can See Them, They May Not Not See You.

Stay Alert When Yaking on the Rancocas Creek Multi-Use Water Trail

Rancocas Creek Dredges

STONE AND SAND DREDGE "NEPTUNE" OF THE HAINESPORT MINING & TRANSPORTATION CO., RECENTLY DESTROYED BY FIRE.

SAND DREDGE "INDEPENDENCE" OF THE HAINESPORT MINING & TRANSPORTATION CO.

Van Sciver Interests Keep Pace With Requirements of the Construction Industry

From a Small Beginning, Mr. Geo. D. Van Sciver Developed an Organization That Has Materially Benefited the Builders and Contractors in Philadelphia

In the latter part of the year 1899, Mr. George D. Van Sciver discovered a large and valuable deposit of sand on the old Van Sciver Homestead at Hainesport, N. J. Mr. Van Sciver, having some knowledge of conditions then existing in the Building Material business, decided to make a complete investigation with the idea of being able to eliminate some of the shortcomings of the industry. He believed that the same principles which he had used successfully in another line could be applied to the merchandising of sand and allied materials. He knew that sand which was of uniform grade, and of the highest quality, would be in great demand.

Prior to Mr. Van Sciver's entry into the Building Material business, and the development of his idea as to the quality and uniformity, little attention had been paid to building sands, particularly those used in cement and concrete work. It required a great deal of hard work to convince the consuming trade of the fact that Jersey sands taken from good deposits and properly prepared were far superior to other sands then in general use.

This first plant at Hainesport, N. J., was started with a capacity of about three hundred tons of sand per day. The equipment consisted of a small gasoline driven sand loader, designed by Mr. Van Sciver, a small industrial railroad, one tug and two 400-ton barges. The increasing demand for this new product, Jersey sand, made necessary the establishment of a new plant at Bridgeboro, N. J., where one of the most up-to-date plants for washing and preparing Jersey sand was built. This was completed about 1914 and had a capacity of 4,000 yards a day.

Another form of sand was used in Philadelphia, principally for lime mortars, under the trade name of "Bar Sand." In 1904 the dredge "Independence," with an approximate capacity of 1,200 yards per day, began dredging this kind of sand.

Having been successful in rendering a real service to the building industry, Mr. Van Sciver decided that the engineers and contractors in Philadelphia and vicinity would use gravel of the same grade as used by the municipal departments in other large cities, provided it was properly prepared. In 1910 the dredge "Neptune" was installed, and operated until destroyed by fire, and in 1914 the dredge "Philadelphia" was commissioned, having a capacity of 5,000 tons a day and facilities for crushing gravel as well as sizing and washing sand. In the early part of 1918 a new dredge was started known as "Liberty" and is used for dredging and preparing gravel, with a capacity equal to that of the dredge "Philadelphia."

In 1906 it became apparent that some arrangements would have to be made whereby demands for distribution to individual jobs could be met. The DeFrain Sand Company was acquired. This plant was immediately improved and equipped along Van Sciver lines. The business growth here was so great that demands were made for better unloading and storage facilities. In 1908 piers No. 65 and No. 66 North were acquired and the present plant at Beach and Berks streets on the Delaware River developed. The most modern equipment for handling building materials was installed. Ample storage space was provided so that sand and gravel can be stored in the open season for use during the winter months. Gravel, as it is dredged from the river bed, contains a quantity of large stones mixed with the smaller material. This large gravel is passed through two up-to-date crushing plants and made into smaller sizes at the rate of 2,000 tons a day.

This plant also has facilities for loading 100 open top cars per day by gravity from overhead bins.

Early in 1915 the Van Sciver interests acquired the Knickerbocker Lime Company, with lime plants at Malvern, Pa., and a retail yard at Twenty-fourth and Callowhill streets. The plant at Malvern, Pa., is one of the largest and finest lime producing plants east of the Ohio River, and represents an expenditure of thousands of dollars for machinery and equipment. At this plant the first satisfactory finishing hydrated lime was made in the East.

In 1921 the old P. H. Fairlamb Company, with wharves at Thirtieth and Chestnut streets, was acquired. Following the Van Sciver custom, this wharf was immediately modernized and brought to the same standard of efficiency as the other Van Sciver plants.

During the depression in the building industry in 1921 there was built a new plant at Van Sciver, Pa., on the main line of the New York division of the Pennsylvania Railroad near Morrisville. This plant, erected at a logical point on an 1,800-acre track of sand and gravel land, represents the last word in sand and gravel production. Costing nearly a million dollars, it has a capacity of 6,000 tons a day, and storage facilities for 300,000 tons of material.

The Van Sciver Corporation, formed in 1923 as a selling and distributing organization, has now taken in hand all of the details incidental to the widely known features of the business of the above named producing companies. With spacious offices located on the Parkway at Twenty-fourth street, the Van Sciver Corporation is in still better position to serve its customers.

11 NOVEMBER, NINETEEN HUNDRED AND TWENTY-THREE

Commerce & Sand Markets

600,000 ton sand annually
South Branch
(early 1900's)

268,000 ton sand for
Philadelphia Filtration Works
North Branch (early 1900's)

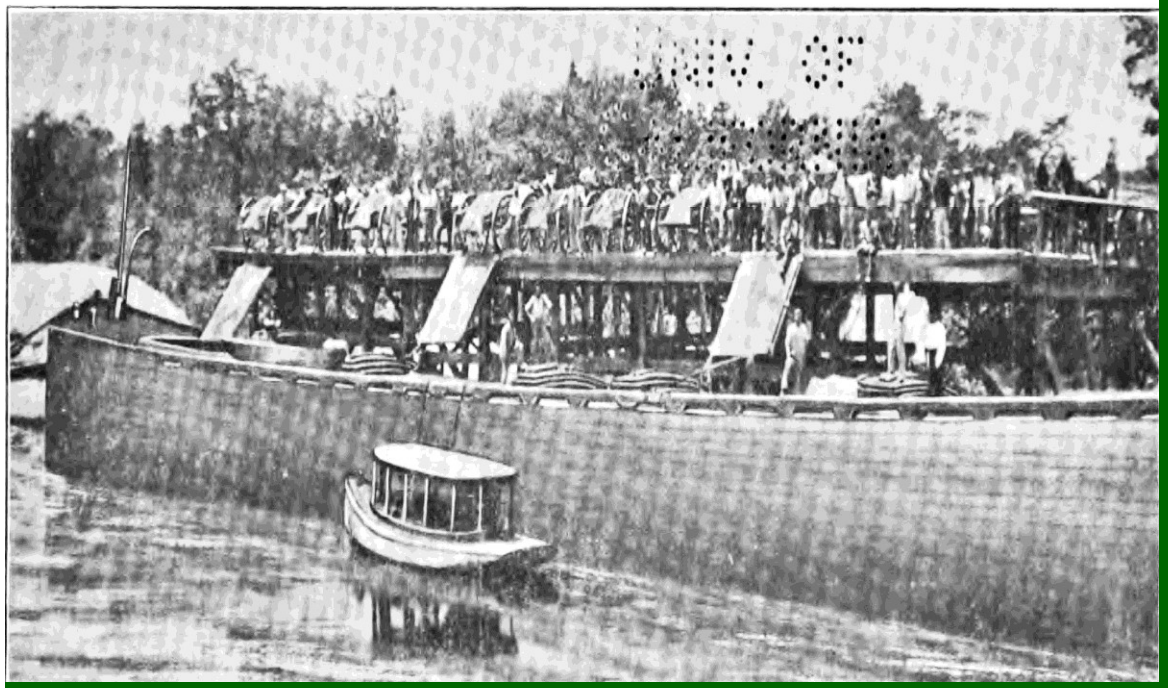
2,488 - 40,000 lbs
rail car loads of Rancocas Creek
Sand (p.a. 1922-1924)

Ref: 1910 & 1922 - Report to Congress

Barges 300-350 Tons

ALBANY SAND
NORTH RIVER SAND
FIRE SAND
JERSEY MOLDING SAND

LUMBERTON SAND
MILLVILLE SILICA SAND
MILLVILLE GRAVEL
SAND BLAST SAND



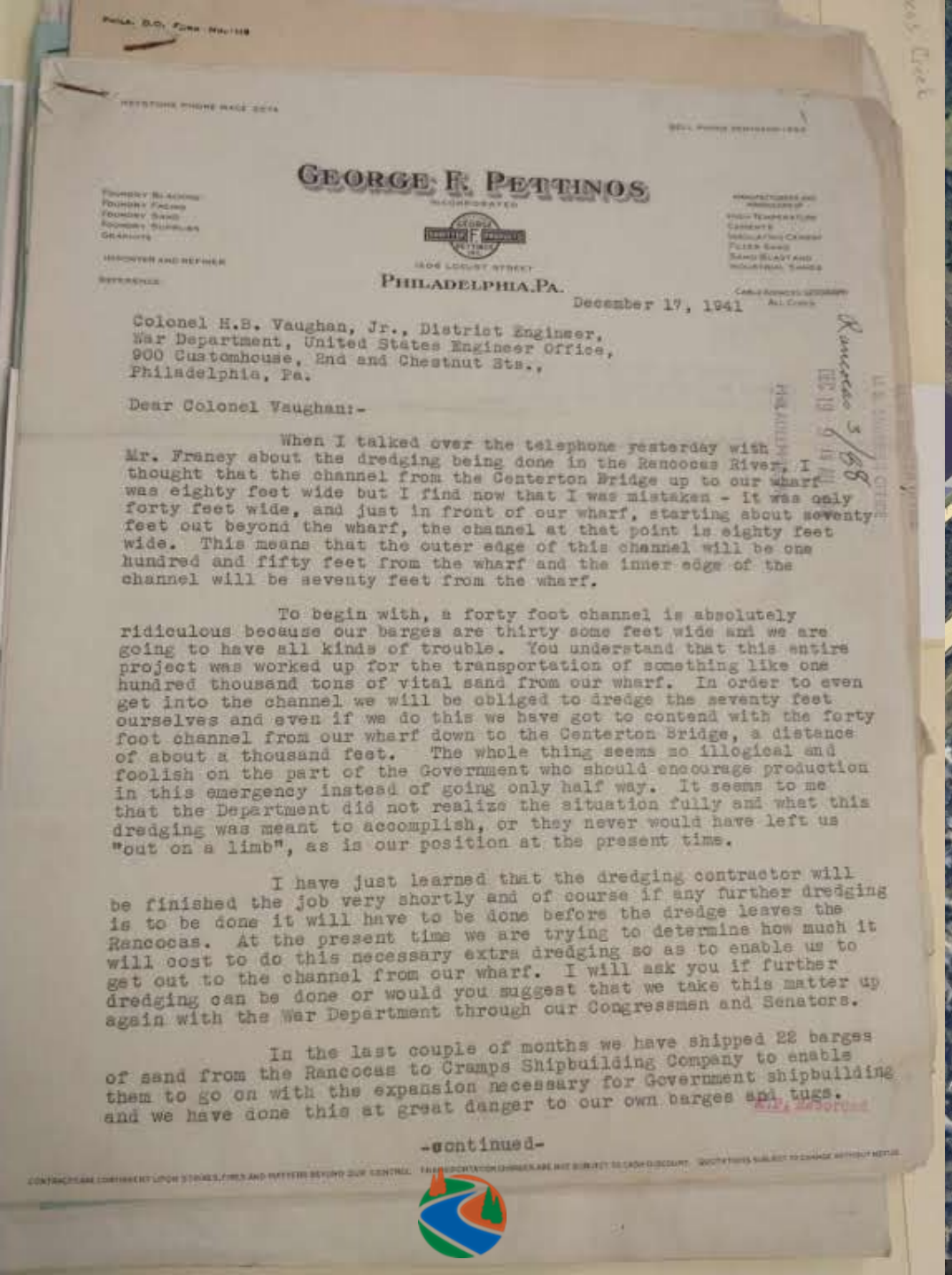
Pettinos Brothers

J. B. Van Sciver, Sr. born in Hainesport, May 14, 1861, with his brother George, developed the Hainesport Mining & Transportation Company, and the De Frain Sand Company.

These companies eventually consolidated into the Van Sciver Corporation. Mr. Van Sciver was also director of the Knickerbocker Lime Company.

By the 1920's these businesses were the premier manufacturers and distributors of building materials in the southern New Jersey/eastern Pennsylvania area.

During World War I, Van Sciver Corporation supplied sand, gravel and concrete to build the Emergency Fleet Corporation's shipyard on Hog Island in the Delaware River. The Van Sciver Corporation was sold to the Warner Company in 1929.



GEORGE F. PETTINOS

INCORPORATED

1606 LOCUST STREET

PHILADELPHIA, PA.

December 17, 1941

Colonel H.B. Vaughan, Jr., District Engineer,
War Department, United States Engineer Office,
900 Customhouse, 2nd and Chestnut Sts.,
Philadelphia, Pa.

Dear Colonel Vaughan:-

When I talked over the telephone yesterday with Mr. Franey about the dredging being done in the Rancocas River, I thought that the channel from the Centerton Bridge up to our wharf was eighty feet wide but I find now that I was mistaken - It was only forty feet wide, and just in front of our wharf, starting about seventy feet out beyond the wharf, the channel at that point is eighty feet wide. This means that the outer edge of this channel will be one hundred and fifty feet from the wharf and the inner edge of the channel will be seventy feet from the wharf.

To begin with, a forty foot channel is absolutely ridiculous because our barges are thirty some feet wide and we are going to have all kinds of trouble. You understand that this entire project was worked up for the transportation of something like one hundred thousand tons of vital sand from our wharf. In order to even get into the channel we will be obliged to dredge the seventy feet ourselves and even if we do this we have got to contend with the forty foot channel from our wharf down to the Centerton Bridge, a distance of about a thousand feet. The whole thing seems so illogical and foolish on the part of the Government who should encourage production in this emergency instead of going only half way. It seems to me that the Department did not realize the situation fully and what this dredging was meant to accomplish, or they never would have left us "out on a limb", as is our position at the present time.

I have just learned that the dredging contractor will be finished the job very shortly and of course if any further dredging is to be done it will have to be done before the dredge leaves the Rancocas. At the present time we are trying to determine how much it will cost to do this necessary extra dredging so as to enable us to get out to the channel from our wharf. I will ask you if further dredging can be done or would you suggest that we take this matter up again with the War Department through our Congressman and Senators.

In the last couple of months we have shipped 22 barges of sand from the Rancocas to Cramps Shipbuilding Company to enable them to go on with the expansion necessary for Government shipbuilding and we have done this at great danger to our own barges and tugs.

-continued-

R.S.P.

Westampton

R.S.P.

North Branch

Melpine Landing

Rancocas River

295

R.S.P.

Hainesport

NJ Tpke (Tollroad)

Texas

Rancocas State Park

R.S.P.

South Branch Rancocas Creek

South Branch

Centerton

R.S.P.

Spencer Park

Mt. Laurel

R.S.P.

South Branch Rancocas Creek

New Covenant Presbyterian Church

R.S.P.

Hainesport

INVESTIGATION AND SUSPENSION DOCKET No. 2397

SAND AND GRAVEL FROM NEW JERSEY TO NEW YORK AND PENNSYLVANIA POINTS

Submitted June 10, 1925. Decided July 16, 1925

Proposed increased rates on molding sand, in carloads, from Mount Holly, Hainesport, and Masonville, N. J., to Buffalo and Rochester, N. Y., and points taking the same rates, found not justified. Suspended schedules ordered canceled and proceeding discontinued.

James E. Gowen for respondents.

Frederick Stohlman, *Bertram P. Rambo*, and *Rambo, Rambo & Mair* for protestants.

REPORT OF THE COMMISSION

DIVISION 3, COMMISSIONERS HALL, CAMPBELL, AND WOODLOCK

BY DIVISION 3:

By schedules filed to become effective May 1 and 11, 1925, respondents proposed to increase rates on molding sand, in carloads, from Mount Holly, Hainesport, and Masonville, N. J., to Buffalo and Rochester, N. Y., and points taking the same rates. Upon protest of the J. W. Paxson Company and George F. Pettinos, sand dealers with pits at Mount Holly and Hainesport, operation of the schedules was suspended until August 29, 1925. Unless otherwise indicated, rates will be stated in amounts per net ton.

Molding sand is a heavy-loading low-grade commodity valued at $1.50 per ton. Prior to August 5, 1924, a carload rate of $3, applied from Mount Holly, Hainesport, and Masonville, local points on the Trenton division of the Pennsylvania of which Hainesport will be referred to as representative, to Buffalo and Rochester and points grouped therewith over either the Pennsylvania's single-line route or over two-line routes maintained in connection with the Delaware, Lackawanna & Western, Lehigh Valley, and other trunk-line carriers. The rate from Lumberton, Smithville, Ewansville, and Pemberton, N. J., points contiguous to Hainesport, of which Smithville will be taken as representative, was $3.40 and applied only over the routes specified. On that date the Pennsylvania increased its local rate from Hainesport to the Buffalo-Rochester group to $3.40, the rate in effect from Smithville, following complaint from sand

dealers located at the latter point that the lower rate from Hainesport placed them at a disadvantage in competing in the destination territory under consideration. In the suspended schedules respondents propose to increase the rate applicable from Hainesport to Buffalo and Rochester over the two-line routes to $3.40. They assert that this was not done at the time the Pennsylvania increased its local rate for the reason that they were then engaged in a general recheck of sand rates from New Jersey points.

The group from which the $3 rate applies extends, generally speaking, from New York, N. Y., to points almost as far south as Baltimore, Md., including points on the Pennsylvania's Trenton division west of Smithville. This group embraces Perth Amboy, N. J., which is served by various trunk-line carriers and South Amboy and other points in New Jersey on the Raritan River Railroad, hereinafter referred to as the northern New Jersey points, from which the same grade of sand is shipped as that from Hainesport and Smithville. The suspended schedules would remove Hainesport from this group and place it in the group from which the $3.40 rate applies. The latter group embraces points in New Jersey east and south of the former group, extending to Cape May, N. J. Respondents fear that if the rate from Smithville is reduced to $3, the Central Railroad of New Jersey and Reading Company will establish the same rate from Whitings, N. J., and points on their lines south thereof and a general reduction in rates on sand from all producing points in southern New Jersey will follow.

Protestants have substantially increased their shipments of sand to the Buffalo-Rochester group in recent years. During the years 1920 and 1921 one of the protestants shipped 1,582 carloads, less than 2 per cent of which moved to this destination territory. It shipped 2,488 carloads during the years 1922, 1923, and 1924, approximately 10 per cent of which moved to points in the Buffalo-Rochester group. Protestants urge that if the rate on this low-grade commodity from Hainesport is increased 40 cents per ton they will be unable to market their sand in this territory in competition with dealers located at the northern New Jersey points and at or near Albany, N. Y. They also instance local rates of $2.79 and $2.80 maintained by the Lehigh Valley from Perth Amboy to points in the Buffalo-Rochester group available to shippers of imported sand. It was stated that these rates would be increased to $3.

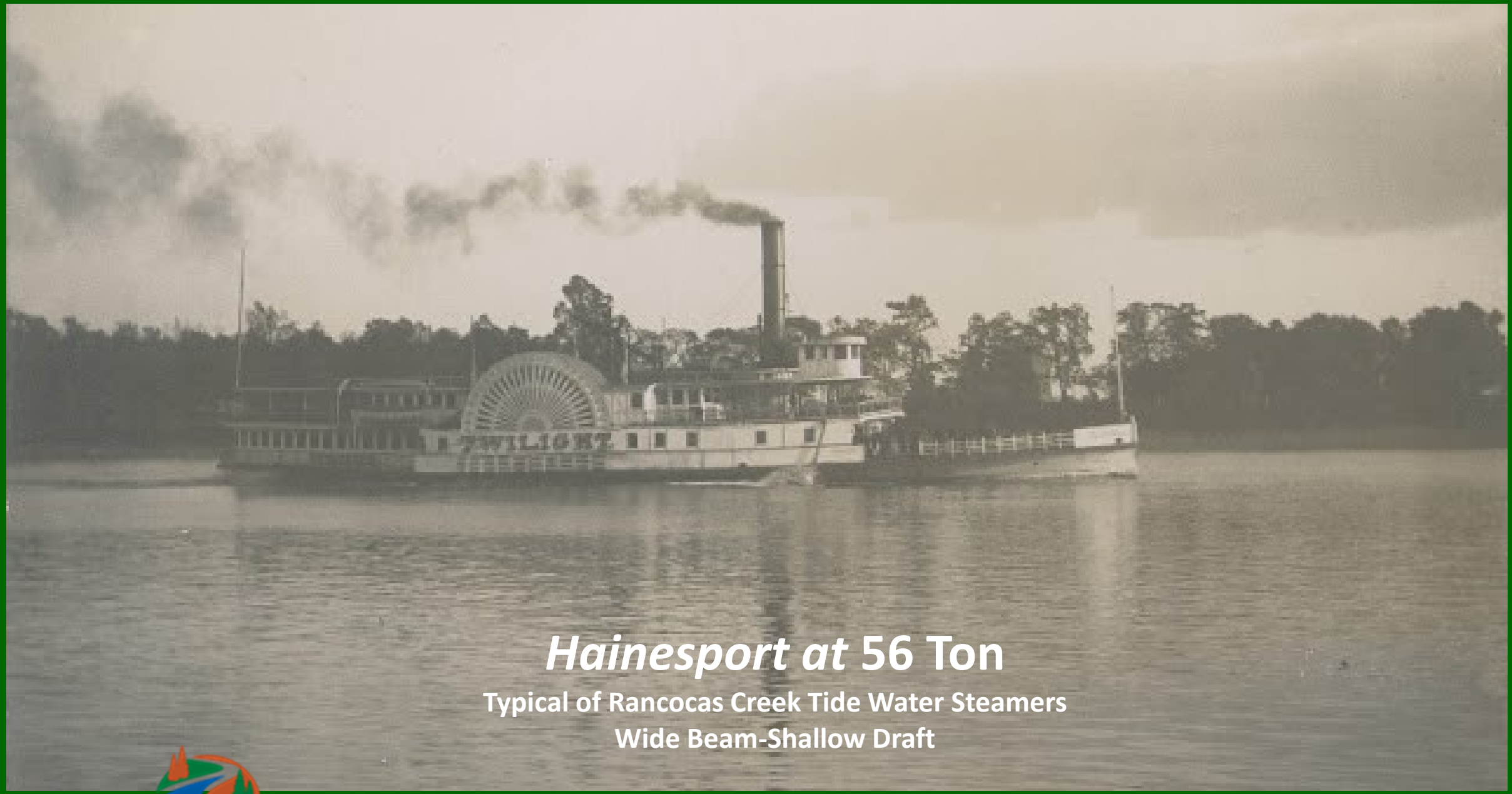
Protestants insist that the parity with respect to rates to the Buffalo-Rochester group which has existed between Hainesport and the northern New Jersey points for a considerable period should not be disturbed. The average short-line distance from Hainesport to Rochester and Buffalo is 398 miles, compared with a distance of 392

Stone Quarry Landing
Hainesport

Stone Quarry Landing
Mt. Laurel/Hainesport1874

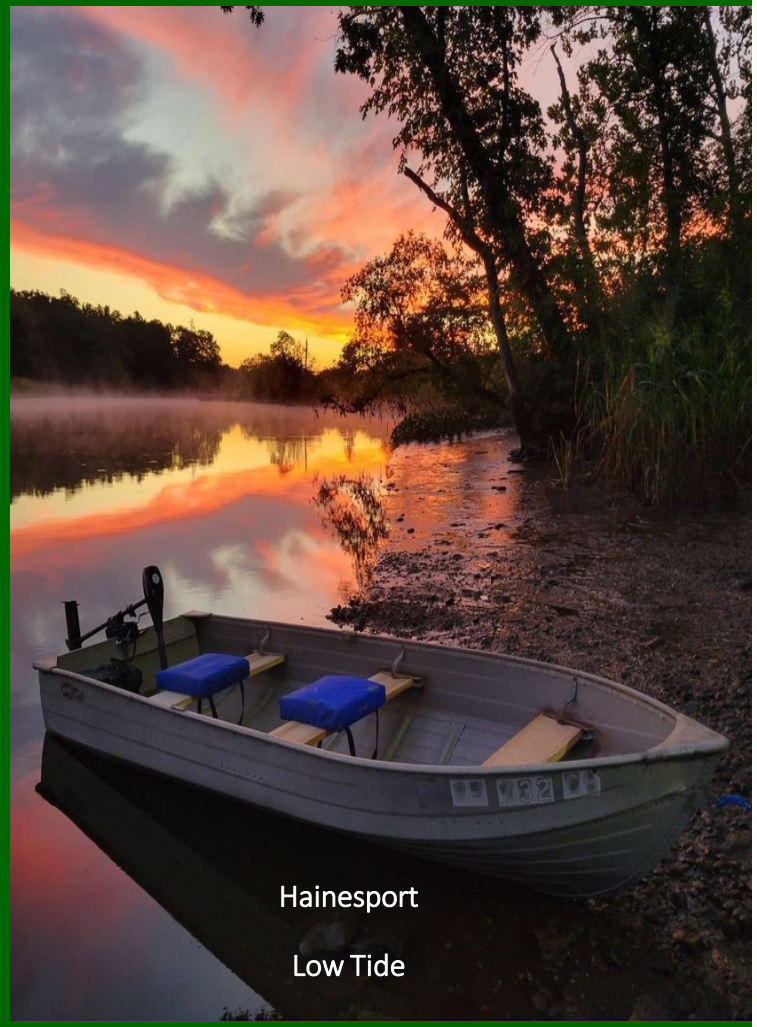
Rancocas Creek Tidal Landings - 1898 US Army Engineers

Cooks Landing - Engles Landing - Stone Quarry Landing- Haines Bank - Foundry Landing - “The Sluice” - Turning Basin - Sand - Hickney Shoal – Other (see Paul Schoop’s Rancocas Creek Landing List)



Hainesport at 56 Ton

Typical of Rancocas Creek Tide Water Steamers
Wide Beam-Shallow Draft



Hainesport

Low Tide

1886 A Red Lions Excursion

A fishing party saw and heard a sea lion in Hainesport creek, near Mount Holly, recently. It barked like a dog, and its head was long and narrow and covered with short silken hair. The lower jaw was covered by a long beard, and the neck was perfectly white. The body was long and tapering. It was evidently one of the eight sea lions that had escaped on July 23, from the pen in which they had been confined at Brighton Beach. It had made a long trip from Coney Island through the Atlantic Ocean to Cape May, from Cape May up Delaware bay to the river, thence to the Rancocas river, which branches off from the Delaware at a point opposite Holmesburg, and from that stream southward about twenty miles to Hainesport creek.

1875 Riparian Chart

Hainesport

House of Barclay Haines

Barclay Haines/Hainesport

Reference: 1919 Memorial to Dr. Conrad Perry

girl. She was the daughter of Barclay Haines, who, leaving Philadelphia when a young man, had settled in Burlington county with his bride and had become the founder of Hainesport, a picturesque village situated on the banks of the Rancocas creek two miles south of Mount Holly. Barclay Haines had been actively identified with transportation interests. He was the owner of a steamboat called the "Barclay" which plied between Philadelphia and Hainesport, once called Herring Hall, from which point passengers and freight were transported by wagon to Mount Holly and various inland points. Later, he became interested in railroad transportation and was one of the pioneers in having the railroad constructed about the close of the civil war, from Camden to Mount Holly and Pemberton. He was a director in the Tuckerton railroad and also in the Mount Holly and Medford railroad, besides being identified with several turnpike companies.

Hainesport had been settled originally by John Cook. The oldest house in the village, which stands in the rear of the Parry residence is more than a century old. In the first half of the 19th century it was known as Long Bridge, taking its name from the bridge which spans the Rancocas creek on the main highway between Mount Holly and Camden. It was also known for a time as Herring Hall, but about 1850, became known as Hainesport in honor of Barclay Haines, who by that time had acquired a considerable part of the land upon which the village was located. In 1867, the Camden and Burlington County branch of the Pennsylvania Railroad was finished between Camden and Mount Holly and a station was opened at Hainesport. The chief industry of the town is an iron foundry, formerly owned by John D. Johnson and now controlled by the Ronalds-Johnson Co., which gives employment to a large number of men. Hainesport is situated in Lumberton township, which also includes Lumberton and Eayrestown.

Hainesport South Branch Rancocas

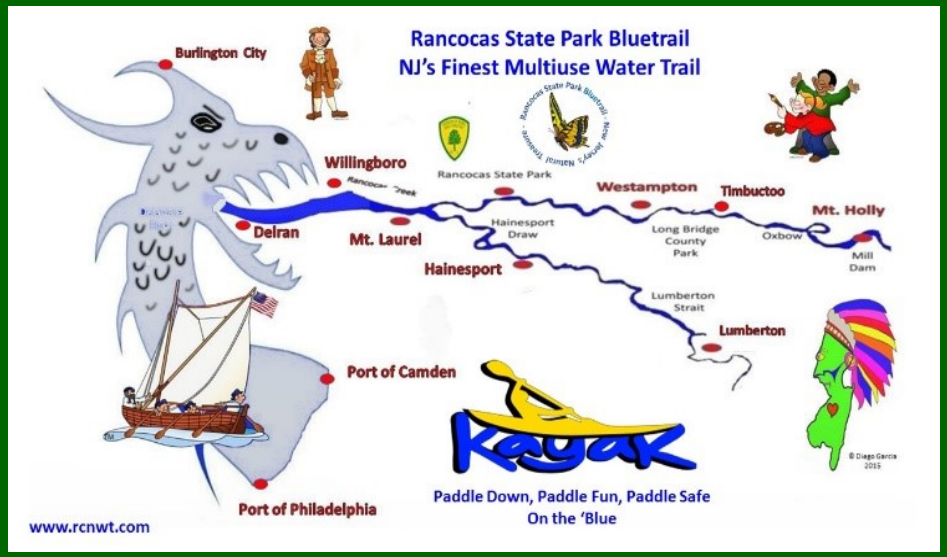
House of Barclay Haines

Burlington County Lyceum of Science and Natural History

Boat Hook Rancocas Creek Tug Minerva

Circa around 1910

Compliments of Burlington County Lyceum



Hainesport Landing
Ray Stork Collection

Mount Holly
North Branch

Hainesport Launch
South Branch

Creek Turn Pottery
Hainesport Twnship
Public Access Point

Lumberton Launch
South Branch

George Pettino's Lumberton Sand

Pettino's active in US Navy Contracts 1907
(ref: US Navy Contract Bulletin, 1907)

PAXSON'S QUALITY

WE CAN DELIVER TO ALL POINTS TO YOUR ADVANTAGE
LOWER IN SULPHUR AND ASH THAN ANY OTHER BRAND

Fig. 202

MOLDING and CORE SAND

For Large and Small Castings in

Iron, Steel, Brass and Aluminum

—SPECIAL NOTE—

We have lately purchased a large acreage of **Albany** and **North River Molding Sand** property, and can now deliver these Sands by Boat or Rail to the North, East, South or West to your advantage.

— Molding Sands, &c. —

oo Crescent
Albany—1-2-3
North River—1-2-3-4
Tullytown
Burlington Isle
Lumberton
Silica
Ground Ganister
Millville
Jersey
Providence
} Core Sand
Clay and Kaolin
Mica Schist

Fill your bins while these sands are in good condition

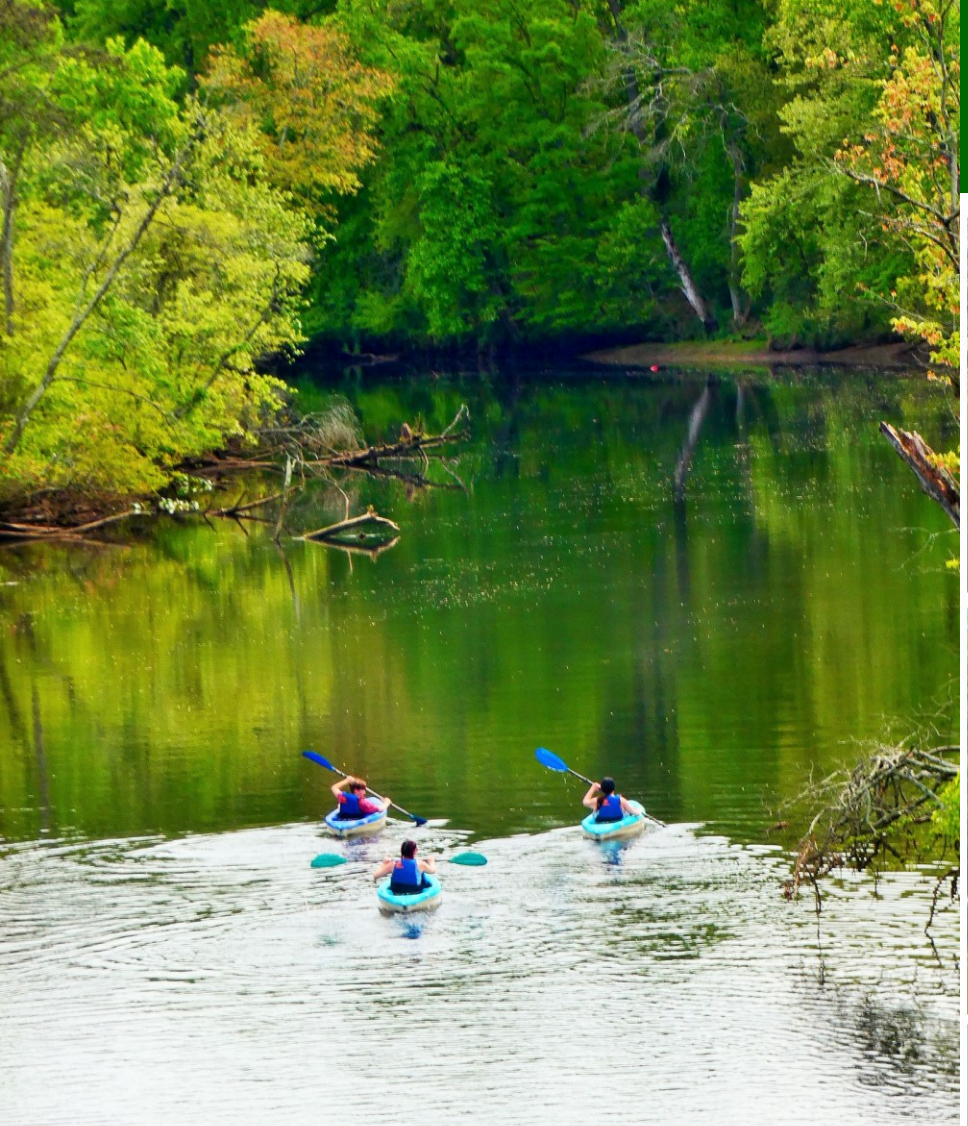
J.W. Paxson Co.,
Philadelphia, Pa.,
BALTIMORE, MD. PROVIDENCE, R.I. TOLEDO, O.

GEO. F. PETTINOS
FOUNDRY SUPPLIES
PHILADELPHIA

MICA SCHIST FIRE STONE

for lining Bessemer Converters and Cupolas.
Also
Mica Schist Sand and Grits
Furnace Bottom Sand and Steel Molding Sand.
Albany — North River — Jersey — Lumberton — Millville
Molding Sands
Our facilities for making prompt delivery on any of the above material are unexcelled.
Foundry Facings, Blackings and Foundry Supplies in stock.

GEO. F. PETTINOS.
REAL ESTATE TRUST BLDG
PHILADELPHIA.
WALNUT 390. RACE 1770.
BOSTON OFFICE
236 Old South Building
CLEVELAND OFFICE
503 American Trust Building



Creek Turn Pottery Water Trail Way Point

Ship bones South Branch - Hainesport

Creek Turn Pottery Public Access Point
South Branch Hainesport

Creek Turn Pottery Troll by Danish Artist Dambo's Dambo, the troll launches his "Way of the Bird King" sculpture series, June 2023

Creek Turn Public Access Site – South Branch Rancocas Creek Water Trail

DELAWARE RIVER ESTUARY - RANCOCAS CREEK WATERSHED - PINES “2” TIDES

Faces of Delaware Watersheds Own Walt Whitman’s “Singing Waters”

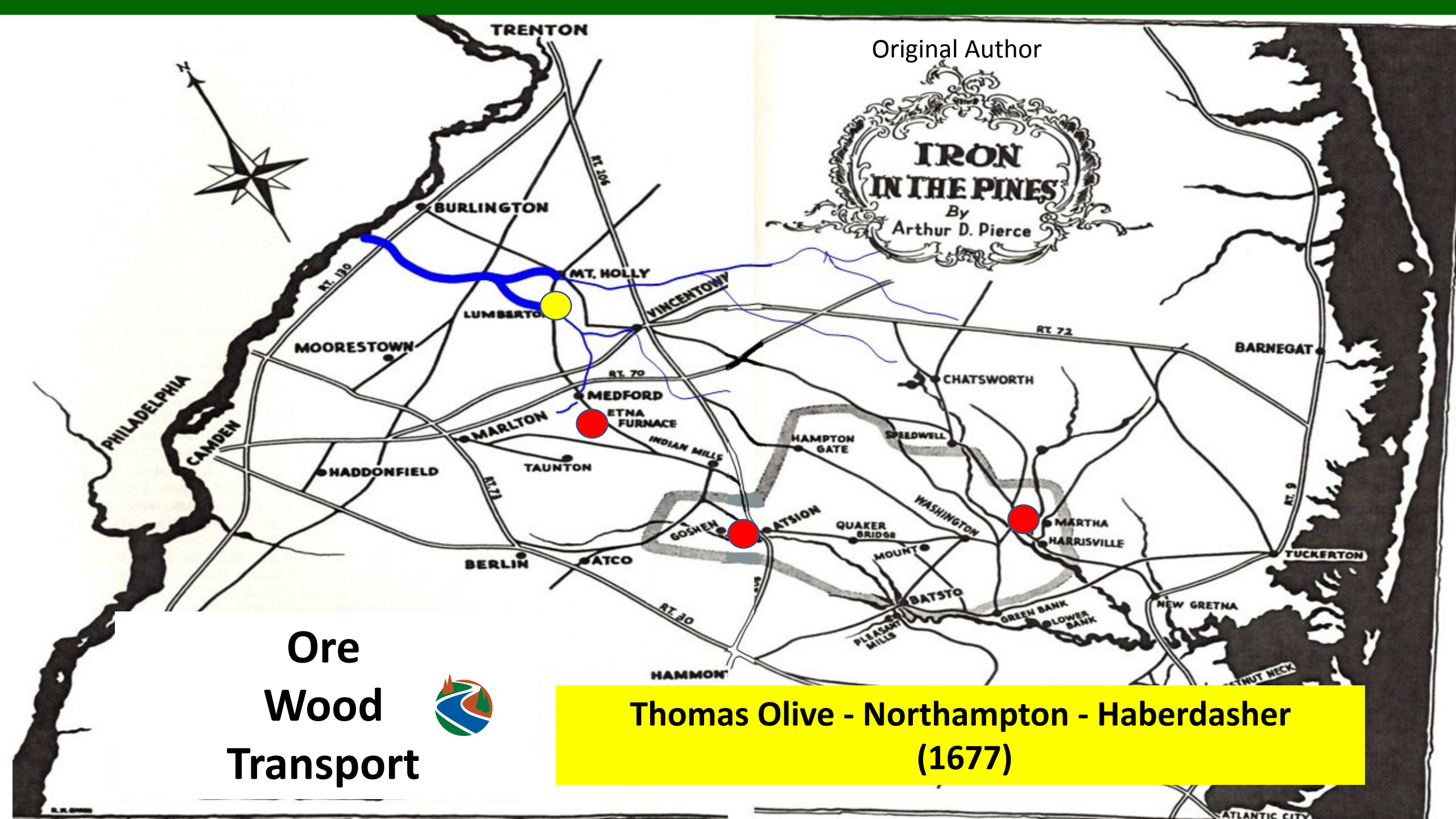
Charlie on the North Branch

North Branch

STEWARDSHIP

Weldon on the South Branch

RANCOCAS CREEK WATER TRAIL - PADDLED SINCE THE LENNI-LENAPE


Original Author
IRON IN THE PINES
By
Arthur D. Pierce
TRENTON
BURLINGTON
MT. HOLLY
LUMBERTON
VINCENTOWN
MOORESTOWN
MEDFORD
ETNA FURNACE
MARLTON
INDIAN MILLS
TAUNTON
HADDONFIELD
PHILADELPHIA
CAMDEN
BERLIN
ATCO
GOSHEN
ATSION
QUAKER BRIDGE
MOUNT
WASHINGTON
HAMPTON GATE
SPEEDWELL
CHATSWORTH
BARNEGAT
MARTHA
HARRISVILLE
TUCKERTON
NEW GRETNA
BATSTO
GREEN BANK
LOWER BANK
PLEASANT MILLS
HAMMONTON
ATLANTIC CITY
RT. 130
RT. 206
RT. 70
RT. 72
RT. 73
RT. 30
RT. 9
Ore
Wood
Transport
Thomas Olive - Northampton - Haberdasher
(1677)

Lumberton 1876
Charcoal Mill - Steel Mill - Flour Mill - Other

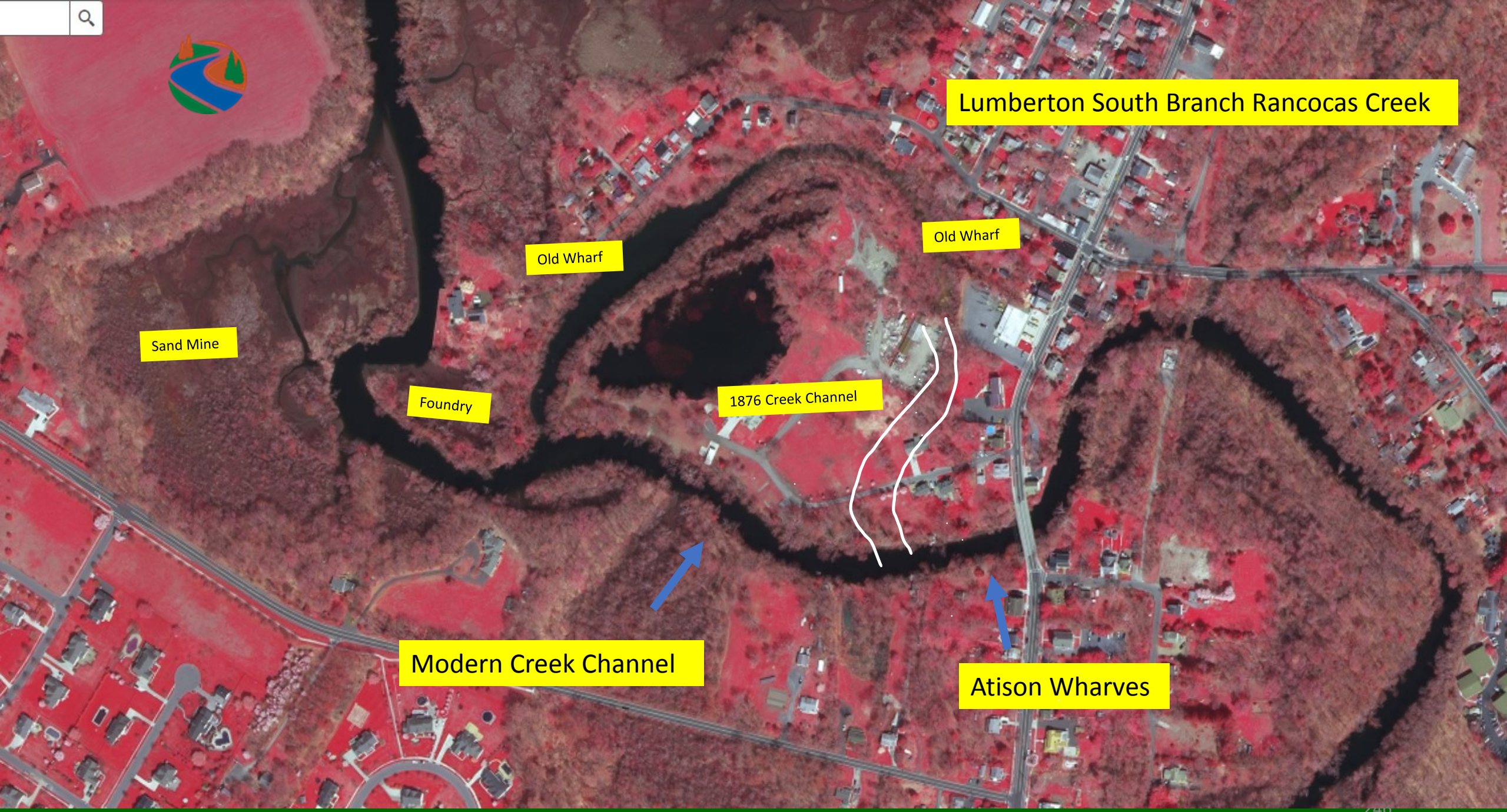
Wharf

Wharf

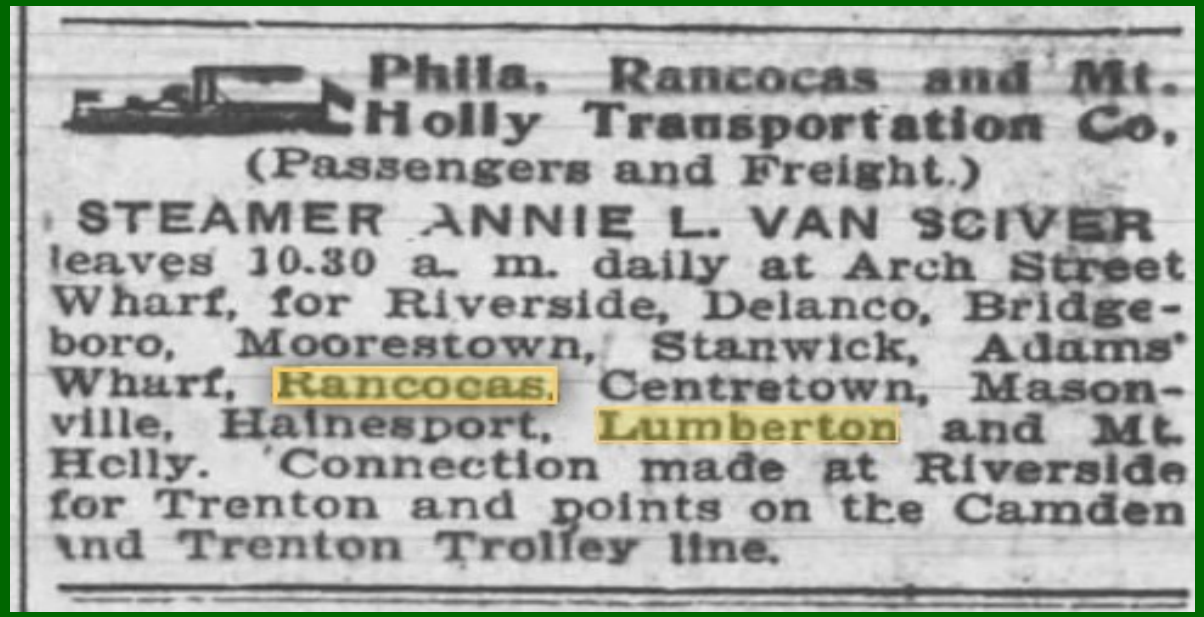
Atison Wharves

Foundry

Modern Creek Bypass Channel


Lumberton South Branch Rancocas Creek
Old Wharf
Old Wharf
Sand Mine
Foundry
1876 Creek Channel
Modern Creek Channel
Atison Wharves

Old Sand Mine - South Branch



Phila. Rancocas and Mt. Holly Transportation Co.
(Passengers and Freight.)
STEAMER ANNIE L. VAN SCIVER
leaves 10.30 a. m. daily at Arch Street Wharf, for Riverside, Delanco, Bridgeboro, Moorestown, Stanwick, Adams' Wharf, Rancocas, Centretown, Masonville, Hainesport, Lumberton and Mt. Holly. Connection made at Riverside for Trenton and points on the Camden and Trenton Trolley line.

Exploring Historic Pathways, Discovering New Understandings

After Rancocas Creek Service
Steamship Annie L. VanSciver to Maine, US Navy and Civilian Ops

rocky bed and in a matter of seconds she was afloat and in the clear.

After finishing her service with the Maine Central, *Norumbega* was sold to Massachusetts interests and operated with entire success, running on the Nantasket Beach line out of Boston, owned by one of the captains and chartered to the company. She kept up her good name for speed and service, and strangely enough, had for her chief engineer most of her remaining years, Ernest H. Dickson who had been in charge of her engines many years while she served in Maine waters.

SAMOSET — SIEUR DES MONTS

Samoset is shown on the outside, *Sieur des Monts* next to the dock, and *Pemaquid* showing astern.

She was being prepared for service for the season of 1934 when the disastrous Quincy fire occurred which destroyed her along with many yachts and another Rockland steamer, *May Archer*, then in service on the Block Island run.

Sieur des Monts

Sieur des Monts, a name of dignity, gentility, refinement and with a possible hint of stiff-necked aristocracy, seems to admirably suit the steamer of that name. *Sieur des Monts* ran to swanky Dark Harbor for many seasons, and was popular with the summer folk.

Launched as *Quaker City* in 1901 at Philadelphia, the steamer was bought by the Maine Central for this run while still new. She was fast and powerful, driven smoothly by twin engines of 1,000 horse power. Her engine room was a thing of beauty and a joy forever to the engine room crew, one of whom, Ernest H. Dicksen, recently chief engineer of the Boston bay steamer, *Town of Hull*, sent the photograph.

She was of 469 gross tons, 155.5 feet long, 32 feet beam and 7.4 feet deep. The stack was of necessity very far aft due to the abnormal length of twin locomotive type boilers which were fired forward.

With the decline of freight and passenger business to the eastward, the Maine Central hauled steamer *Pemaquid* off the Sargentville run and put her in place of the *Sieur des Monts* because of the high operating costs of the latter, and *Pemaquid* finished out the days of the Dark Harbor line. *Sieur des Monts* laid at Maine Central wharf only a short time before being sold to Norfolk, Virginia, interests, where she was in operation as S. S. *General Mathews* until 1930 when she was burned to the water's edge at Norfolk. She was rebuilt as a tank barge in 1931 and is still in service.

Samoset

The ugly duckling of the Maine Central Railroad's fleet of steamers was *Samoset*, used for Winter service as a bus boat at Mt. Desert ferry. She was built in 1897 at Philadelphia as *Annie L. Vansciver*, 146 gross tons. She was a hull boat of steel construction, 103.3 feet long and 23 feet wide, notable for her bulging bows, slender stack and general lack of beauty.

Samoset left Maine waters in 1918 for service in the Navy, keeping the same name. In 1922-23 she was released from government service and re-appeared as a merchant vessel, freighter this time, still steam, and of the same dimensions as in Maine, but under the name *Everglades*, hailing from New York.

In 1927 she was fitted out as a passenger boat again, and shortly afterward changed over to Diesel power, registering now 278 gross tons, and re-named *City of Punta Gorda*. She became the property of the Florida Railroad and Navigation Company and was operated in passenger service, hailing from Tampa. From 1930 through 1932 she again hailed from New York and the following year became a part of the

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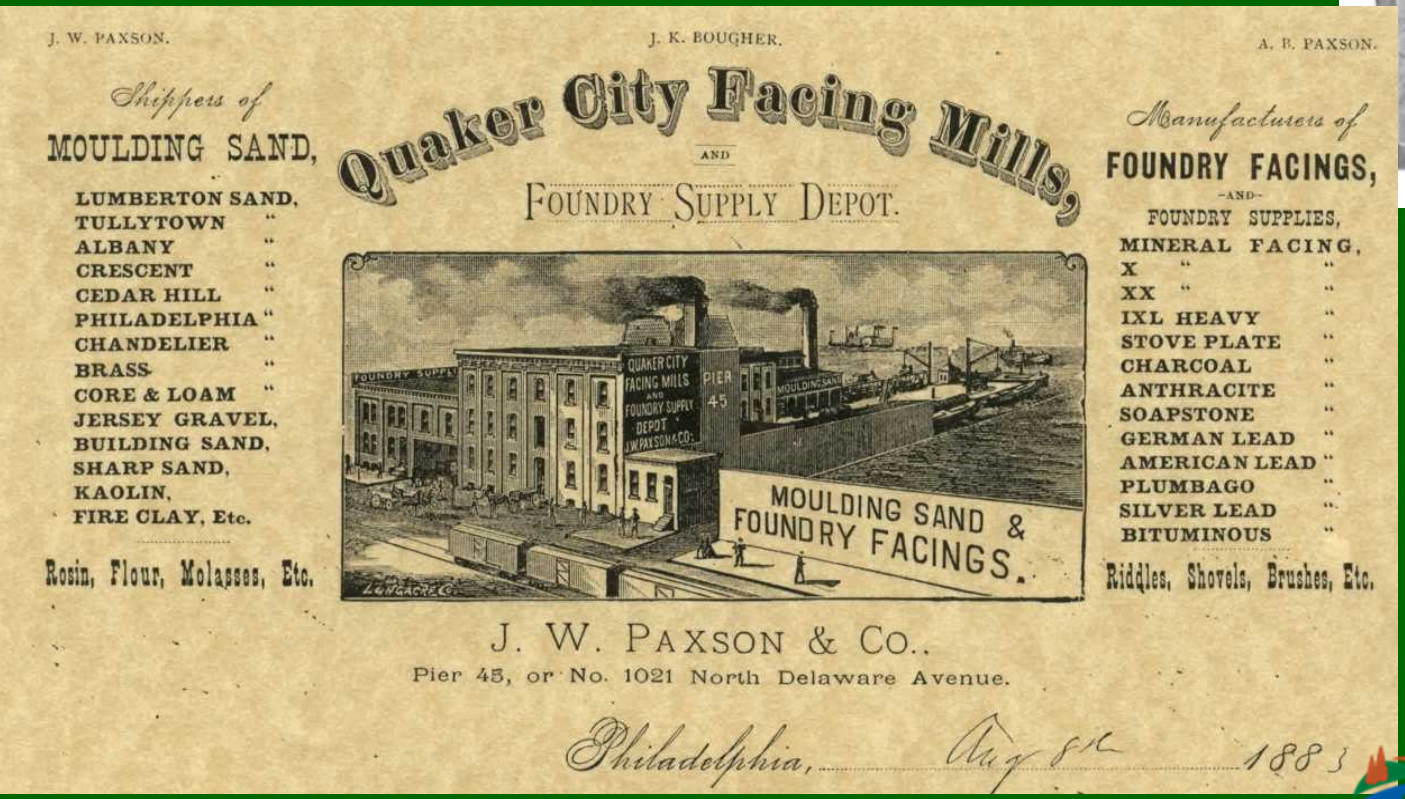
The second *Samoset* was built during 1905 at Camden, N.J., as the coastal passenger and freight vessel, *Annie L. Vansciver*, and delivered to the United States Navy on 20 March 1918 by her owner, the Maine Central R. R. Co. Assigned to the 1st Naval District and renamed *Samoset*, she averaged four ferry trips daily from the Boston Navy Yard to Deer and Bumkin Islands.

Retained in service after the end of World War I, *Samoset* was transferred to the New York Navy Yard for local duty within the 3d Naval District. Placed out of service at New York on 24 March 1922, *Samoset* was sold on 16 June 1922 and struck from the Navy list the same day. Returning to mercantile service under her original name, she disappeared from mercantile registers in 1934.

Rancocas Creek Tidewater

JW Paxton Lumberton Molding Sand Naval Contracts

Reference: 1901 US Navy Contract Bulletin


J. W. PAXSON. J. K. BOUGHER. A. B. PAXSON.

Shippers of
MOULDING SAND,
LUMBERTON SAND,
TULLYTOWN "
ALBANY "
CRESCENT "
CEDAR HILL "
PHILADELPHIA "
CHANDELIER "
BRASS "
CORE & LOAM "
JERSEY GRAVEL,
BUILDING SAND,
SHARP SAND,
KAOLIN,
FIRE CLAY, Etc.
Rosin, Flour, Molasses, Etc.

Quaker City Facing Mills,
AND
FOUNDRY SUPPLY DEPOT.

Manufacturers of
FOUNDRY FACINGS,
—AND—
FOUNDRY SUPPLIES,
MINERAL FACING,
X " "
XX " "
IXL HEAVY "
STOVE PLATE "
CHARCOAL "
ANTHRACITE "
SOAPSTONE "
GERMAN LEAD "
AMERICAN LEAD "
PLUMBAGO "
SILVER LEAD "
BITUMINOUS "
Riddles, Shovels, Brushes, Etc.

J. W. PAXSON & CO.,
Pier 45, or No. 1021 North Delaware Avenue.

Philadelphia, Aug 8th 1883

Don't Worry, They Won't Go Off, Unless They See a German Ship.

THE WALTER F. WARE CO., Dept. D,

Foundry Supplies and Equipment

Lumberton Sand,
Albany Sand, Silica Sand,
Millville Gravel, Clay, etc.

Plumbago,
Bituminous Facing,
Pitch Core Compound

Eclipse Core Blacking,
Charcoal Facing, etc., etc.

Sand Blast Machinery,
Cupolas, Ladles, etc.

Sieves, Brushes,
Bellows, Shovels, etc.

Some men listed as working JW Paxson were Josiah K. Bougher, Howard Evans, and Howard M. Bougher.

Bougher, Rancocas Creek, is today's Centerton/Mt. Laurel. In the late 1880's-early 1900's a Captain Bougher was a well respected Delaware River mariner and tugboat Captain for Tug Shaw.

[Leg. Int., Vol. 38, p. 66.]

Bark "AJAX" vs. Tug "S. SHAW" and Schooner "ANNIE M. ALLEN."

Snapping Turtle Old Sand Mine Site
South Branch

Collection: The Pennsylvania Gazette

Publication: The Pennsylvania Gazette

Date: February 5, 1756

Title: To be SOLD, By the subscriber, living in MooreTown, in the

To be SOLD, By the subscriber, living in MooreTown, in the county of Burlington, in West Jersey, A COMMODIOUS new brick house, two story high, with three rooms on a floor, a good kitchen, stable and other conveniences; the whole well finished, with a large yard, and a good wharff at the end thereof, where flats or other vessels of burthen may load or unload there cargoes, situate in the most populous Part of Bridge town, common called ***Mount Holly*** , in the county aforesaid, very convenient for a merchant or shop keeper, and has been used in that way ever since it was built. Also about three acres of good clover meadow, near said premises, belonging to the estate of Benjamin Bispham deceased. The title is indisputable. For terms, enquire of of JOSHUA BISPHAM, Executors.

Atsion and Batsto Forges

ATSION FORGE
1767-1823
1826-1848

Burlington County
On Atsion River

Built by Charles Read and associates David Ogden and Lawrence Salter. Samuel Richards, a later owner, operated the works to about 1848, when forced to close because of competition from anthracite coal furnaces of Pennsylvania.

Products: Bar iron, salt evaporation pans, camp kettles, naval iron, stoves, firebacks, etc.

Indians from nearby Edgepillock Reservation were employed at Atsion.

85. EARLY STOVE, probably made at Atsion Iron Works.
Has hearth extension.
Lent from CHARLES S. BOYER COLLECTION

86. Iron bust of MARQUIS DE LAFAYETTE cast at Atsion.
Lent by MONMOUTH COUNTY HISTORICAL SOCIETY

87. PARCHMENT MAP, dating from about 1793, showing the areas of the Atsion and Batsto Furnaces.
Red zones on both banks of the Atsion River denote ore. Yellow line marks the lands on 15, August 1761, from which ore is to be taken. There seem to have been discrepancies between various surveys (the trapezium to the north of the red space on the Atsion River was Philo Leeds' survey of 50 acres now property of Atsion Company—the original survey bears date of 7. March 1743). A later survey on 12. March 1763 allowed for variations to the west and was based on 77 acres in place of the formerly stated 50.
Lent by FRANKLIN S. HIRST

BATSTO FURNACE
1766-1854

Burlington County
On Batsto River

Owned early in its operation by Charles Read; later by John Cox for whom William Richards and later Joseph Ball were managers. Because of financial difficulty, the works closed c. 1854; completely destroyed by fire in 1874.

Products: Pig iron, hollow ware, cannon balls for Revolution and War of 1812, firebacks, fences, grave markers, etc.

John Cox and his family were early residents of Trent House in Trenton. Steam cylinder for John Fitch's fourth steamboat was made at Batsto Furnace.

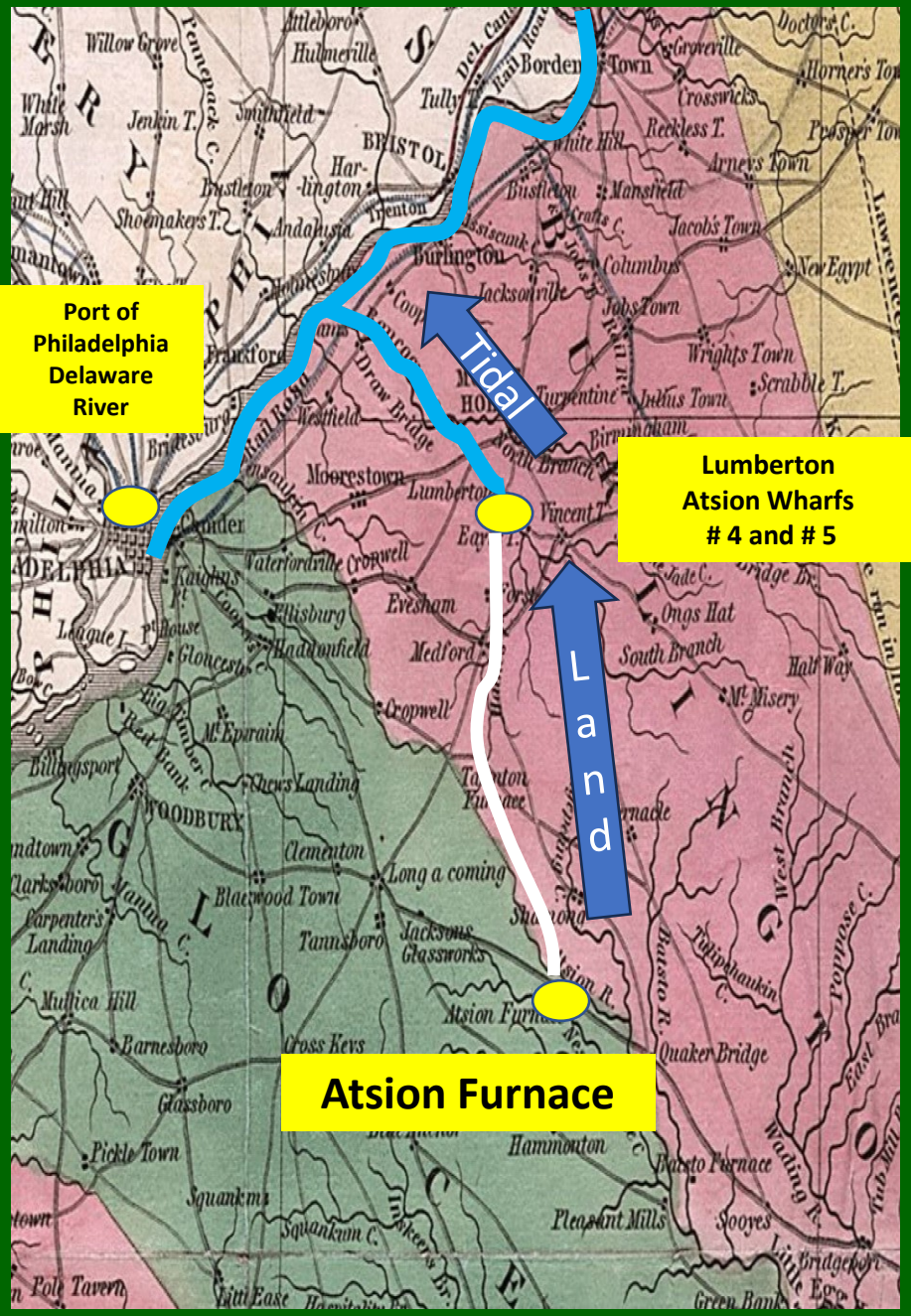
81. "Batsto" STOVE PATTERN.
The art of making iron stoves decorated with pictures and designs in very low relief was brought to the Colonies from Germany. The plates—heavy, rectangular and about 2 feet square—are relics of charcoal blast furnaces, cast in open sand molds, and date to the early 18th century. (Photograph by N. R. Ewan.)

82. CAST IRON GRAVE MARKER in Weymouth Burying Ground.
Typical of those cast at Batsto Furnace at Batsto River or at Weymouth Furnace at Great Egg Harbor River.
"In Memory of Rosana Ireland Babington who departed this life July 13-1825. Aged 18 Months. O death it is a solemn call, A sudden judgment to us all." (Photograph by N. R. Ewan.)
Items 81-82 courtesy of NEW JERSEY STATE LIBRARY

83. LETTER FROM JOSEPH BALL TO JOHN COX, September 27, 1774.
Regarding shipment of molasses and iron.

84. LETTER FROM JOHN COX TO BENJAMIN JACKSON, September 4, 1777.
Regarding plate iron for salt pans to be delivered to Mt. Holly or Batsto.
Items 83-84 lent by NEW JERSEY STATE LIBRARY

South Branch Lumberton

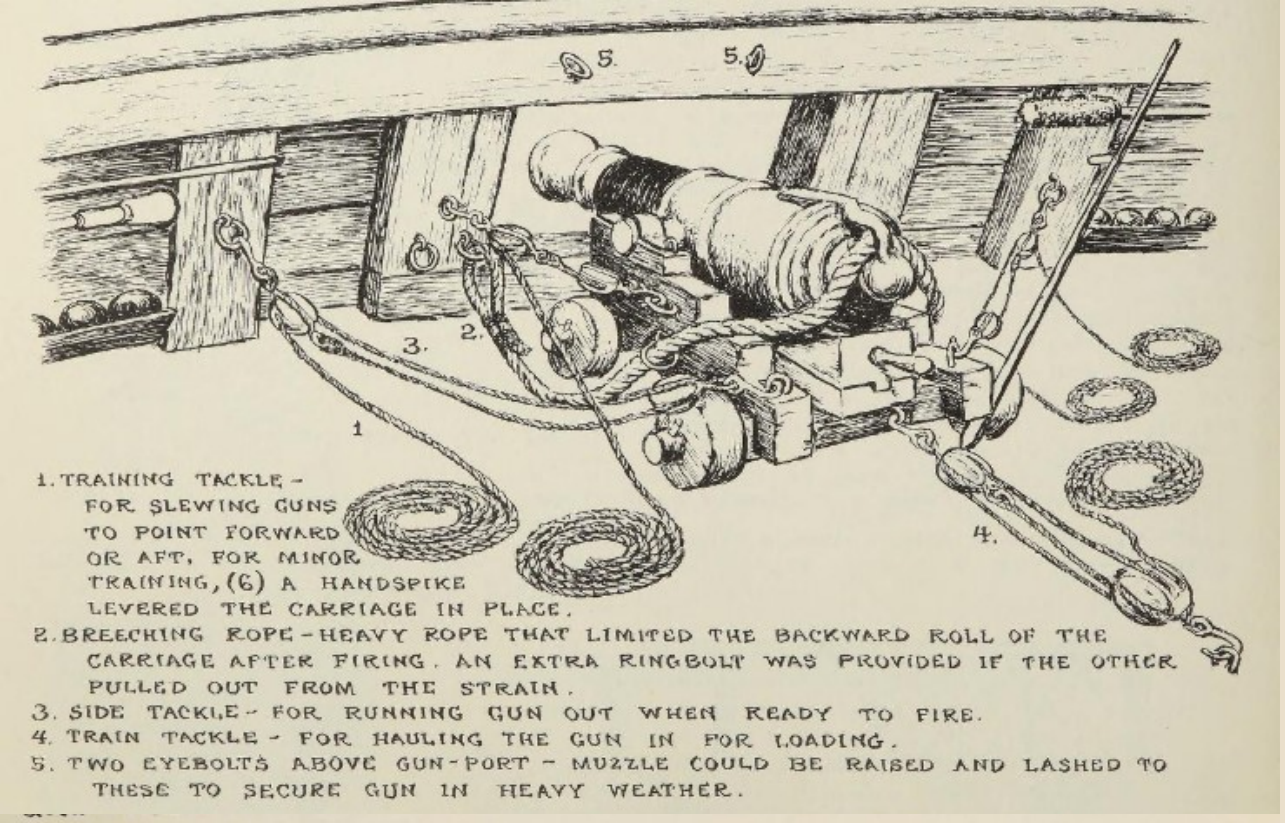


Courtesy Lumberton Historical Society

Atsion - Lumberton - Rancocas Creek Naval Stores an d Delaware River Ports & Markets

1766

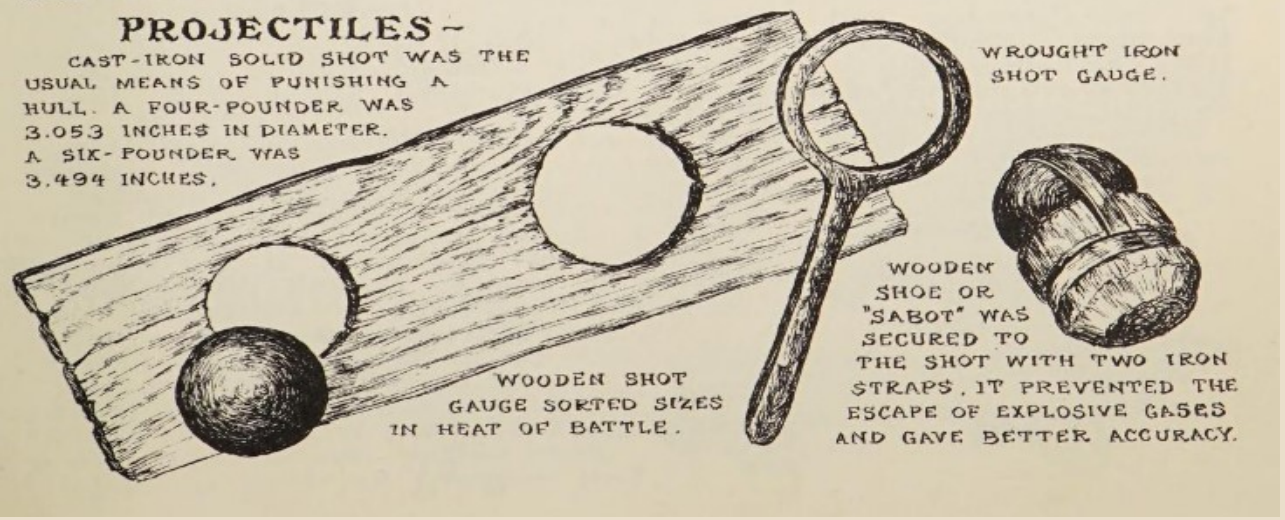
NJ Pioneer Navigation Act

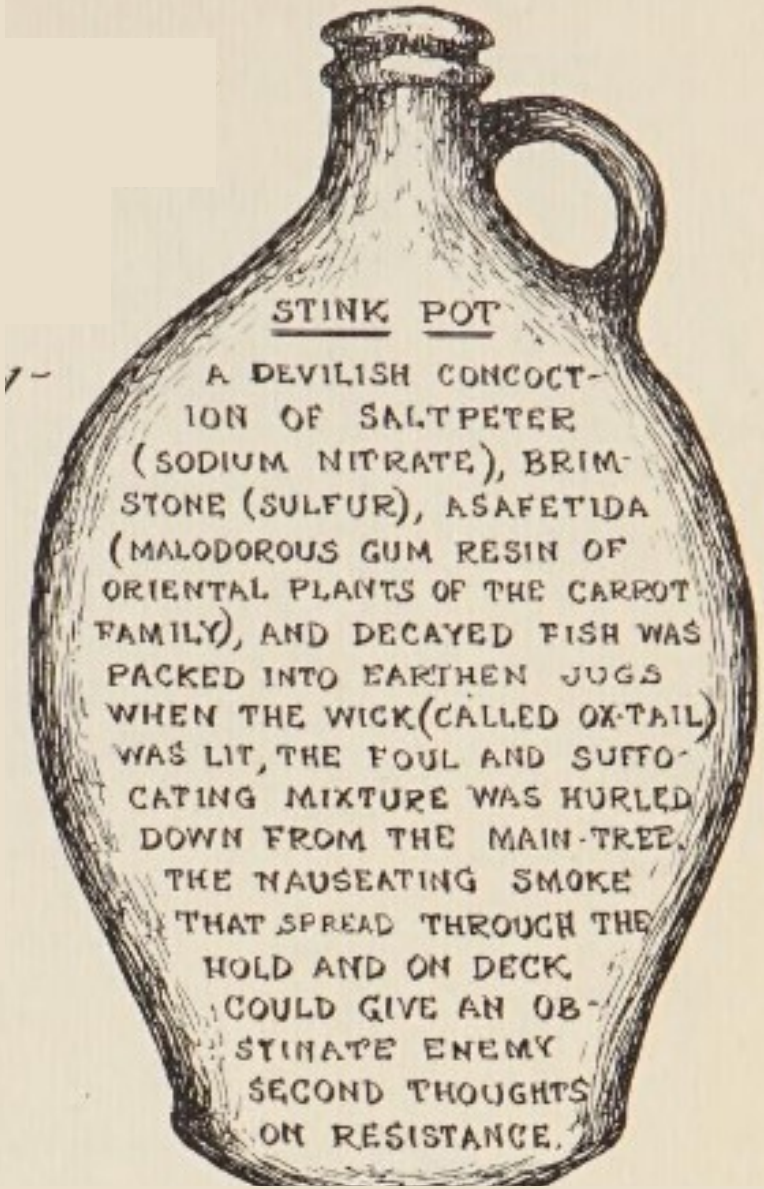


1. TRAINING TACKLE - FOR SLEWING GUNS TO POINT FORWARD OR AFT, FOR MINOR TRAINING, (6) A HANDSPIKE LEVERED THE CARRIAGE IN PLACE.
2. BREECHING ROPE - HEAVY ROPE THAT LIMITED THE BACKWARD ROLL OF THE CARRIAGE AFTER FIRING. AN EXTRA RINGBOLT WAS PROVIDED IF THE OTHER PULLED OUT FROM THE STRAIN.
3. SIDE TACKLE - FOR RUNNING GUN OUT WHEN READY TO FIRE.
4. TRAIN TACKLE - FOR HAULING THE GUN IN FOR LOADING.
5. TWO EYEBOLTS ABOVE GUN-PORT - MUZZLE COULD BE RAISED AND LASHED TO THESE TO SECURE GUN IN HEAVY WEATHER.

PROJECTILES -

CAST-IRON SOLID SHOT WAS THE USUAL MEANS OF PUNISHING A HULL. A FOUR-POUNDER WAS 3.053 INCHES IN DIAMETER. A SIX-POUNDER WAS 3.494 INCHES.





Reference: C. Kieth Wilbur

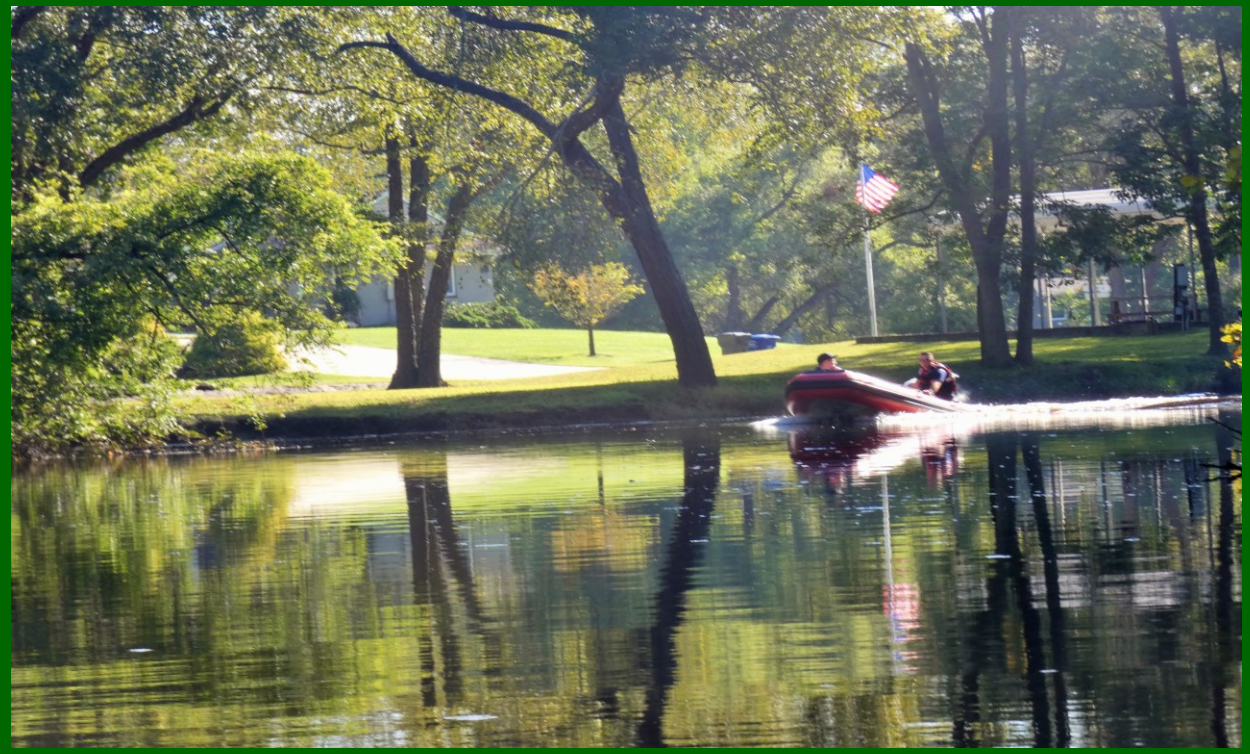
Tip of the Hat 2 Weldon Storey
Lumberton Creekside Resident and Historian
Original Enlistee 10th Mountain Division (1941)

Atsion Wharf

S Branch

Lumberton

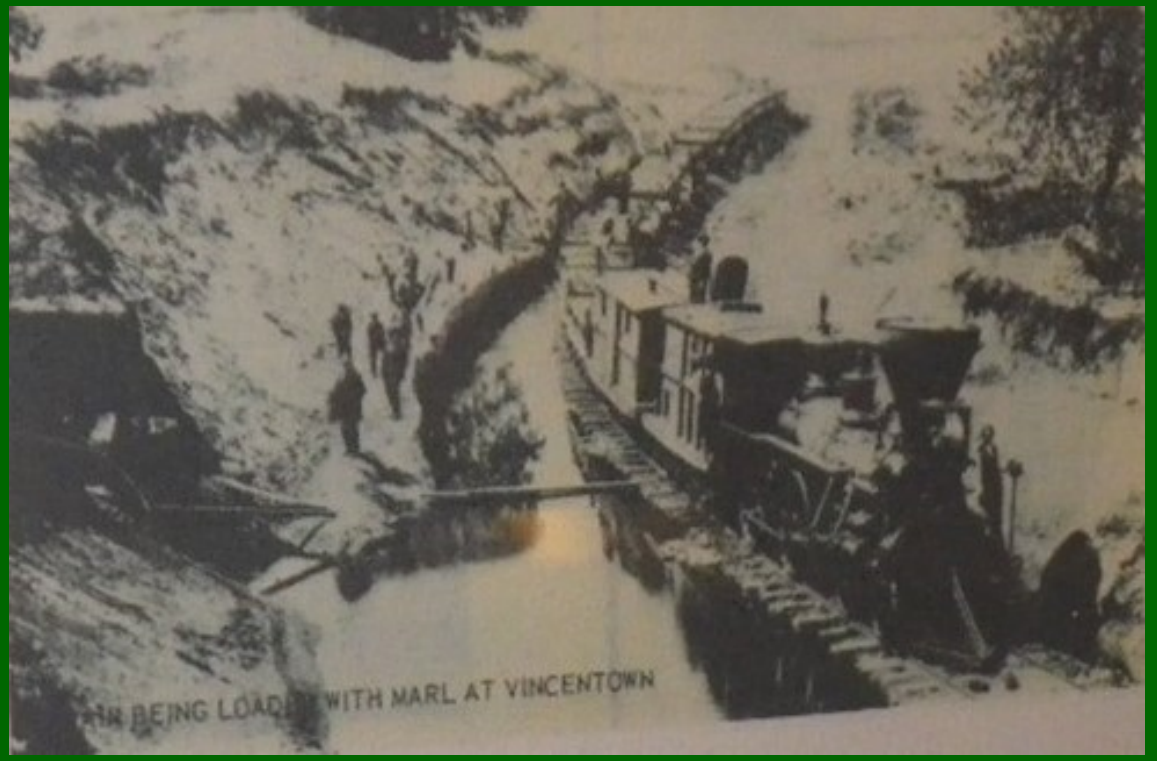
South Branch Lumberton

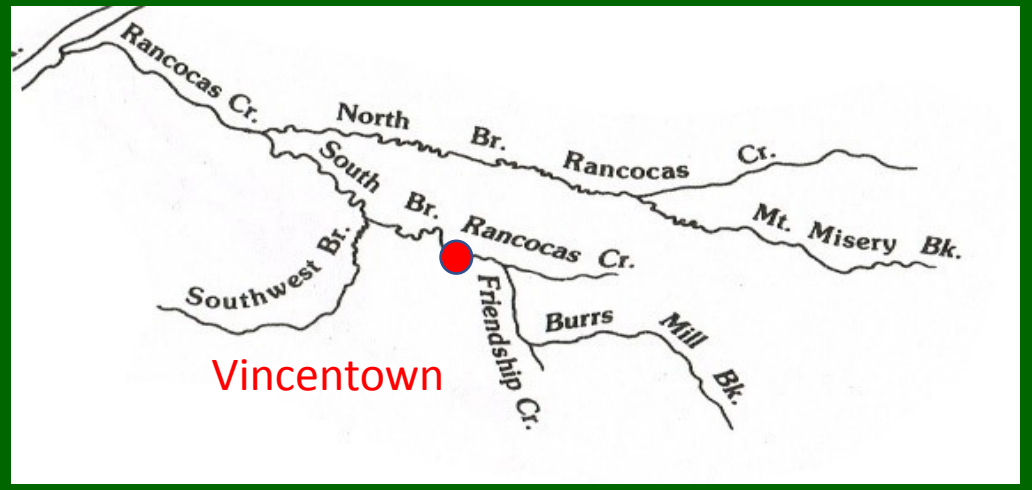


140 sqm
30 foot fall
590 Horsepower
(calculation ref: NJ Dept of Conservation)

Extractive Resources

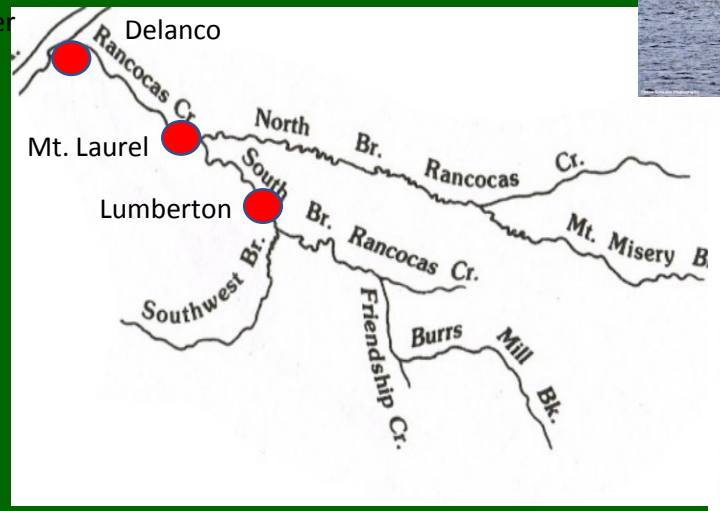
Vincentown Pine Barrens Marl and Molding Sands





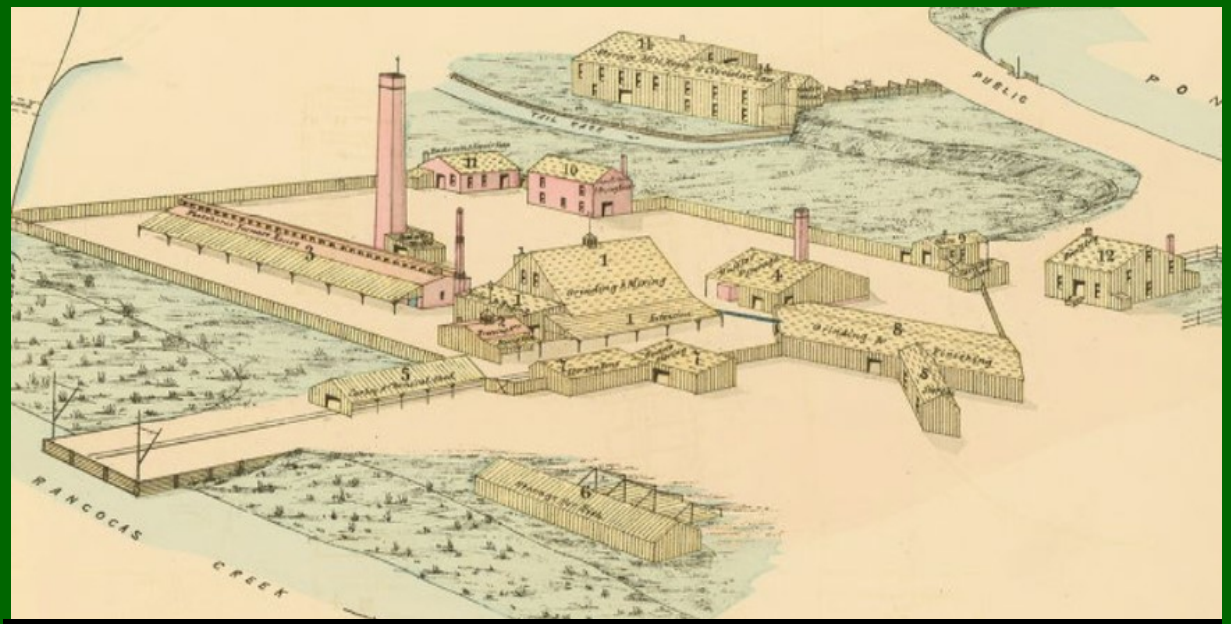
Exploring Historic Pathways, Discovering New Understandings

Lumberton to the Delaware River Federal Navigation Channel



1875 Charles Stokes Rancocas Creek
Riparian Chart
Westampton
Leed's
Wharf
TEXAS
Hainesport
Mount
Laurel
Hainesport
MOUNT HOLLY CREEK
LUMBERTON CREEK
EXTERIOR WHARF LINE
Stokes Island
Palisade Hills
Enclosed Meadow
STONE QUARRY
PHOSPHORUS WORKS
TEXAS

Lucifer Came A Calling - Texas - Phosphorus Works – Phossy Jaw



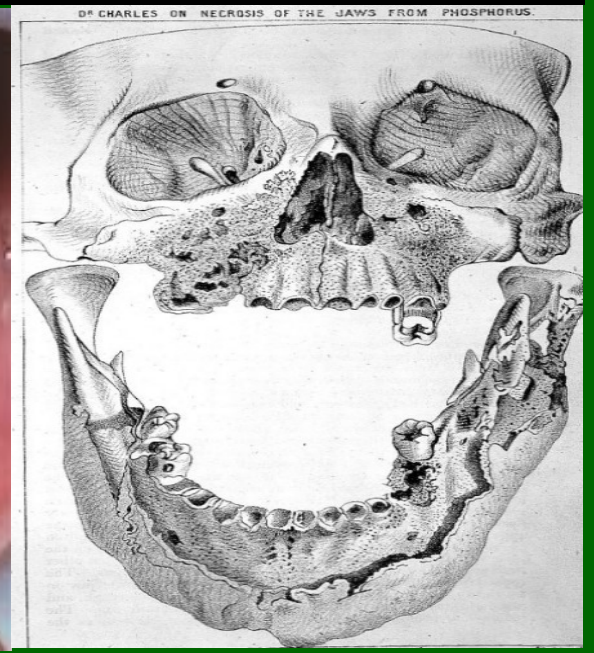
1875

Produced 1,700 lbs. of Phosphorus weekly

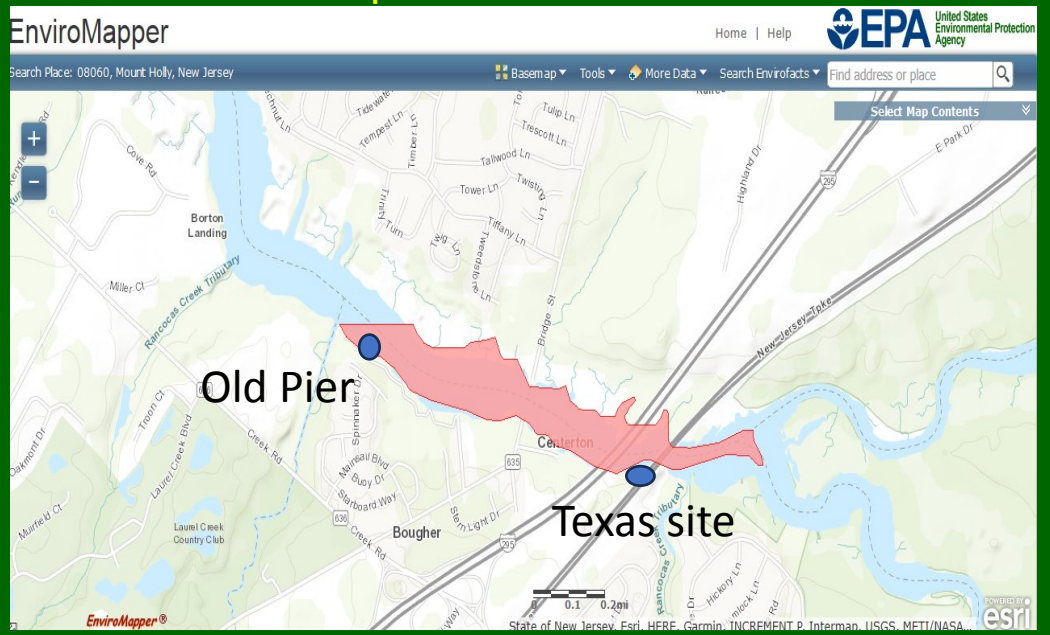
26 Tons Per Year

Barged down Rancocas Creek to Philadelphia

Phossy jaw, a common medical disease among phosphorus workers

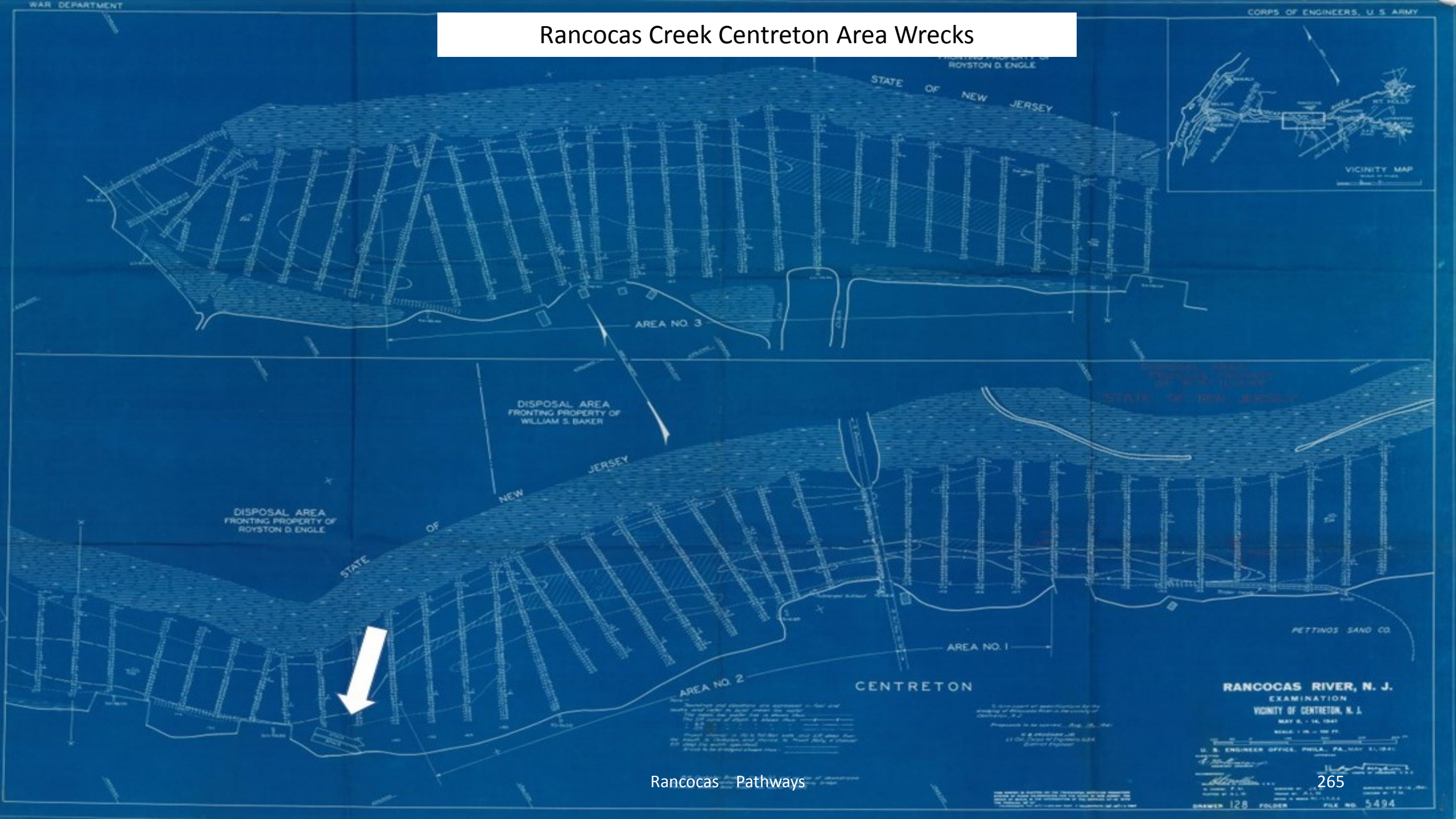


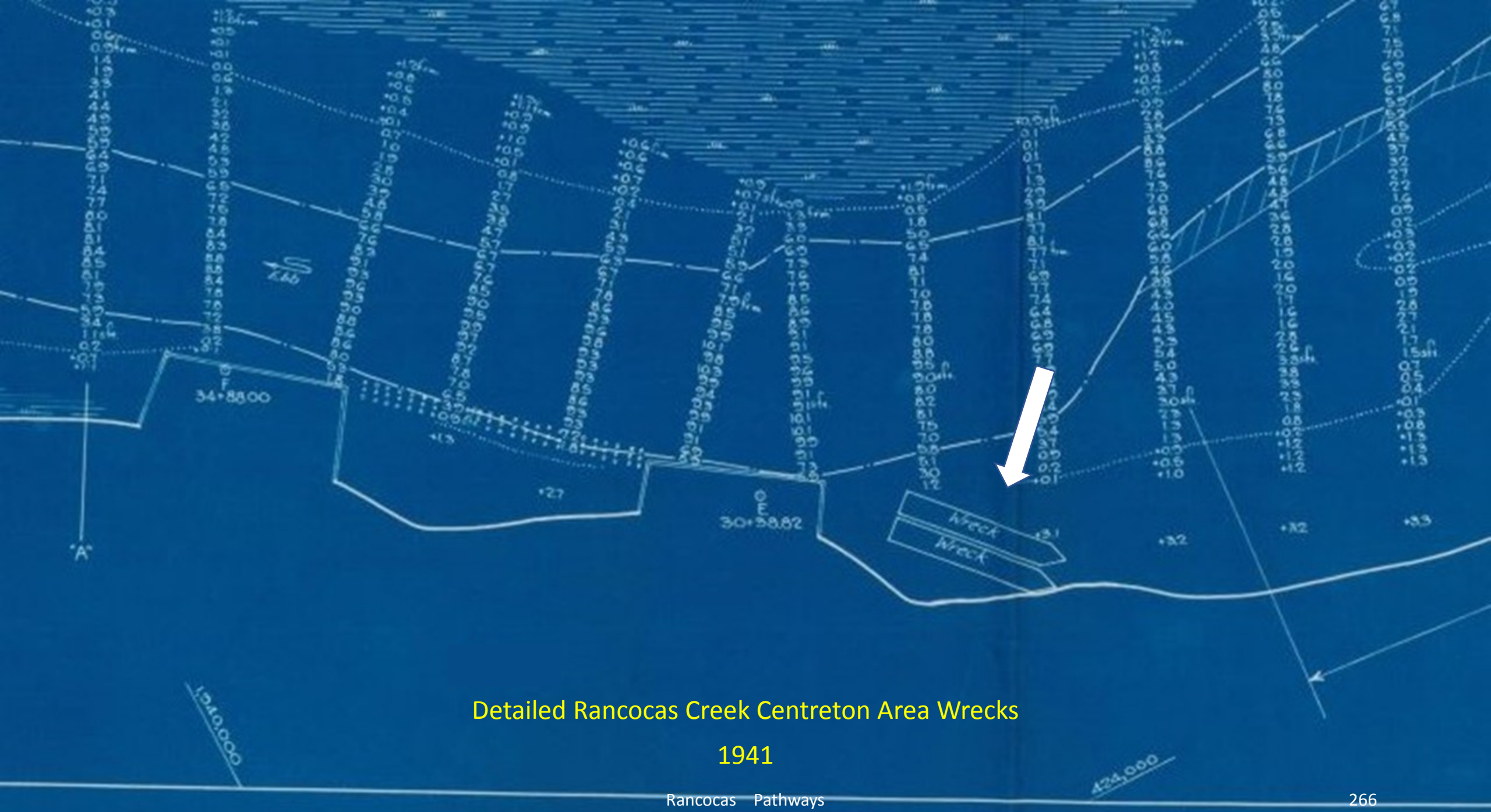
Phosphorus Plume 2022



Bruce Inspecting Intact Phosphorus Retort Texas Site Main Stem Rancocas Creek

Rancocas Creek Centreton Area Wrecks





Detailed Rancocas Creek Centreton Area Wrecks

1941

Rancocas Creek Water Trail
South Bank Rancocas Creek

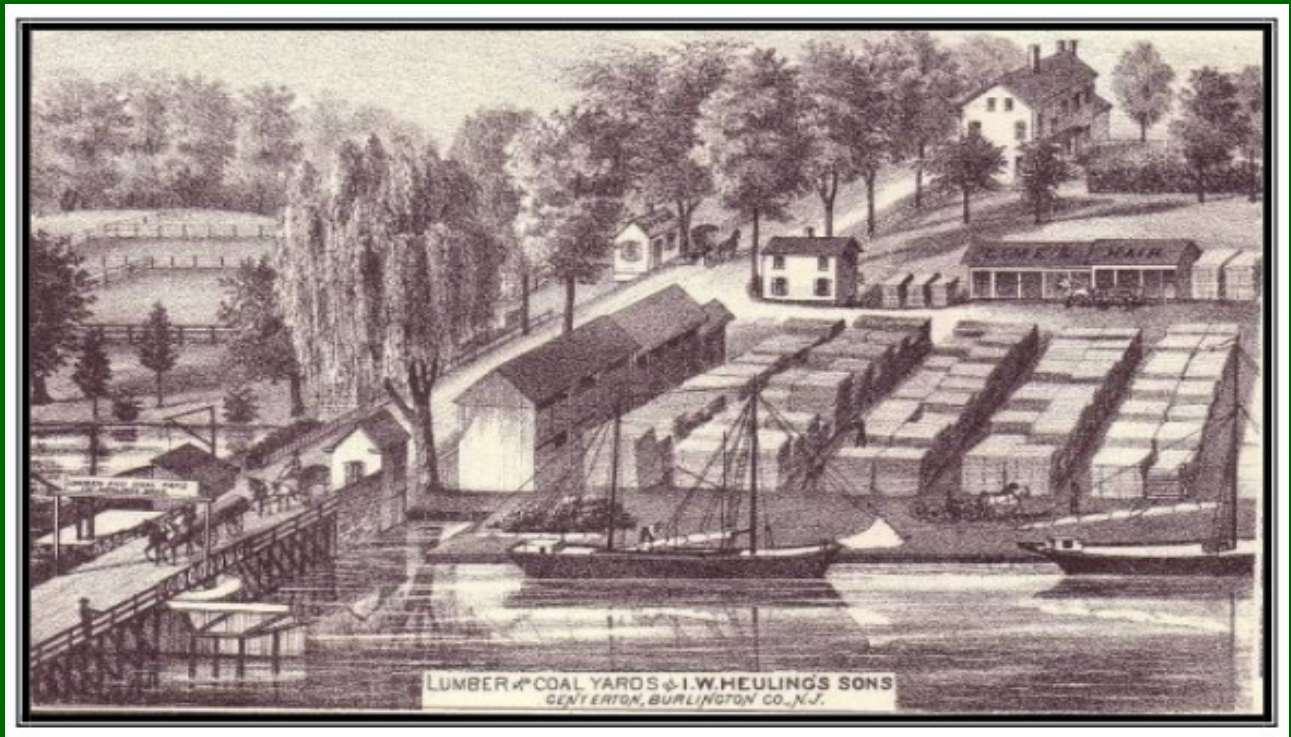
Rancocas Creek Centreton Area Wrecks - 2023

Pretty Rancocas' Field.

The banks of the upper Rancocas, that beautiful, winding stream, whose dark cedar waters spring from the pine barrens of interior New Jersey and flow down the Delaware, where they commingle at Delanco, is one of the greatest sections for sand mining in the East. Its banks are dotted with wharves at Barton's landing, Centerton, Rancocas Park, Hainesport and Lumberton. All day long men dig in the fields near by and other men with carts haul the yellow dirt to the wharves, where it is dumped into the waiting barges to be towed to Philadelphia and other points. The bulk of the sand shipped by boat is used for iron molding, while that hauled by train away from the river points is sold for filtration purposes.

March

1909



Centerton Bridge

Creek Barge

Exploring Historic Pathways,
Discovering New Understandings

Schooner Rudder Dated to mid 1840's

Parkers Creek

Rancocas Pathways

RANCOCAS RIVER

Rancocas River is used principally by Geo. F. Pettinos, Inc., whose wharf is located at Centreton, N. J., approximately 7 miles from the mouth and east of the highway bridge, and the Warner Co., whose dock is located a short distance east of the highway bridge at Bridgeboro, N. J. The Riverside Metal Co., located near the highway bridge, U. S. Route 130, receive anthracite and bituminous coal. The Robbins Shipyard is also located on the river between the railroad bridge and the highway bridge at Delanco, N. J.

The Pettinos wharf is of pile and timber construction approximately 600 feet long, surmounted with a narrow guage private railroad, elevated approximately 18 feet above low water, from which dump cars load directly into barges. Between the channel and the wharf the Pettinos Co. have dredged a basin for the

DELAWARE DREDGING CO.
COLONIAL TRUST COMPANY BUILDING
THIRTEENTH AND MARKET STS.
PHILADELPHIA, PA.

3/145 Rancocas

September 16th,
1 9 1 9

The District Engineer,
U S. Engineer Office,
Wilmington, Delaware.

Dear Sir:-

We beg to acknowledge receipt of Permit to dredge about 2,500 cubic yards from in front of the J. W. Paxson's wharf on the left bank of Rancocas River, New Jersey.

Yours very respectfully,

DELAWARE DREDGING COMPANY

By:- J. B. Richards

Secretary

WBS

Rancocas Creek Maritime Accidents 1914-1915

May 19th 1915.

DATE.	KIND OF TOWS. Tug and one scow	Tug and two scows	Tug and three scows	Tug and four scows	Tug and five scows	Tug and six scows	No. double Headers 2 tugs & scows	Total Number times draw opened	Total number boats passing through draw	Total number of trains de-layed	Total number of minutes trains were delayed.
Jan. 1914	21	7	4	1				122	152	17	57
Feb. 1914	13	1	-	-				45	50	4	12
Mar. 1914	16	6	10	2			1	99	159	13	39
April 1914	43	21	23	7				201	389	40	139
May 1914	41	30	32	16			1	259	522	38	149
June 1914	67	22	22	19				291	557	49	165
July 1914	52	26	17	19				163	506	39	142
Aug. 1914	53	37	26	12				266	517	44	141
Sept.1914	56	34	20	17	2	1		307	590	35	138
OCT. 1914	61	48	29	12	1			313	634	51	222
Nov. 1914	87	48	28	8				289	593	45	167
Dec. 1914	41	22	13	6			1	164	314	24	99
Jan. 1915	46	17	8	4				105	224	14	54
Feb. 1915	27	10	7	5				96	165	18	58
Mar. 1915	60	18	12	4				189	332	32	101
Apr. 1915	57	38	26	10				209	461	42	144

There are four drawbridges across this river, consisting of 3 highway and one railroad bridge. The navigation on this river consists of tugs, an occasional pleasure boat, also manure and sand scows. The channel is fairly straight at the railroad bridge and approaches on the upstream side on a broad curve, as shown on Government plan, easily navigable we believe for a tug and one scow.

Where more than one scow is taken through by a tug, we believe that the pilots take a grave chance of accident as it is extremely difficult to control the second scow in spite of the fact that helmsmen are usually at the wheel of each scow.

From the above analytical table it will be seen that one tug has occasionally taken through as many as six scows, but we consider that extremely bad judgment was shown by the pilot in doing this.

The sand scows are from 110 ft. to 120 ft. long and 27 ft. to 30 ft. wide with square ends, loaded on top of the deck. The tug boats will average about 70 ft. in length and the distance between the barges is about 15 feet.

We have had a number of accidents to our bridge caused by the scows colliding with the fenders, etc., on the approach to the channel. Below we give you a list of these accidents occuring during the past few years:

May 19th 1915.

July 25, 1913	Tug and three empty scows. Third or last scow struck bridge causing a damage of approximately $391.90
August 13, 1912	Two tugs double heading and three loaded sand scows. Second scow struck bridge causing a damage of approximately $328.29.
October 1st 1913	Tug and three empty scows. Second scow struck bridge causing a damage of approximately $227.57.
November 7, 1913	Tug and three empty scows. Third scow struck bridge causing a damage of approximately $452.03.
November 9, 1913	Tug and three loaded sand scows. First scow struck bridge causing a damage of approximately $22.00.
December 4, 1913	Tug and two empty scows. Last scow hit bridge causing a damage of approximately $13.72.
October 16, 1914	Tug and four empty scows. Last scow hit bridge
April 27, 1915	Tug and two loaded scows. Last scow hit bridge causing a damage of over $200.00.

It will be seen from the above cited accidents that no damage has been sustained by our bridge where a tug only took one scow, but that wheremore than one scow is taken through the draw at a time, serious damage to the bridge is liable to occur.

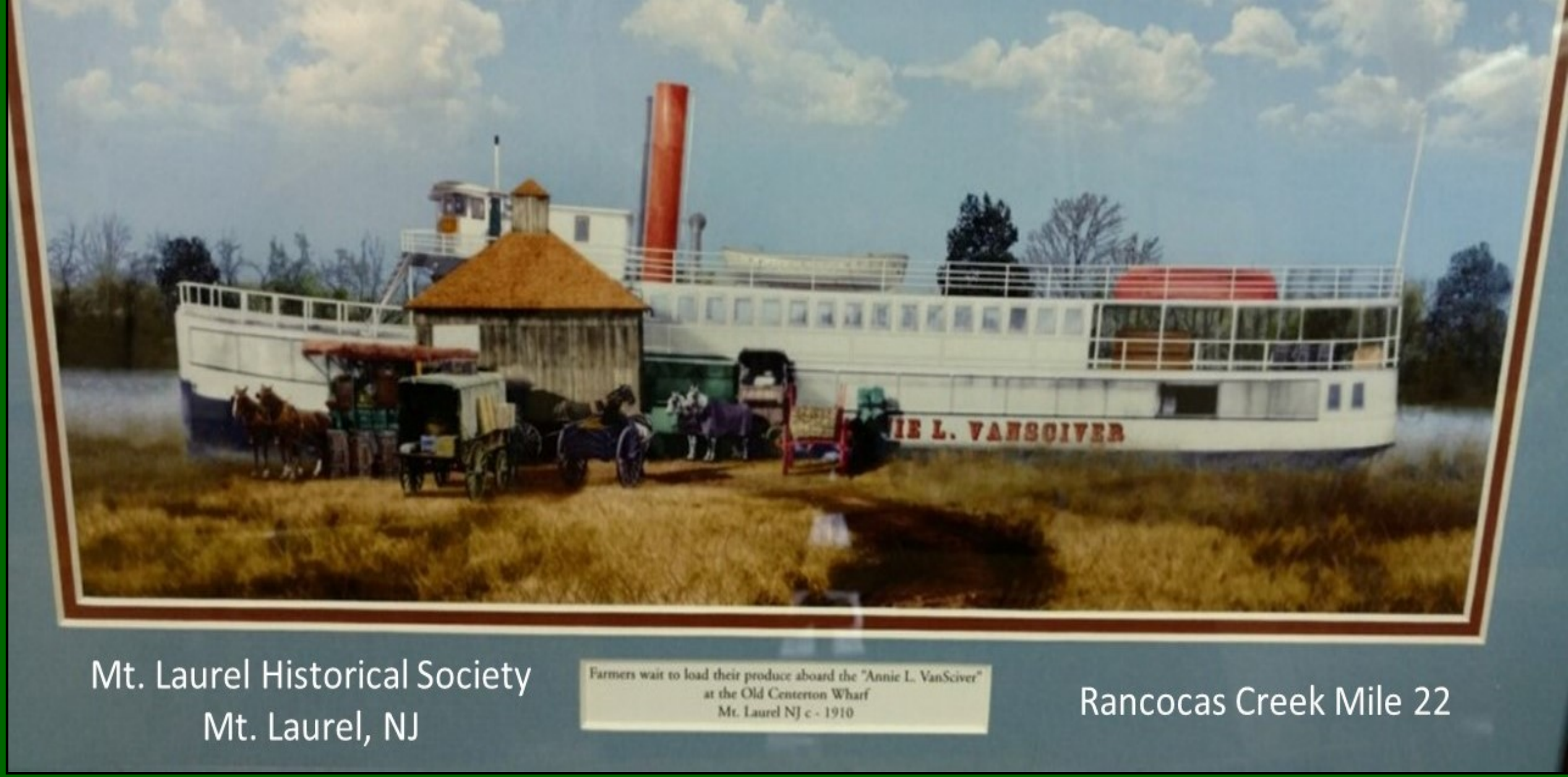
The table of movements through our draw also shows that we give every possible facility to the passage of boats to the detriment of our train movement. In April 1915 we had 42 trains delayed, a total of 144 minutes. Since connections are made at Trenton, Jamesburg and South Amboy by our trains, it shows that we have endeavored to give all boats free and easy passage in spite of the fact that our trains are thereby detained.

It is our belief that unless proper towing rules are established by the Government on Rancocas Creek, and power given to enforce same, that it will only be a question of time before an accident will occur to the railroad bridge caused by collision of scows with same, that will make it impossible to maintain our traffic over this bridge to the detriment ofour passengers, and damage to our Company. We suggest that only one scow be towed or dropped through our draw at one time. We would, therefore, respectfully submit that the Government formulate towing rules,

In recent accidents at this bridge, it was shown that the manila bridle lines connecting the barges together broke. This line was a five inch cable in good condition. In order to avoid accident of this kind in the future, we ask that a rule be established specifying that the size of bridle line shall be between six and seven inches.

It has also been brought out in recent accidents at this bridge that the helmsman on the barge is not a licensed man and at the informal hearing held in your office on May 17th, it was stated that the Captain of the tug was not responsible for the men on the barges. We, therefore, ask, in order that additional safety may be procured to the public,travelling across the bridge and navigating the Rancocas River, that only licensed men by put in charge of the barges as helmsmen. At the present time apparently anyone can be picked up and employed as helmsman, even though he may not know or be able to speak English, and have no knowledge as to the steering of a barge.

1. The number of scows to be taken through the draw in one tow should be limited.
2. The size of towing lines should be between six and seven inches.
3. A licensed helmsman should be on each scow.



Mt. Laurel Historical Society
Mt. Laurel, NJ

Farmers wait to load their produce aboard the "Annie L. VanSciver"
at the Old Centerton Wharf
Mt. Laurel NJ c - 1910

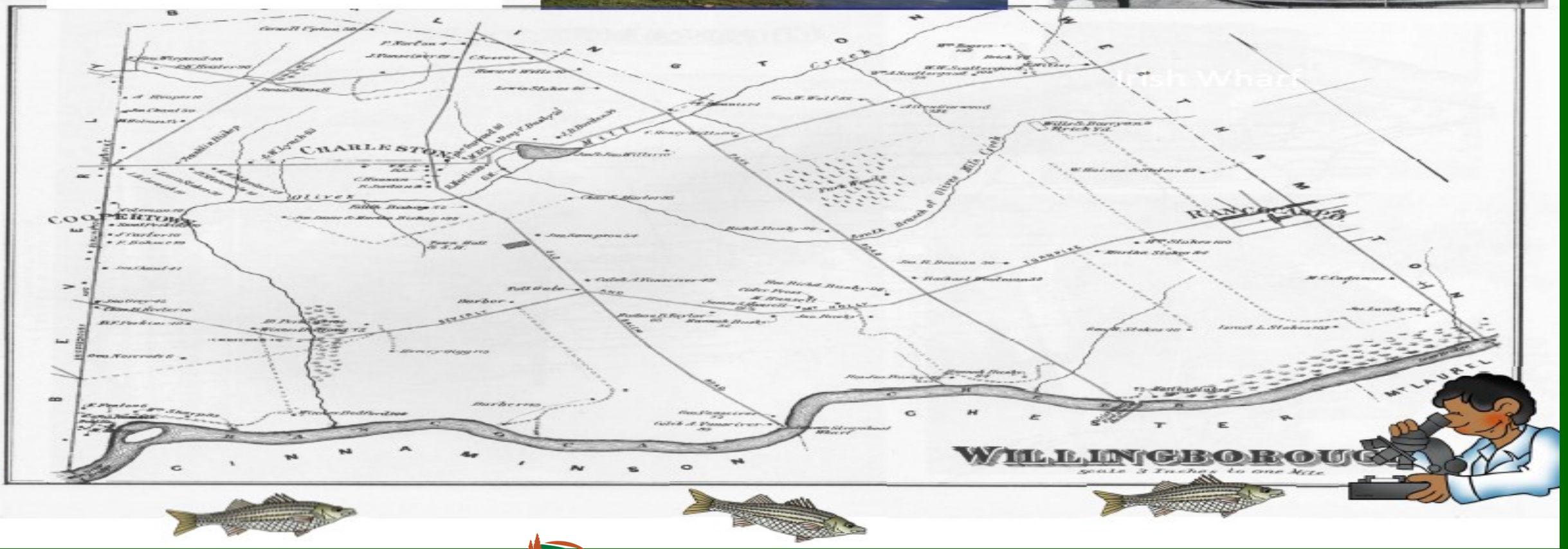
Rancocas Creek Mile 22

Golden Age of Steam

James Stokes, Centeron Sand Mine

Reference: P. Uhland Collection....Thanks and Obliged

Willingboro 1842 Note Landings on Rancocas Creek Tide Waters



Borton Landing

Used w Permission

Moorestown's Borton Landing

Rancocas Pathways

Exploring Historic Pathways, Discovering New Understandings

Moorestown's Maritime

Exploring Historic Pathways, Discovering New Understandings

Rancocas Pathways

Mill Creek

Rt 130 Bridge

Willingboro
THE TOWNSHIP OF
NEW JERSEY
A Naturally Better Place to Be.

Adams Steamboat Wharf

1870's Willingboro Rancocas Creek Heritage Areas

Sites of Interest

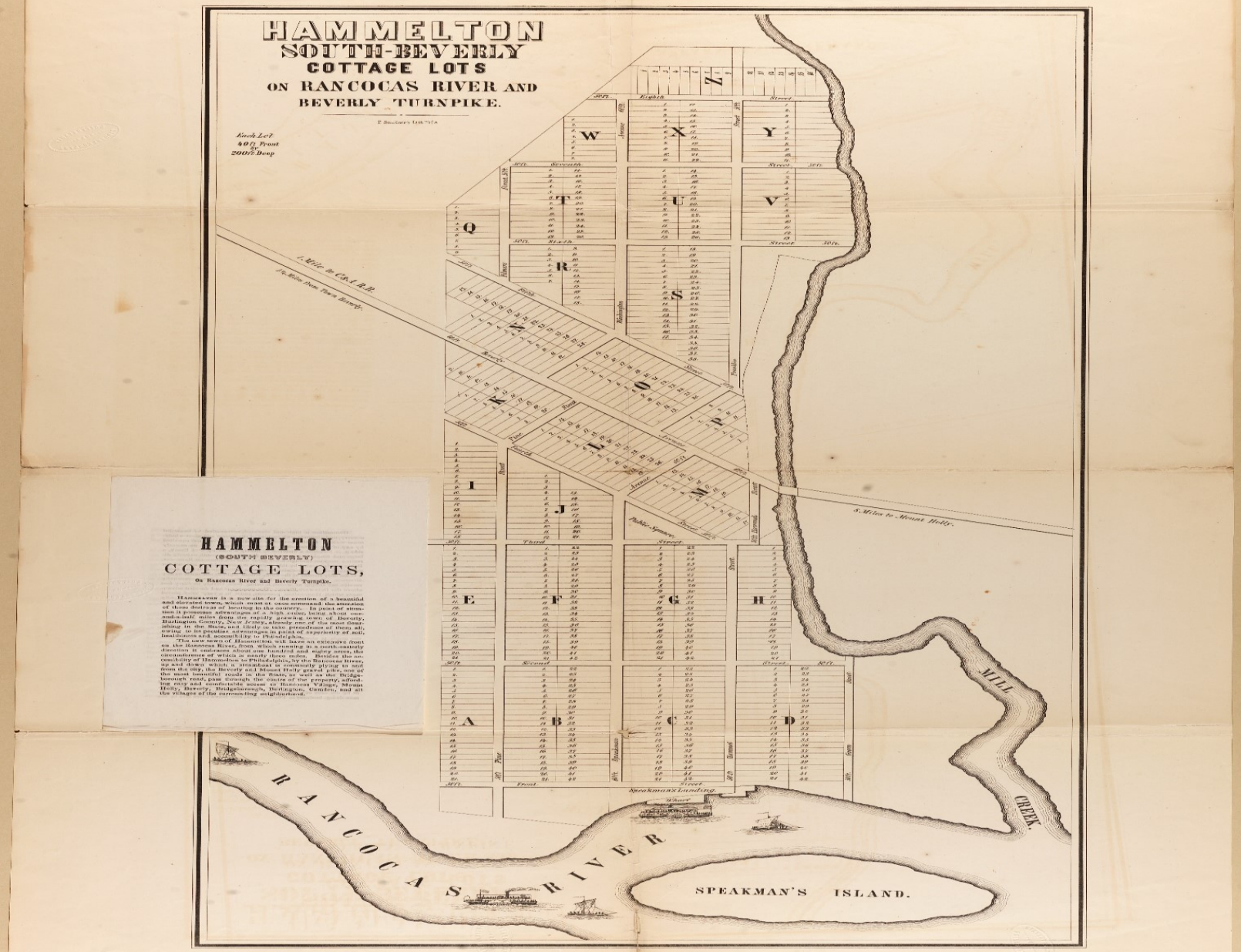
Buzby's Landing

Irish Wharf

Centerton Bridge

Exploring Historic Pathways, Discovering New Understandings

Tug and Barge Graveyard - Willingboro Lakes County Park - Burlington County Greenway



1890's

Proposed Development

Rancocas Creek Mill Creek

Willingboro

Rancocas River – Below the confluence or the forks of the Rancocas where the North and South Branch Join, technically becomes Rancocas River. Its known locally as the Rancocas.

Note: Proposed Landing

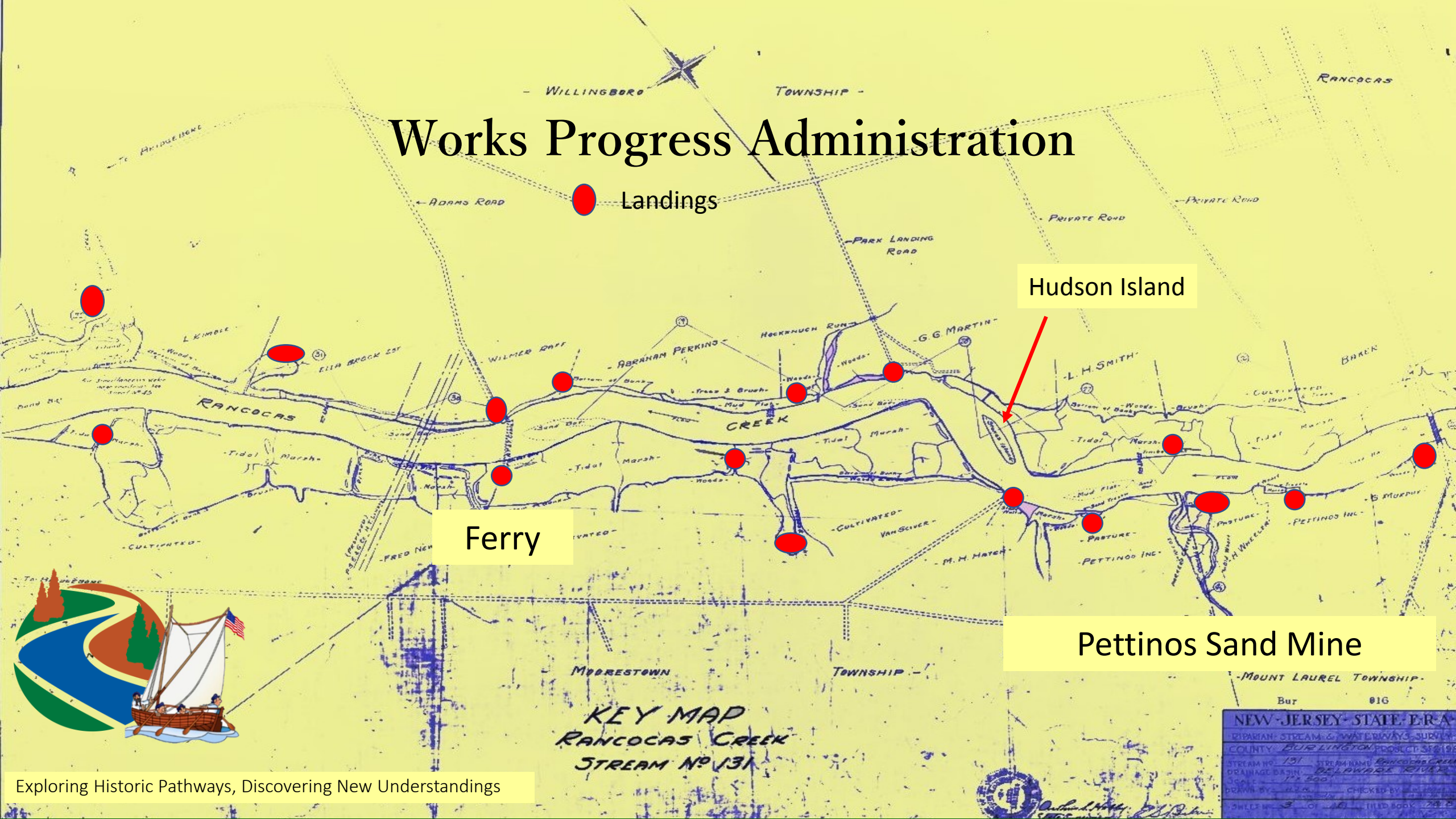
Works Progress Administration

Landings

Hudson Island

Ferry

Pettinos Sand Mine



Exploring Historic Pathways, Discovering New Understandings

Courtesy Peter Fritz

Maritime Cultural Narrative

Creek Mile 28 - Community Incubator

1876 Shad Fishing Rancocas Creek

Langhorn Thorn, Warden of Burlington County reports on the Rancocas Creek at Delanco, Riverside and Bridgeboro there are 37 shad fishing nets in place, average length 140 fathoms (840 feet), 8 feet in depth,

Catch 1,800 shad sold $35.00 per one hundred

1866-71

U.S., PA & NJ Fish & Game Commissions organized in Part to regulate shad fishing. PA took responsibility for the Susquehanna River believing it to be a better shad fishery. NJ took responsibility for the Delaware River in Part because most of the successful shad spawning grounds were on the east side (more unspoiled tributaries, less deforestation and lower water temperatures). Complaints arise against Kensington and Fishtown fishermen who ignore the regulating authorities in NJ by rowing away. These fisherman believe they have ancestral fishing rights along the Delaware River.

Industrialization

Exploring Historic Pathways, Discovering New Understandings

Rancocas River
Aids to Navigation and Dredging

Rancocas Creek

Navigation Laws

NJ Legistlature

RANCOCAS, OR ANCOCAS CREEK.

1783.	To build and sustain mill-dam across the north branch of Ancocas creek at Fork Bridge.....	7	ses.	2	sit,	"	71
1788.	Act for the improvement of the navigation of the southwest branch of Ancocas creek, amended.....	13	"	1	"	"	491
1792.	Act for the improvement of the navigation of the southwest branch of Ancocas creek, of November 28, 1788, amended.....	17	"	1	"	"	793
1791.	Biddle, Stacy, to authorize, to erect a dam across the north branch of Rancocas creek at Slab bridge.....	16	"	1	"	"	726
1792.	Jones, Benjamin, junior, to erect a dam across the north branch of Rancocas creek at Slab bridge	16	"	2	"	"	766
1792.	President, Managers and Company of Rancocas Toll Bridge, incorporated	17	"	1	"	"	806
1798.	President, Managers and Company of Rancocas Toll Bridge, act amended, part of act of November 28, 1792, repealed.....	22	"	2	"	"	263
1807.	President, Managers and Company of Rancocas Toll Bridge, amended.....	32	"	1	"	"	47
1793.	Parker, Jacob, for dam on main branch of Ancocas creek.....	17	"	2	"	"	842
1795.	The President, Managers and Company for the improvement of the navigation of the north branch of Rancocas creek.....	19	"	2	"	"	1041
1796.	The President, Managers and Company for the improvement of the navigation of the north branch of Rancocas creek, act of November 16, 1795, amended.....	20	"	2	"	"	40
1825.	The President, Managers and Company for the improvement of the navigation of the north branch of Rancocas creek, act of November 16, 1795, amended.....	50	"			"	48
1827.	The President, Managers and Company for the improvement of the navigation of the north branch of Rancocas creek, act of November 16, 1795, amended.....	52	"	1	"	"	3
1805.	Howell, Samuel E., to erect a mill-dam across the north branch of Rancocas creek	30	"	1	"	"	510
1812.	Earl, William L., and Thomas R. Lacey, to erect and maintain a mill-dam, &c., across the south branch of the main north branch of Rancocas creek.....	37	"	1	"	"	3
1817.	Earl, William L., and Thomas R. Lacey, and John Black, to erect dam across one of the branches of Rancocas creek.....	41	"	2	"	"	32
1806.	Bolton, Joseph, and Rolen Jones, to erect and maintain a mill dam, &c., across the south main branch of Rancocas creek, in the township of Northampton.....	30	"	2	"	"	669
1817.	To clear out and improve the navigation of the north main branch of Rancocas creek, between the town of Mount Holly and the south main branch of Rancocas creek.....	41	"	2	"	"	30

Aid to Navigation

Presented by Rancocas Pathways, Westampton

I-53 RANCOCAS RIVER, N. J.

APPROPRIATIONS.

1881,	$10,000,	**81,** 795.
1882,	10,000,	**82,** 778.
1890,	[1] 10,000,	**91,** 1085.
1892,	5,000,	**92,** 936.
1894,	3,000,	**95,** 1068.
1896,	[2] 2,000,	**96,** 927.
1899,	[2] 2,000,	**99,** 1356.
1902,	3,000,	**02,** 1047.
Total,	45,000	

COMMERCE.

Description of, **95,** 1084, 1087.
1901, 321,135 t., **02,** 1048.

CONTRACTS.

1881. American Dredging Co., dr., 55¢ c. y., **81,** 796.
1882. American Dredging Co., dr., 32¢ c. y., **83,** 635.
1891. F. C. Somers, dr., 22¢ c. y., and removal of 3 wrecks, at a total of $800, **91,** 1085.
1892. F. C. Somers, dr., 14¾¢ c. y., **92,** 935.
J. P. Randerson, dr., 20¢ c. y. ($4,000), **93,** 1175.
1894. F. L. Somers, dr., 17¢ c. y. ($2,125), **95,** 1068.
1897. F. C. Somers, dr., $1,767.59, **98,** 1097.
1899. J. L. Mills, dr., 25¢ c. y. ($1,700), **99,** 1357.
1903. F. K. Wills Construction Co., contraction works (wing dams) on Lumberton Branch, **03,** 984.

ENGINEERS.

Chief of Engineers. **R.,** **80,** 98; **81,** 126; **82,** 123; **83,** 124; **84,** 133; **85,** 123; **86,** 120; **87,** 82; **88,** 82; **91,** 116; **92,** 117; **93,** 126; **94,** 115; **95,** 129, 132; **96,** 118; **97,** 150; **98,** 153; **99,** 174; **00,** 198; **01,** 238; **02,** 179; **03,** 166; **04,** 157; **05,** 164; **06,** 177; **07,** 185; **08,** 194; **10,** 256.

In charge:
Col. J. N. Macomb, 1880–82. **R.,** **81,** 795.
Capt. W. Ludlow, 1882–83. **R.,** **82,** 777.
Lt. Col. G. Weitzel, 1883–84. **R.,** **83,** 635.
Maj. W. H. Heuer, 1884–85. **R.,** **84,** 833.
Lt. Col. H. M. Robert, 1885–91. **R.,** **85,** 849; **86,** 841; **87,** 807; **88,** 708.
Maj. C. W. Raymond, 1891–1901. **R.,** **91,** 1084; **92,** 935; **93,** 1174; **94,** 854; **95,** 1066, 83, 86; **96,** 925; **97,** 1219; (Lt. Col.) **98,** 1097; **99,** 1356; **00,** 1578; **01,** 1327.
Col. Jared A. Smith, 1902. **R.,** **02,** 1046.
Capt. J. C. Sanford, 1903. **R.,** **03,** 984.
Capt. C. A. F. Flagler, 1904–08. **R.,** **04,** 1228; **05,** 1097; (Maj.) **06,** 1051; **07,** 1107; **08,** 1149.

Assistant: A. Stierle. **R.,** **83,** 635; **84,** 834.

OPERATIONS.

1881–82. 723 l. f. dike built from n. bank to upper end of Hamills Isld.; 17,000 c. y. dr. from the chan., **82,** 778.
1882–83. 25,983 c. y. dr. from the chan., **83,** 636.
1883–84. Removal of "Coates Bar" completed, **84,** 834.
1890–91. 3 wrecks and 32,749 c. y. removed from chan. between the mouth and Centerton, **91,** 1085.
1891–92. 7,330 c. y. dr., **92,** 935.
1892–93. 19,936 c. y. dr., **93,** 1174.
1894–95. 12,044 c. y. dr., **95,** 1067.
1897–98. 5,026 c. y. dr., **98,** 1097.
1899–00. 5,879 c. y., p. m., dr., **00,** 1579.
1902–03. 5 wing dams completed; about 60% of entire work completed, **03,** 984.
1903–04. 18 wing dams in all built; work completed, **04,** 1228.

PHYSICAL CHARACTERISTICS.

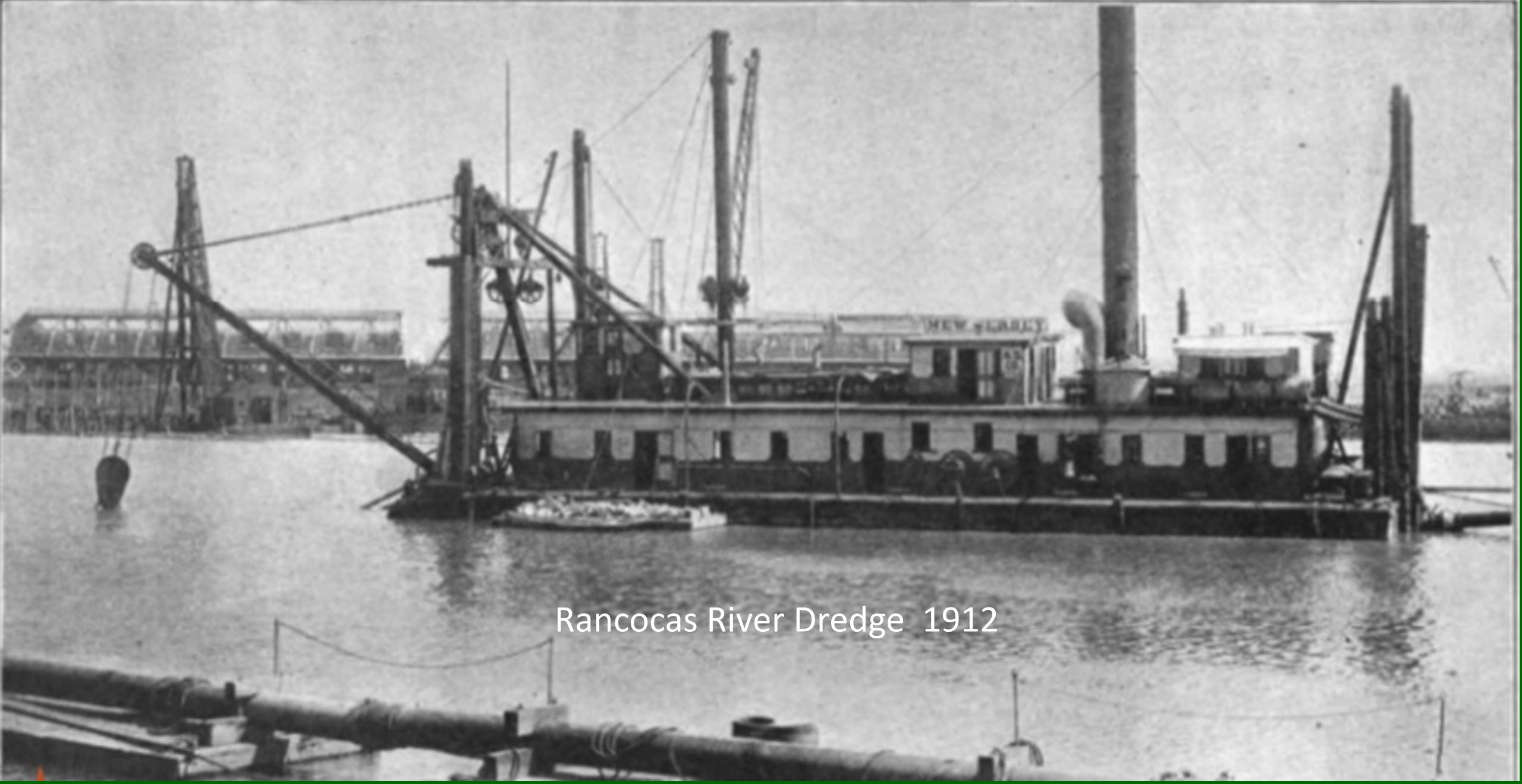
Description of R. and obstr. therein, **81,** 796; **95,** 1084, 1086.

PROJECTS.

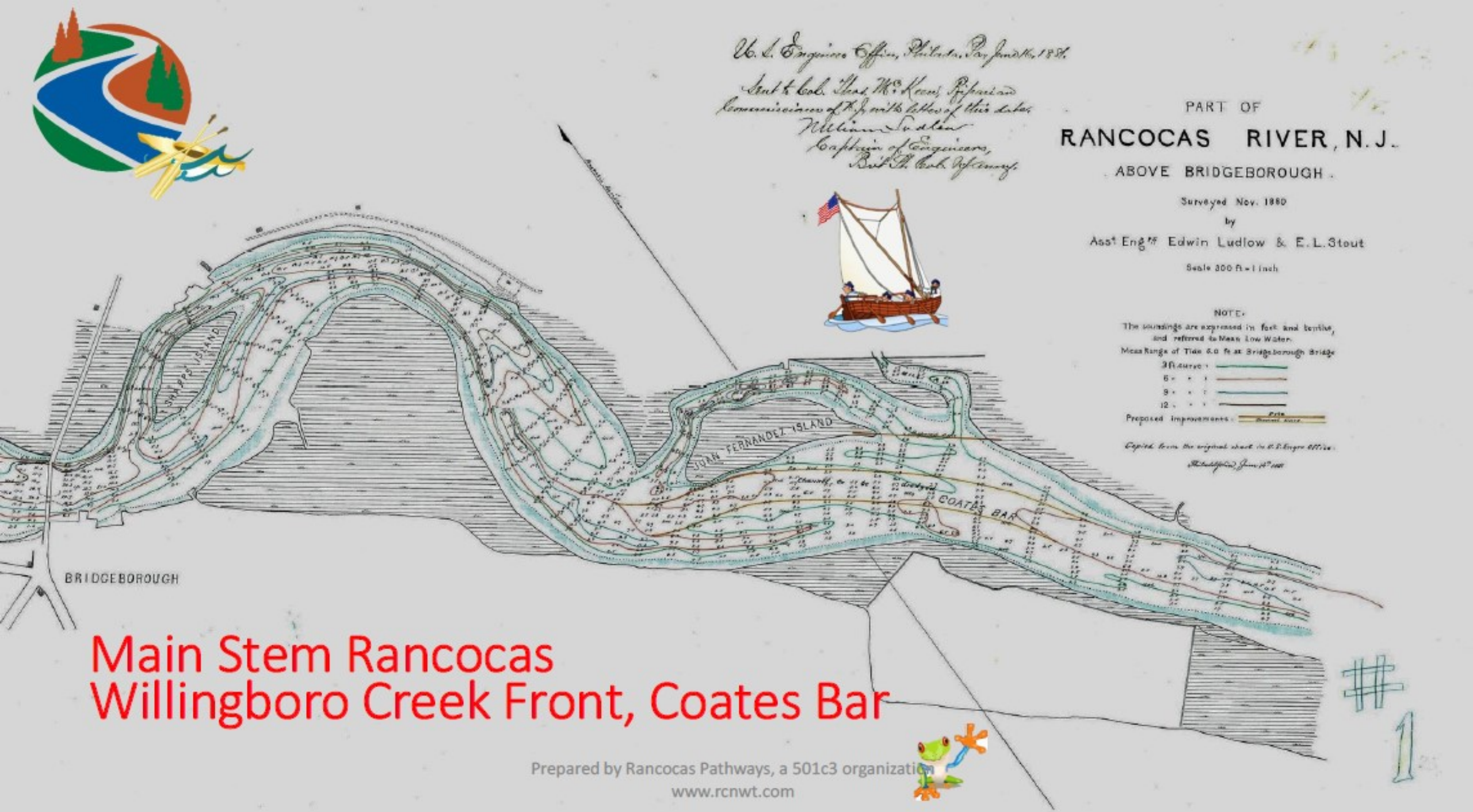
By Col. Macomb, 1881, chan. from 150′–200′ w., l.-w. d. of 6′ from mouth to Centerton, 7½ m., and 5′ l.-w. chan. thence to Mount Holly; est., $81,236, **81,** 798; **91,** 1084.
By Maj. Raymond, 1894, chan. 5′ x 50′ in continuation of chan. dr.in 1893. Extension found to be inpracticable, **95,** 1067.
By Maj. Raymond, 1897, 6′ chan. 30′ w. at Pattersons Landing and Paxsons Landing in Lumberton Branch as far as the $2,000 app. in 1896 would permit, **98,** 1097.
By Lt. Col. Raymond, 1899, 6′ chan. m. l. w., 30′ w., through the shoals below Moores Landing and below Hainesport as far as available funds would permit, **99,** 1356.
Act 1902 au. $3,000 for continuing imp., **02,** 1007.

SURVEYS.

Au. act June 14, 1880; made, 1881, by Col. Macomb, **81,** 796.
Ex. au. act Aug. 17, 1894; made by Maj. Raymond, 1894 (**R.** unfav.), **95,** 1083.
Ex. of Lumberton Branch au. act Aug. 17, 1894; made by Maj. Raymond, 1894 (**R.** unfav.), **95,** 1086.
Sur. of Lumberton Branch made by Maj. Raymond, 1897, **97,** 1219.
Pre. ex. and sur., mouth to Mount Holly; **R.** by Capt. L. H. Rand [3] (**R.** unfav.), **10,** 256.
Maps.[3]

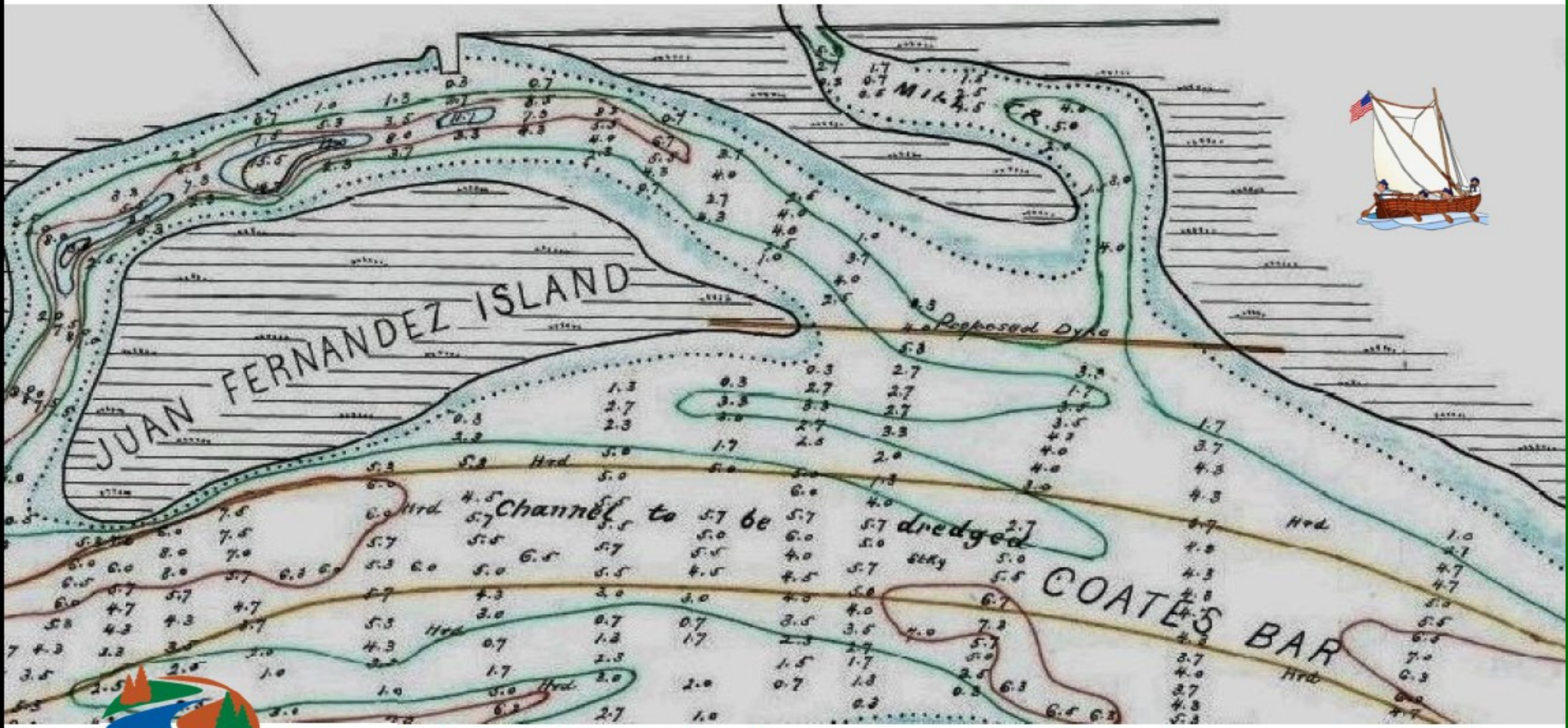


Rancocas River Dredge 1912



Main Stem Rancocas
Willingboro Creek Front, Coates Bar

Prepared by Rancocas Pathways, a 501c3 organization
www.rcnwt.com



Creek Channel Depth Reading in Feet - Main Stem Rancocas
Willingboro Creek Front, Coates Bar

Back in the day when a steam boat was no longer profitable they were run ashore on the creek bank leaving behind todays relics

Vessel Graveyard - Rancocas Creek

"Louise," a 50′ tug powered with a Mianus oil-engine

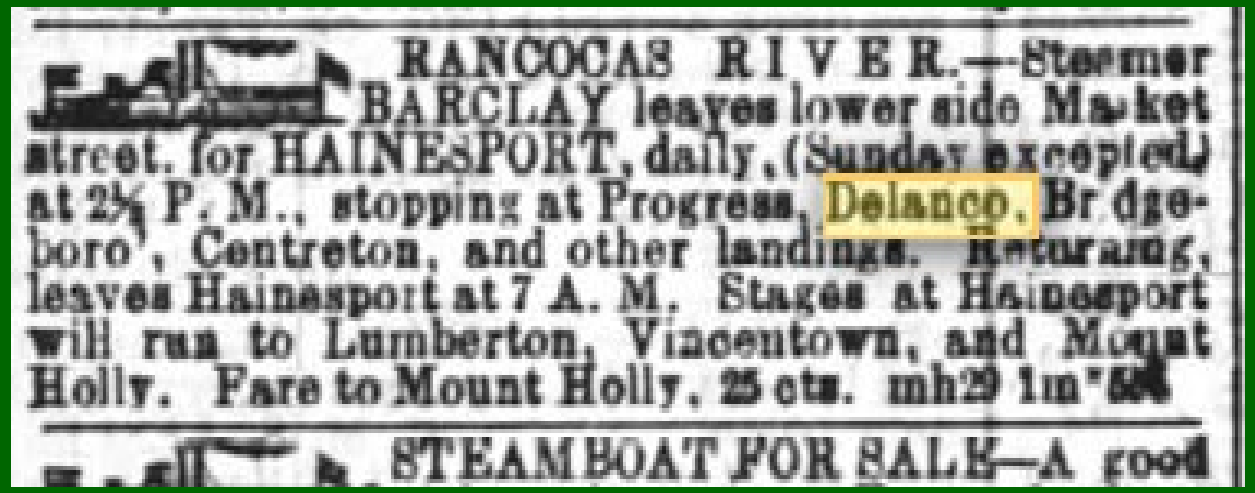
OIL-ENGINED TUG FOR PHILADELPHIA

A motor-tug for the Philadelphia Paper Manufacturing Company under construction by the Rancocas Construction Company, from designs drawn up by J. Murray Watts has been previously re

55 Ft. Diesel Towboat

MARION ADELE, 55 ft. Diesel towboat, has been completed recently by the Rancocas Construction Co. at Delanco, N. J., for the Meteor Transport & Trading Co., Miami Beach, Fla. She was designed by J. Murray Watts, Naval Architect, Phila. The boat is powered by a 150 hp. 6-cylinder Standard full Diesel engine which turns a 4-bladed wheel 50 in. diameter by 36 in. pitch at 400 r.p.m. and gives the vessel a speed of 14 m.p.h. light. MARION ADELE has a length on waterline of 52 ft., beam of 15 ft., and draft of 5 ft. 6 in. Pilot house control has been fitted so that the vessel may be handled by one man. Electric bilge pump, air compressor and general service pump are installed.

BARBARA, 3000 ton rotor ship, and second rotor ship to be constructed has passed successfully through a series of trial trips in the North Sea. Besides having three large rotors she is fitted with Diesels for auxiliary use. Her performance was good and she maintained a speed of 10 knots



RANCOCAS RIVER.—Steamer BARCLAY leaves lower side Market street, for HAINESPORT, daily, (Sunday excepted) at 2¼ P. M., stopping at Progress, Delanco, Bridgeboro, Centreton, and other landings. Returning, leaves Hainesport at 7 A. M. Stages at Hainesport will run to Lumberton, Vincentown, and Mount Holly. Fare to Mount Holly, 25 cts. mh29 1m*

STEAMBOAT FOR SALE—A good

Reference: 1849

Muskrat Prices Attract Hunters.

Delanco, N. J.—The prediction that muskrat pelts will be worth $1 apiece the coming winter is attracting many persons to fur hunting in South Jersey and thousands of traps have been set.

1902

Mar

TROLLEY AND BOAT FOR CHARMING TRIP

From Trenton to Camden, to Mount Holly and Burlington and Then Home Again.

For a combination of city, suburban and rural scenes in life no more interesting trip can be suggested for Trenton people than to go to Philadelphia by boat, cross on the ferry to Camden and then go to Burlington via Mt. Holly.

For a circuitous trip of varied delights the outing may take the form of an all-day picnic by rambling a little out of the beaten paths at one or more of the modern, thriving suburban towns, or the historic villages scattered along the route from Camden to Burlington. The return to Trenton may be made by trolley, train or by river steamer.

The distance from Camden to Burlington is about twenty-six and a half miles. By stopping at Merchantville, where a fresh fare is collected, and again at Moorestown, or just beyond Moorestown, where one can walk less than a mile through one of the most historic portions of South Jersey to Stanwick, where another nickel is requested by the insatiable conductor; and again at Hainesport, where the famous old milling industries are scattered along Rancocas creek. Between Hainesport and Mt. Holly one can secure the most varied scenes for the money expended. But the through trip is interesting for a warm day, when rambling does not appeal to the tourist, as the trolley runs through interesting sections of open country, dairy

Reference: 1889

Delanco Slides 295 - 301

Top Notch Brochure – Anchor's Delanco's Fusion w Rancocas Creek Maritime Cultural Landscape

Credited to Delanco Historic Commission

Delanco's Historic Riverfronts

By Peter Fritz

For a village like Delanco, nestled between the Delaware River and the Rancocas Creek, it was natural for its early residents to be tied to life on the water. From early times, local watermen netted shad and sturgeon, hunted ducks, geese, rail and reed birds, and built the specialized small craft that made these activities possible. Delanco's Historic Preservation Advisory Board is seeking information on this chapter and we need your help.

A wooden tugboat and a two-masted yawl sitting at a wharf at the foot of Poplar Street. The PRR trestle bridge is visible in background. Can anyone name these vessels or help us date this photo?

Transportation on the Delaware and Rancocas

We know that as early as 1787, regular steamboat service on the Delaware between Philadelphia and Burlington City was attempted by inventor John Fitch. It was not commercially successful and lasted less than a year. Others followed, and in 1823 regular steamboat service was established between Philadelphia and Lumberton and Mount Holly by way of the Rancocas Creek, with stops for passengers and freight at the many wharfs in between.

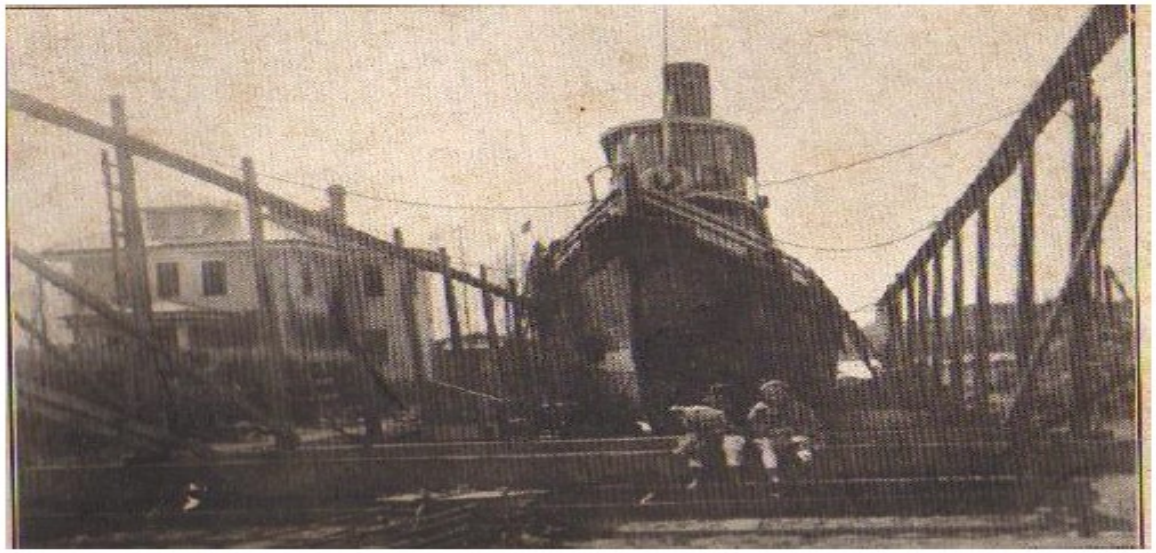
Steamboat Admiral of the VanSciver Freight Line is shown on the Rancocas Creek near the foot of Buttonwood Street in Delanco. Regular steamboat service between Philadelphia and Mount Holly began on the Rancocas in 1823 and continued well into the 1900s.

One such wharf, Wallace's Landing, was located at what would later become Delanco. Can anyone help us identify Wallace? In 1850 a fine deepwater crib and rubble wharf was built at the foot of Union Avenue on the Delaware River. It was originally referred to as Parson's Wharf for the retired dentist who operated a nearby boardinghouse on Union Avenue.

Known wharves and landings in the Delanco area

Ca. 1823	Wallace's Landing	Rancocas at Burlington Avenue?
Unknown	Poplar Street Wharf	Rancocas at Poplar Street
Ca. 1851	Bechtold's Wharf	Rancocas at Pavilion Avenue
1850 - 1969	Parson's Wharf	Delaware at Union Avenue

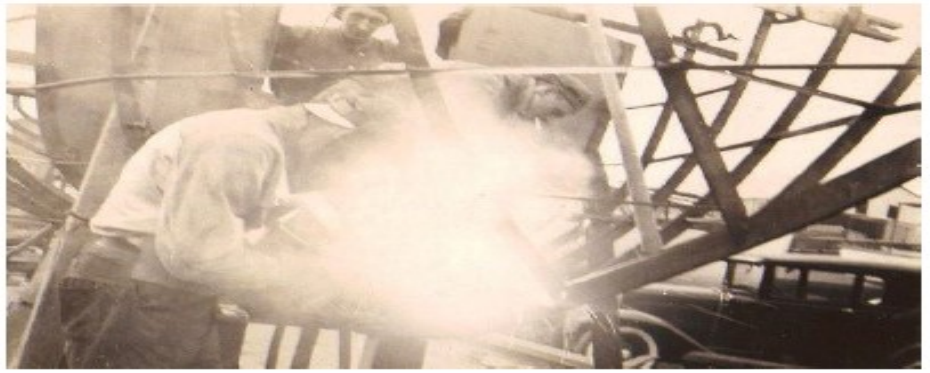
Early Delanco Business Directories tell us Samuel Seeds shipbuilding was operating by 1876, followed by George Hartley by 1895. Sam Borel's Boatyard appears in the early 1900s. In 1913, a young man named Louis D. Steel, son of industrialist Thomas C. Steel, began building pleasure boats on Rancocas Avenue near the foot of Poplar Street. He took on several partners and reorganized as Rancocas Construction Co. in 1922.



Two boys share a lunch while sitting on the massive carriage on Delanco's largest shipway. The first home of Thomas C. Steel, located on the Poplar Street Wharf is shown in the background. Can anyone identify this wooden tug or the names of the children?

Delanco Shipbuilding Co. was in operation by 1919. Then between 1939 and 1941 Edmond E. Robins Shipbuilding and Welding Co. was established between Ash and Poplar Street, building steel-hulled ships for military use. During WWII, the large loft of the former Ridgway Shoe Factory at the foot of Ash Street was used to replicate patterns for U.S. Navy Patrol Torpedo Boats; making a useful contribution to the war effort.

The tugboat Emma R, named for Mrs. Robins is shown in its finishing stages at Robins Shipyard in 1941. Delanco was particularly known for production of seagoing tugs that were exported to England, the Netherlands, South America, and the Caribbean.



Two welders at work on a steel-framed ship under construction at Robins Shipyard sometime between 1939 and 1941.

Special thanks to the Daniels and Steel families, formerly of Delanco, and the Robins family of Riverside for providing many of these photographs to the Delanco town archive for preservation. Thanks also to Jay Cohen of Delanco and the Riverside Historic Society for research.
Thanks to Paul Schopp for his review and suggestions.

A steel ship, probably the 65-foot, 60-ton US Army Ferry Maj. Carroll Edgar, under construction at Robins Shipbuilding in Delanco. It was launched September 9, 1941 and put into service at Ft. Slocum, NY.

Prior to 1958, the Lakeman Boat Company was established off Rancocas Avenue and Orchard. It then moved to the foot of Ash Street at Rancocas. It is not yet clear if Lakeman was a broker or a builder. By 1958 Harry Wolf Shipbuilding was constructing tugboats for service on the Delaware River and beyond. In its heyday Delanco's boatbuilding industry had several marine railways. The largest, capable of hauling ships of 65 feet of length and a draft of five feet, is still located at the yard at the foot of Poplar Street.

A 1920's news article announced a drydock capable of handling ships of 120 feet and a houseboat factory were planned. But we have no evidence they were ever built.

* * *

The Delanco Historic Preservation Advisory Board asks anyone who has additional information on any of these companies to contact us. We have displayed material on Delanco's Historic Shipyards in the past. If you have additional photos, hand tools, ship models or other artifacts to lend or donate for future exhibits, please let us know. We can be reached by email at: PFritz5976@aol.com or by phone at 609-760-7746.

Peter Fritz is Chair of the Delanco Historic Preservation Advisory Board.

March 10, 1922 MOTOR BOAT 41

Just the boat you've had in mind

Standardized production has made it a reality —and priced it to fit nearly every pocket.

How many times have you planned, in your mind, a cruiser just like this—and wondered why some one did not supply it at a price within reason?

Well, here's the boat you've dreamed of—the "Delanco 27"—*complete* at $1500.

No digging down for extras.

Consider this special equipment on each one of these V-bottom "Delanco 27" Cruisers—

Two-burner stove, toilet, sink, liquid compass, brass fog bell, flags and flag poles, rugged galvanized frame covered with khaki awning over the entire cockpit, 8-ft. military mast, anchor, anchor rope, lights, cushions for cabin and cockpit and everything else that goes to make a boat ready for her first cruise.

If you do not already know the details of this "Boat Without a Competitor," we shall be pleased to send you the details in Folder M1.

This V-bottom "Delanco 27" is 27' x 9' 6" x 3' 6". Main cabin 6 ft. 6 in. long and forward is a roomy toilet. The after end of the raised deck structure has a galley 3 ft. 4 in. long and the width of the boat. There is 5 ft. 8 in. headroom under the carlins in the cabin. The cockpit is 9 ft. 2 in. long. 16 h.p. four cylinder Kermath power unit drives the boat, has high tension magneto and impulse coupling, reverse gear, etc. The gasoline tank is of 30 gal. capacity.

THE DELANCO SHIP BUILDING CO., INC.

At Delanco New Jersey

$1500

for this cruiser—complete in every detail.

A Boat without A Competitor

DELANCO 27

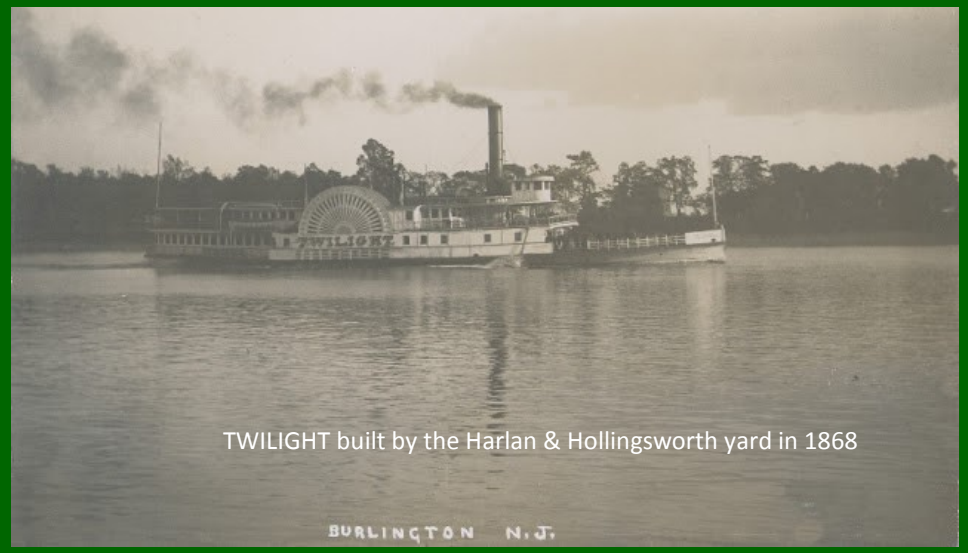
A 1922 magazine advertisement for a 27-foot motor yacht selling for the princely sum of $1,500. The cost rose later in the year to $1,800. This advertisementd was provided by Jay Cohen.

Produced by Delanco Historic Preservation Advisory Board
770 Coopertown Road, Delanco NJ 08075
www.delancotownship.com

Rancocas Creek Joins Delaware River

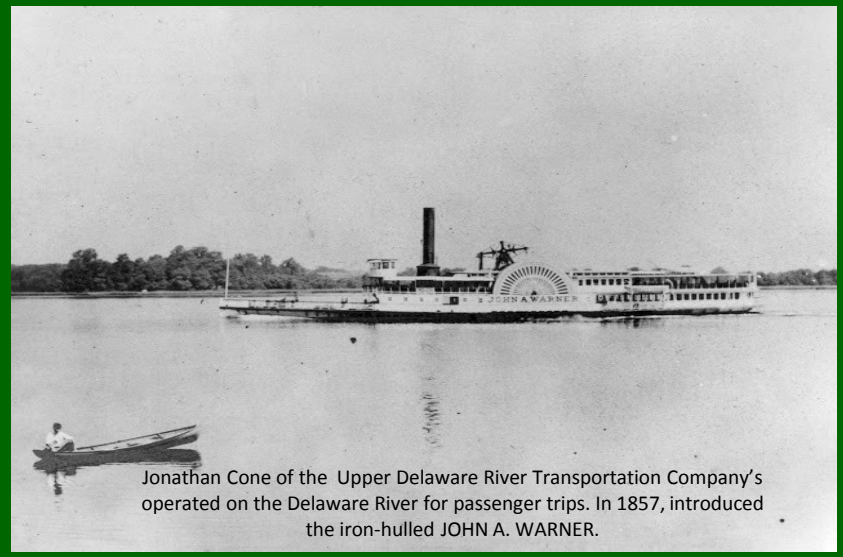
1898 Steamer Fare

Regularly scheduled trip was $0.25 one-way or $0.40 for a round-trip to Bristol or $0.50 to Trenton



TWILIGHT built by the Harlan & Hollingsworth yard in 1868

Samoset (American Ferry Steamship, 1897)



Jonathan Cone of the Upper Delaware River Transportation Company's operated on the Delaware River for passenger trips. In 1857, introduced the iron-hulled JOHN A. WARNER.

Columbia-1898-Delanco Landing

Model of Annie VanSciver, Rancocas Creek Streamer (1907)
Museum of the Albemarle, 2009 - Virginia Pilot

Three Musketeers – 1930

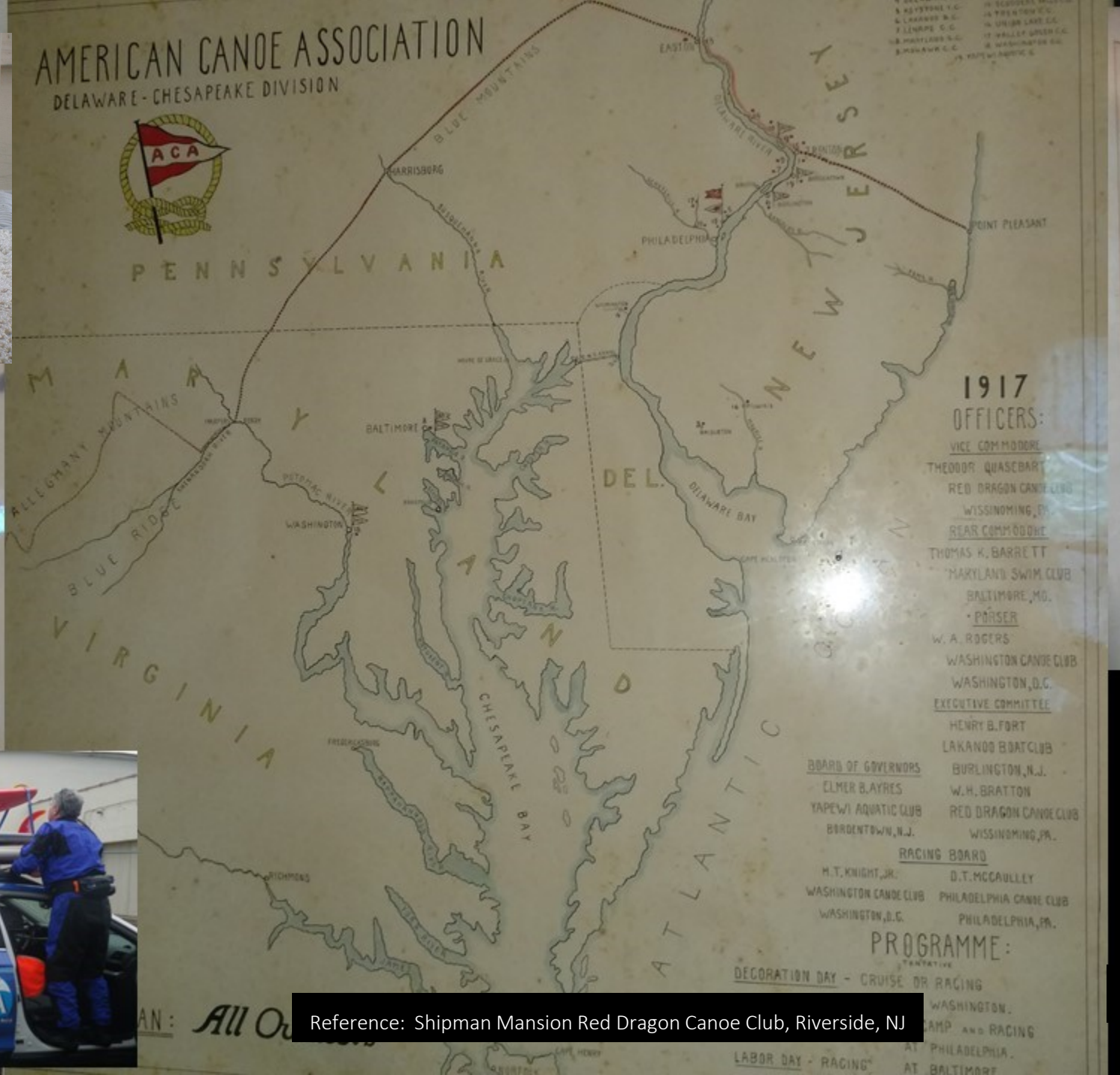
Pennsylvania Side of Delaware River

From the Log Book

August 7th, 1898

As the night fell the ugly clouds gradually rolled away, and we flew up the Rancocas on a strong flood by the light of a magnificent full moon, reaching the old camp above Mille Creek about 9 o'clock.

Mt. Holly Oxbow
2016



Reference: Shipman Mansion Red Dragon Canoe Club, Riverside, NJ

Rancocas Creek and the ACA

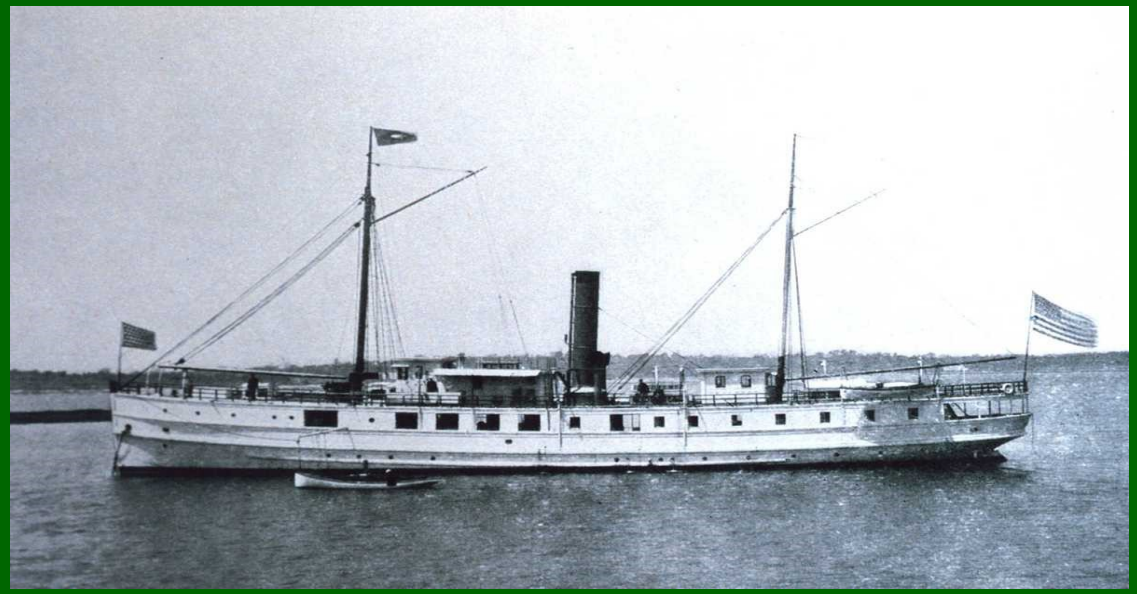
100 Years of Paddlesports

1897

Rancocas Creek Tidewater Fishery (Rancocas overfished then stocked w shad)

Fish Hawk's main deck was filled with hatching equipment to allow her to serve as a floating hatchery for American Shad, stripped bass, mackerel, and herring. A pump supplying 10,000 US gallons (38,000 L) of water per hour and two 500-US-gallon (1,900 L) distribution tanks fed the equipment. Fertilized fish eggs were placed in 36 hatching cones, each capable of hatching 200,000 American shad eggs, and feed valves regulated the current through the cones to keep the eggs gently in motion so they would not mat or settle to the bottom. *Fish Hawk* also had 18 hatching cylinders – each capable of holding 250,000 eggs – with wire gauze bottoms; the cylinders were suspended from beams hanging over the sides of the ship and Partially submerged, with nine on each side. Cam machinery caused the cylinders to rise gently and drop more rapidly for about eight inches (20 cm), which made the eggs circulate freely without settling on the bottom.

Reference: NOAA Historical Center



US Fish Hatchery Vessel "Fish Hawk" stocked Rancocas Creek w 800,000 Shad Fry 1897

Tracy Mueller Collection Main Stem Rancocas Creek Delanco

Rope Works in Center Background, Ship Yard on Background Right

Rancocas Creek

Joins

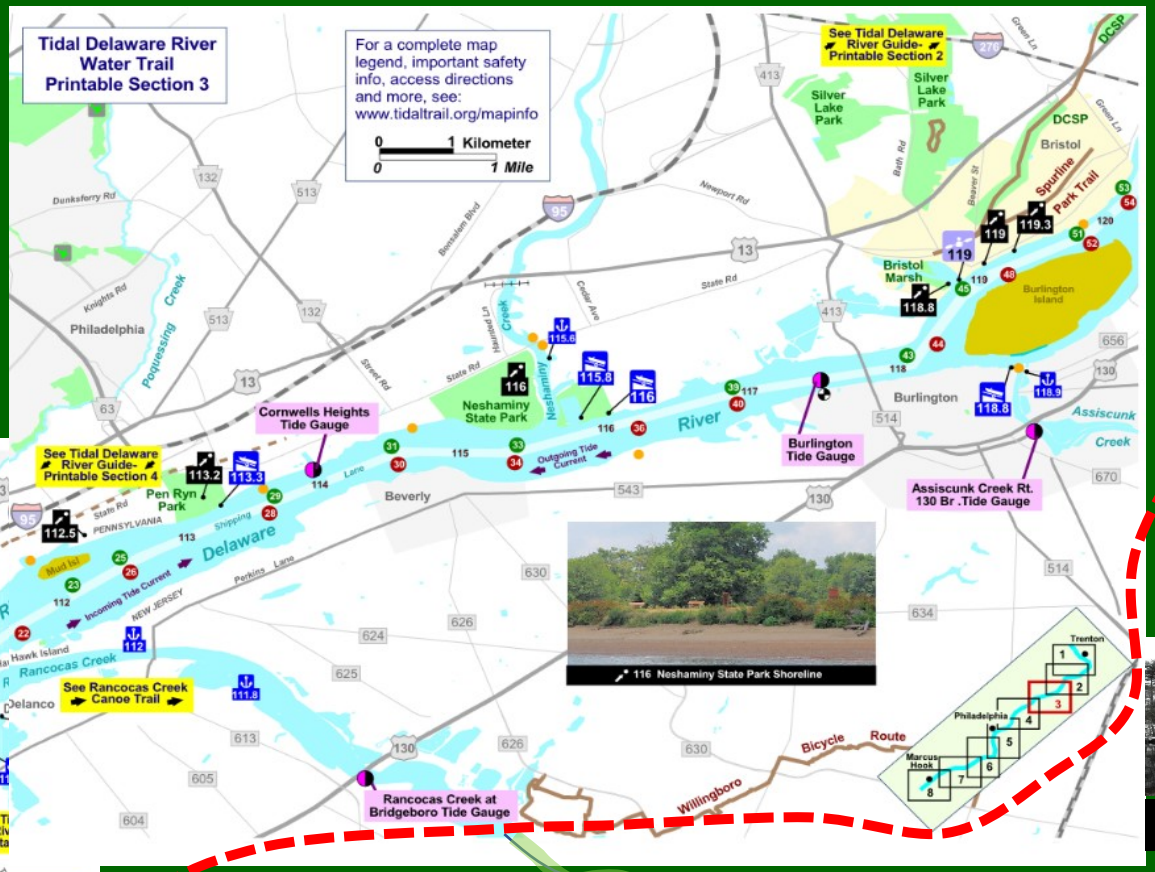
Delaware River

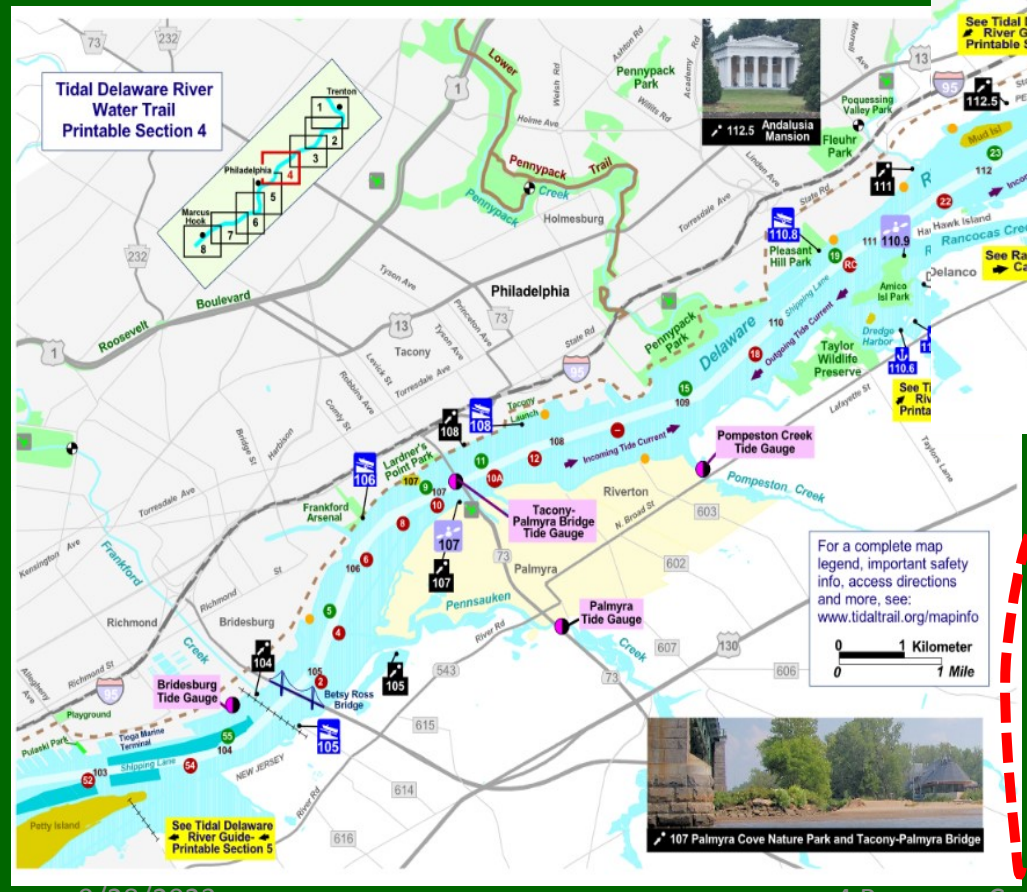
Rancocas River is formed when the N Branch and S Branch join at the forks of the Rancocas.

Approximate 30 miles East Whites Bog Historical Village, N Branch Rancocas Creek, NJ Pine Barrens: 15 miles East Head of Tide and Navigation: N Branch Mt. Holly, S Branch Lumberton
Philadelphia
Camden Harbor
Pier H
Piers for Bulk Liquids
Scrap Metal Piers
Over Delanco Viewshed
Tip of Hat Photo Sam
Dredge Harbor Marinas
Amico Island
Burlington County Parks
Riverside
Rancocas Creek Pine Barrens Western Outflow
Note: Dark brown tannic Pine Barrens waters flow into the Delaware River
Hawk Island
Delanco Township
Rancocas Creek and the Delaware River
Federal Navigation Channel Maritime Crossroads

Maritime Crossroads

Delaware River Water Trail





RCNWT Insert

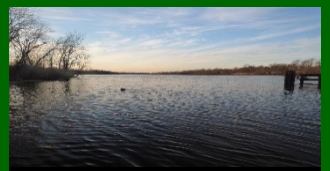
N Branch Channel

Main Stem

Rancocas Creek National Water Trail (nomination)

N Branch

Mt. Holly



Main Stem-Rancocas

Hainesport Boat Launch

Burlington County Park

Mt. Holly Oxbow – Mill Race

S Branch

Lumberton

Toms River

Toms River, a Piratical Set of Banditti*

*as headlined in Rivington's Royal Gazette, March 1782

Toms River headwaters originate in the NJ Pine Barrens.

Toms River served as an important port and a stopover for whaleboats, schooners, and sloops. Toms River saw mill cedar and oak timbers used for local ship-building

Logging

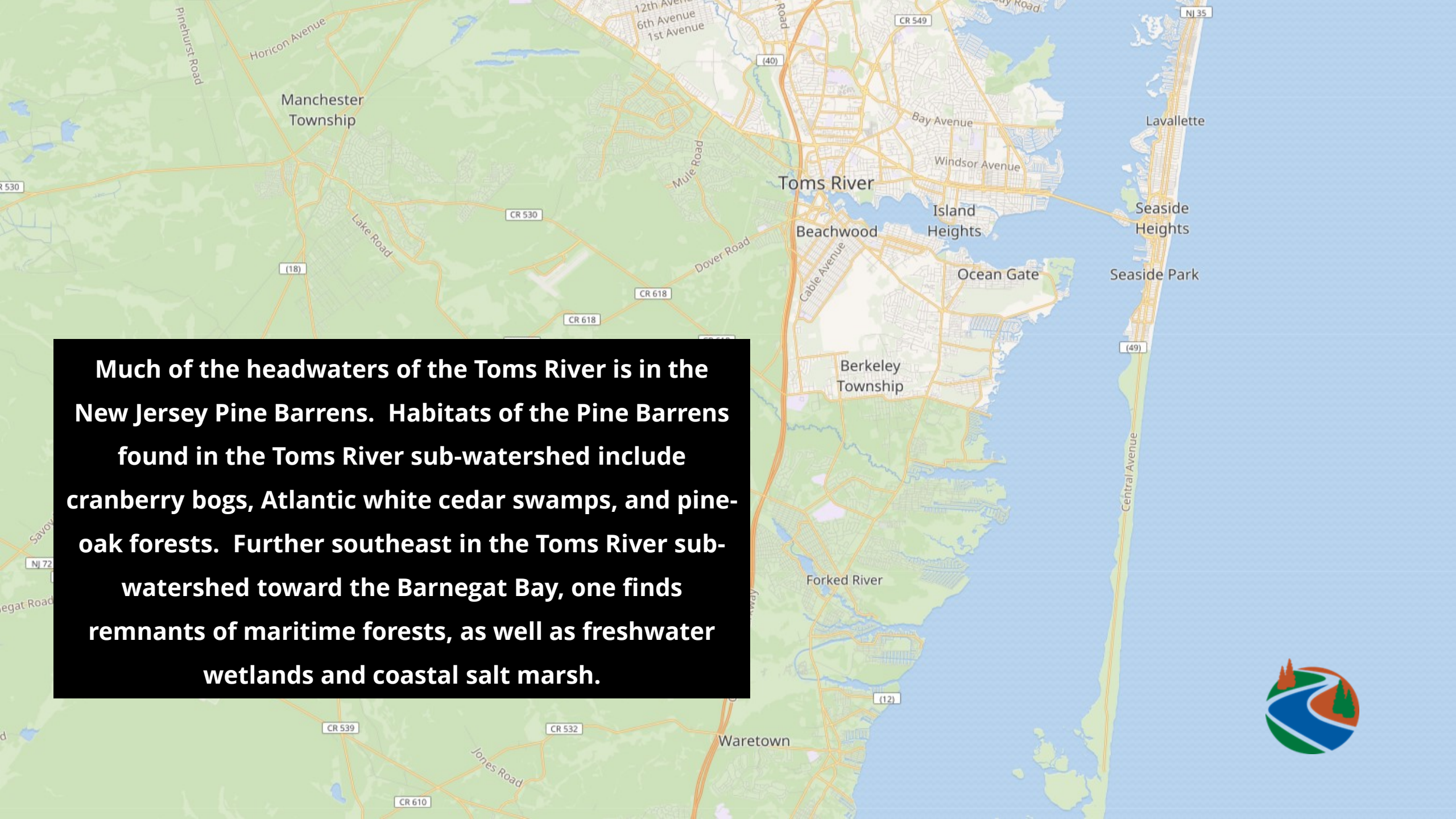
Ocean

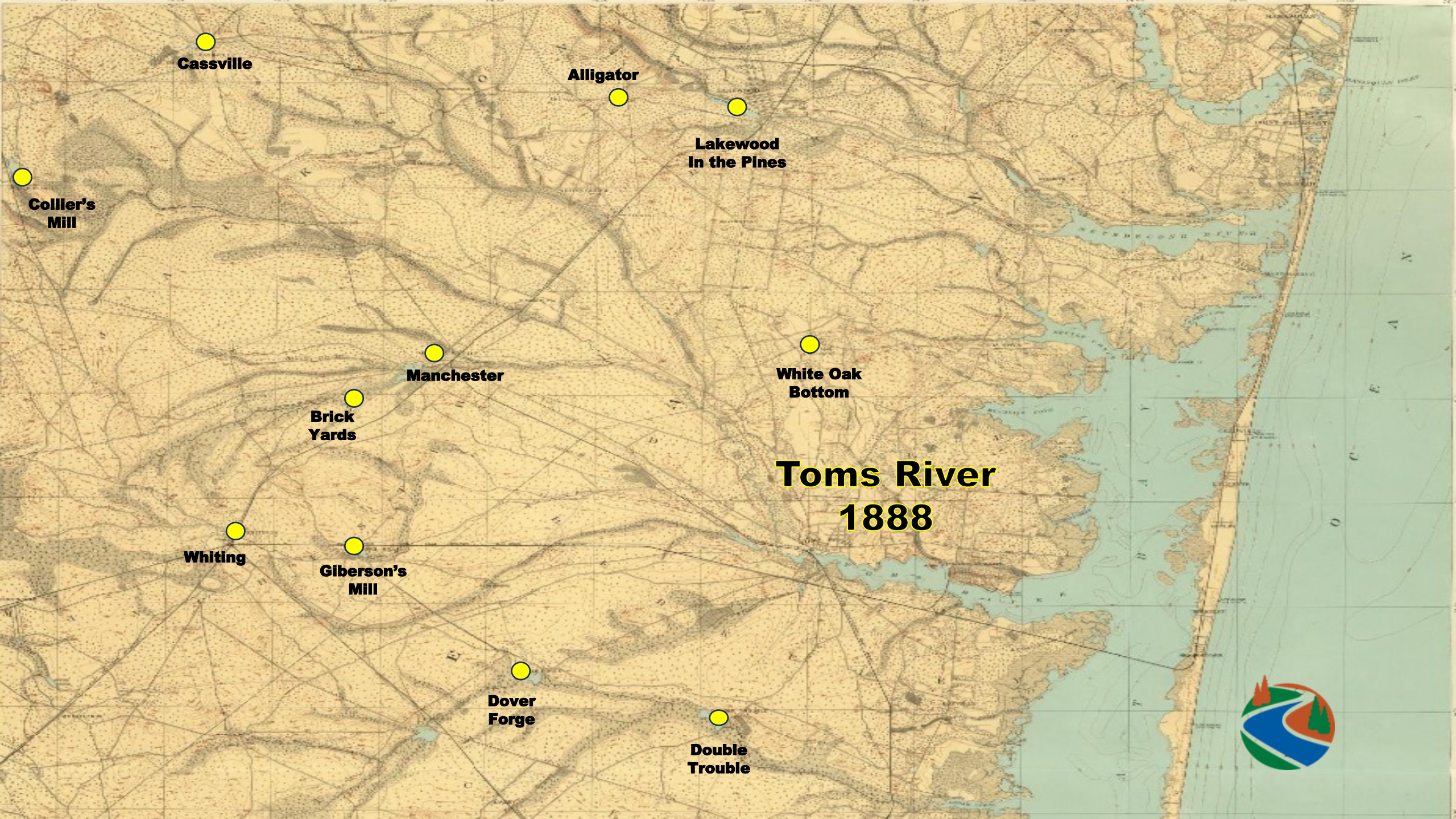
County

New Jersey

East of Camp Dix

Reference: ocean county library system


Much of the headwaters of the Toms River is in the New Jersey Pine Barrens. Habitats of the Pine Barrens found in the Toms River sub-watershed include cranberry bogs, Atlantic white cedar swamps, and pine-oak forests. Further southeast in the Toms River sub-watershed toward the Barnegat Bay, one finds remnants of maritime forests, as well as freshwater wetlands and coastal salt marsh.
Manchester Township
Toms River
Beachwood
Island Heights
Seaside Heights
Seaside Park
Ocean Gate
Berkeley Township
Forked River
Waretown
Lavallette
Bay Avenue
Windsor Avenue
Mule Road
Lake Road
Dover Road
Cable Avenue
Central Avenue
Pinehurst Road
Horicon Avenue
6th Avenue
1st Avenue
Jones Road
CR 530
CR 618
CR 549
CR 539
CR 532
CR 610
NJ 35
NJ 72
(40)
(18)
(49)
(12)


Cassville
Alligator
Lakewood
In the Pines
Collier's
Mill
Manchester
White Oak
Bottom
Brick
Yards
Toms River
1888
Whiting
Giberson's
Mill
Dover
Forge
Double
Trouble

Huddy Park - High Tide Toms River

On March 24, 1782, Captain Joushua Huddy led local militiamen in a fight to defend Toms River from an attack led by British soldiers and their Loyalist allies. Huddy was captured and executed without trial. His unlawful hanging became an international incident that stalled the signing of the Treaty of Paris, which formally ended the American Revolution and created the world's newest independent and democratic nation

Toms River

Revolutionary War

Privateers

PRIVATEERING ON OUR COAST—TOMS RIVER DURING THE REVOLUTION.

PRIZES TAKEN—AMERICANS CAPTURED—AN ENEMY SEARCHING FOR WATER LOSES HIS RUM—OLD CRANBERRY INLET, &c.

Toms River appears to have been occupied by the Americans as a military post during the greater part of the Revolution. The soldiers stationed here were generally twelve months men, commanded by different officers, among whom may be mentioned, Captains Bigelow, Ephraim Jenkins, James Mott, John Stout and Joshua Huddy. Captain Mott had command of a company called the "Sixth Company" of Dover, and Captain Stout of the Seventh Company. The Fifth Company was from Stafford, and commanded by Capt. Reuben F. Randolph. These companies all belonged to the militia organization of old Monmouth.

The duties of the militia stationed at Toms River, appear to have been to guard the inhabitants against depredations from the refugees; to check contraband trade by way of old Cranberry Inlet to New York, and to aid our privateers who brought prizes into the Inlet, which was a favorite resort for New Jersey, New England and other American privateers.

"August 12th, 1778. We learn that on Thursday night, the British ship "Love and Unity" from Bristol, with 80 hhds of loaf sugar, several thousand bottles London porter, and a large quantity of Bristol beer and ale, besides many other valuable articles, was designedly run ashore near Toms River. Since which, by the assistance of some of our militia, she has been brought into a safe port and her cargo properly taken care of."

The cargo of this ship was advertised to be sold at Manasquan, on the 26th of August, by John Stokes, U. S. Marshal. The articles enumerated in the advertisement show that the cargo must have been a very valuable one. The Americans were not quite so lucky with the ship as with the cargo, as will be seen by the following extract:

"Friday, September 18th, 1778. Two British armed ships and two brigs, came close to the bar off Toms River (Cranbury) Inlet, where they lay all night. Next morning between seven and eight o'clock, they sent seven armed boats into the Inlet, and re-took the ship Washington formerly "Love and Unity" which had been taken by the Americans; they also took two sloops near the bar and captured most of the crews.

Court of Admiralty

and Captain Bigelow and others manned two boats and went out and captured the brig and brought her up to Toms River without difficulty. The brig, with her cargo of 140 puncheons of rum, was advertised to be sold at Toms River, January 3, 1781, by John Burrowes, Marshal. On the 25th of January, 1781, Captain Bigelow and Samuel Allen had their claims for prize money for these sales before a Court held at the house of Gilbert Barton, Allentown.

Captain Bigelow also made a prize of another vessel called the "Betsey," which had belonged to citizens of Delaware, where she was taken by the British out of a place called Muskmelon Creek. On her way to New York she was driven in a storm ashore near the bar of Cranberry, where Captain Bigelow recaptured her. His prize claim was adjusted at a Court held at the house of Isaac Woods, Mount Holly.

service. In the latter part of 1780 he took two prizes, the schooner "John" and the sloop "Catharine," on the south side of Staten Island. The Admiralty Court, to adjust his prize claims, was appointed to be held at Mount Holly, January 1, 1781. Just a month before this he was killed. It is said that a few years after his death

EMPLOYMENT OF OCEAN COUNTY VESSELS.

The establishment of saw mills rendered it necessary to have vessels to carry lumber to market; these vessels were generally sloops. This was about the beginning of the coasting trade for which Ocean county has since been so noted. After a time these first vessels found additional employment in carrying cedar rails to market; after a time this trade began to fail but about the time it failed the invention of *steamboats* caused a demand for pine wood. Since then a large number of vessels owned and manned by citizens of this county have been steadily engaged in the wood trade; when the supply of pine wood failed in the county, larger vessels were built and proceeded to Maryland and Virginia to obtain it.

When the largest of the timber—such as was fit for marketable wood, was cut off, the charcoal trade next furnished employment for many of the smaller class coasting vessels. The charcoal trade was commenced about forty years ago.

At the present time most of the coasting vessels (generally schooners—two or three masted) are too large to enter our bay loaded; they are engaged in the coasting ade from New York to Southern and Eastern ports. A

Mullica, Batsto, Wading Rivers

Batsto
Batsto
Charcoal Landing
Hermann City
Tylertown
Pleasant Mills
Crowleytown
Green Bank
State Forest
Wading River
Bass River
State Forest
Parkertown
Nugentown
Giffordtown
Tuckerton
Ocean County
Little Egg
Harbor Twp
Weekstown
Swan Bay
New Gretna
N Maple Ave
Mullica River
Mullica River
Moss Mill Rd
W Moss Mill Rd
Egg Harbor
City
Cologne
Port Republic
Brigantine
Wilderness
Higbeeville
Great Bay
Mystic Islands
Oyster Creek
Jacques
Cousteau
National Estuarine Research Reserve
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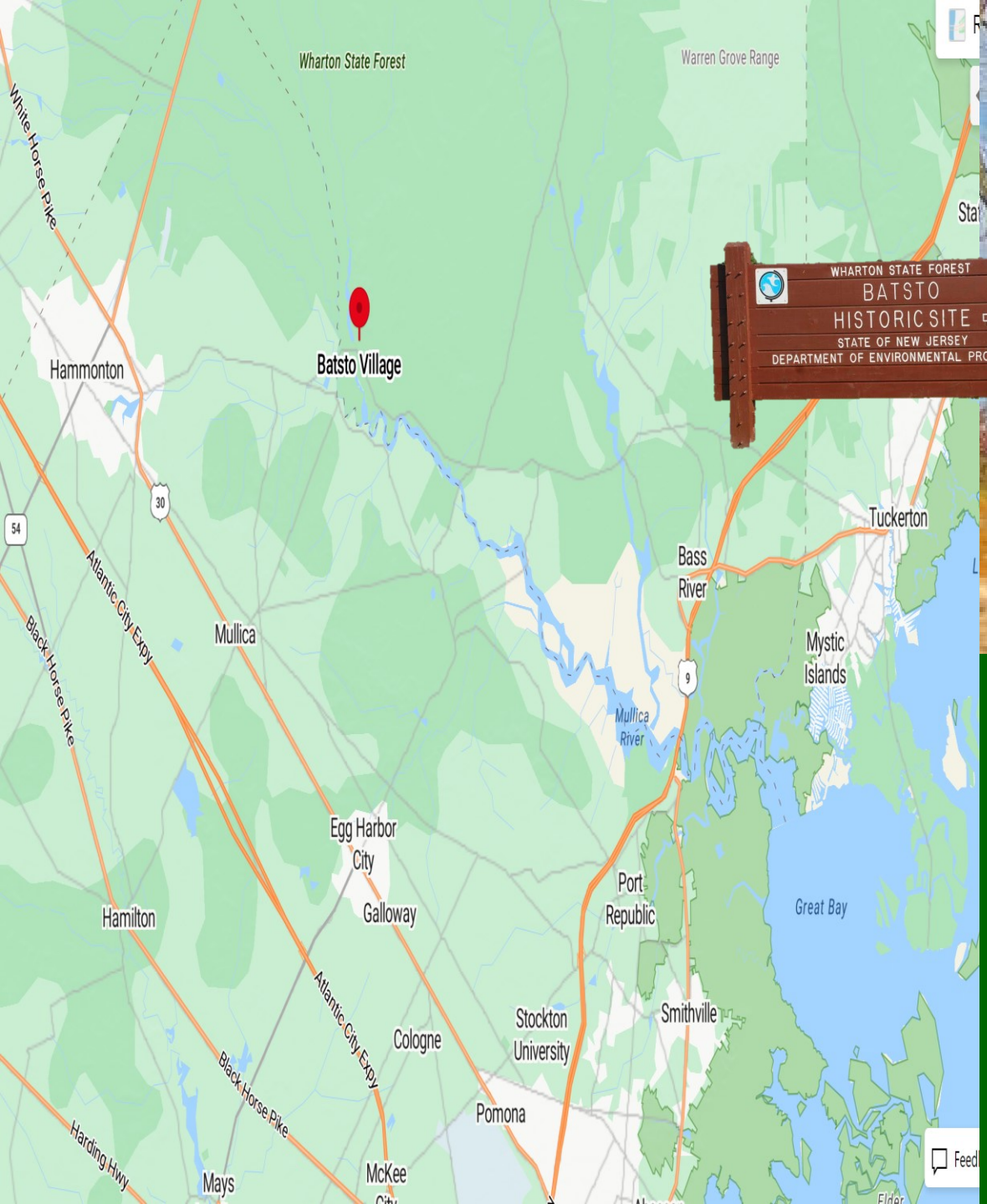
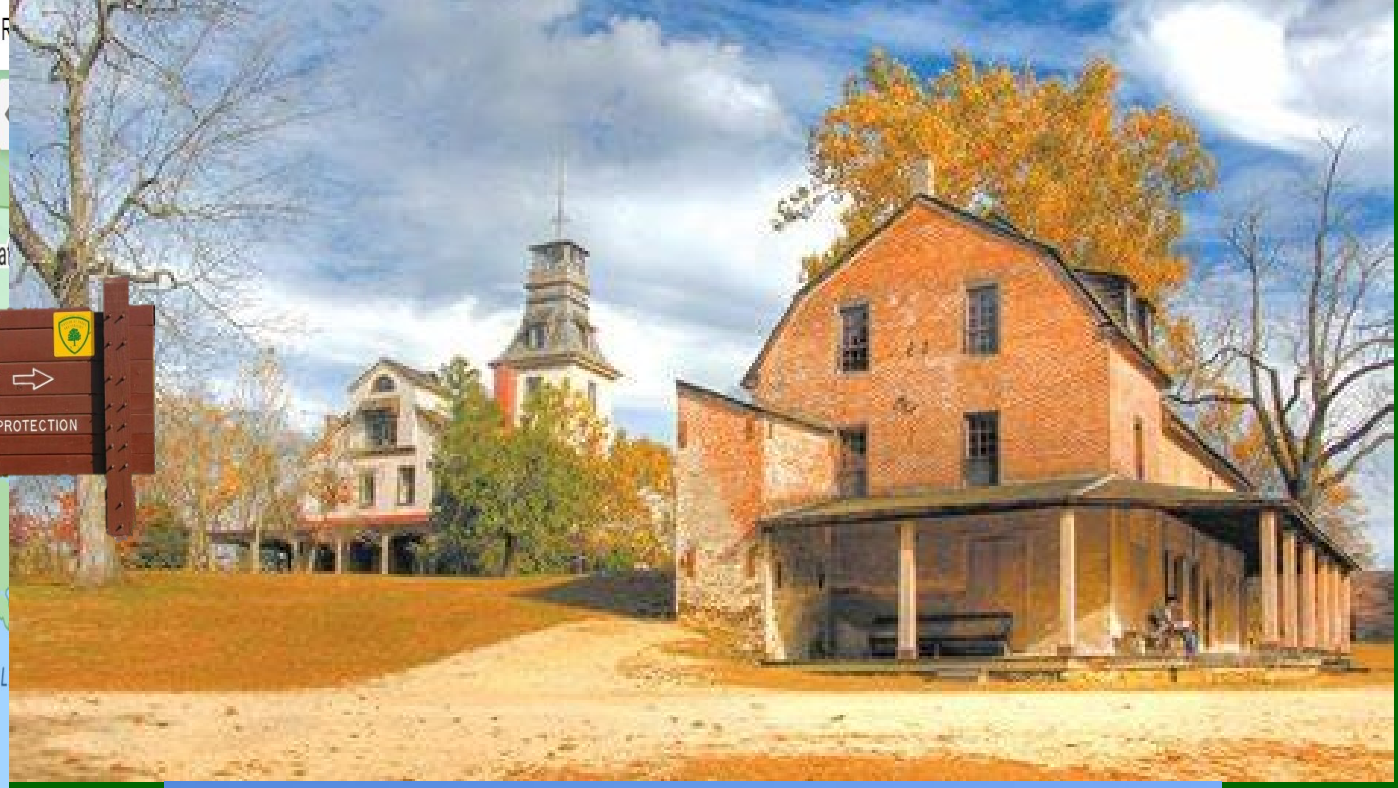
9
654
575
50





Batsto Lake Non-Tidal Landing

Batsto
Mullica River Maritime Cultural Landscape

- *The grounding of the British ships* October 7, 1778
- Daybreak Commander Colins faced with the decision to follow the original plan and continue up the Little Egg Harbor River and destroy "The Forks" and the iron works at Batsto or to abort the mission, since the element of surprise had been lost. Local loyalists came aboard the British flagship, Zebra, and told Collins that Procter's Artillery was on the way. Colins decided to withdraw.
- At noon, the British assembled to withdraw. They had taken and destroyed the prized vessels. Burned all the storehouses and wiped out the village. Only one British soldier was wounded.
- *The British* - It was not as easy to leave as they might have hoped. Two of the British ships were aground. Col Ferguson decided to take his soldiers and raid the north shore and the salt works. They destroyed 2 landings, 3 salt works and 10 buildings owned by patriots.
- October 8, 1778
- The 2 grounded ships were refloated and got underway. H.M.S. Greenwich again became grounded. The H.M.S. Dependance was left with her for protection and the rest of the ships rejoined the Zebra in the bay. Commander Colins planned to search Barnegat and Cranbury Inlets on the way back to New York, but the weather continued to worsen and the ships were unable to cross the sand bar.
- October 9 - 18, 1778
- The British capture and unwary American Brigantine with a load of lumber. While they are waiting for better weather they transfer the lumber to their ships. It took 10 days to transfer all the cargo. During that time a few other American vessels were captured. Still the British Fleet was unable to put to sea.
- October 12, 1778
- A Hessian Lieutenant named Juliat had deserted the British on September 12 and joined The Pulaski Legion. He was assigned to the First Troop of Dragoons under Baron Bose. Baron Bose regarded Juliat with contempt for having deserted his post, even if it was with the enemy. Perhaps to get back at Baron Bose or perhaps he was always loyal to the British. Juliat took several men on a fishing Party. They did not return and were thought drowned. They had actually rowed the twenty miles and were given permission to board the H.M.S. Nautilus. The story continues with intrigue. (ref: The Nest of Rebel Pirates, Franklin Kemp)

Jersey Coast 1770's

Mullica River

Batsto River

Great Egg Harbor River

Maurice River

Right Upper Center- Ancocas (Rancocas Creek)

WATERS OF THE Atsion and Batsto rivers meet at a tiny, sleepy village deep in the Pine Barrens to form the mighty Mullica River. The hamlet is quiet now; its deeply weathered cedar clapboard houses bordering a solitary main street are ghosts of Jersey's past.

The wheel of the grist mill is still. Smoke no longer pours from the vanished chimney of the colonial iron furnace. The forge pond is dry. The resounding echoes of the once busy forge hammers are mute. Stages plying the route between Cooper's Ferry and Leeds Point are but a memory.

Batsto — the village that made iron for Washington; the village that, with its neighbor the Forks, proved such a thorn in the side of the Crown that Sir Henry Clinton sent the British Fleet to "seize that place" — Batsto is but a specter of its former self.

Here were made po
mortars and pestles, firebacks, stove plates and stoves, cannon and ball, and ironwork for sailing vessels. The Forks was the center of privateering for the Jersey coast. Prizes seized by daring seamen were brought here to be auctioned at public vendue. Their cargoes, intended for the English forces, were unloaded and transported over sandy, rugged roads to Continental Army forces at Valley Forge, Trenton, and Morristown.

Batsto and the Forks boasted such names as Colonel Elijah Clark, Colonel Richard Wescoat, Joseph Ball, Charles Read, John Cox, Samuel Richards, and countless others whose efforts for the colonial cause meant much to the success of the American Revolution.

John Hancock and Robert Morris, signers of the Declaration of Independence, were vitally concerned with the bustling

The "black" cedar houses of Batsto, built during the

Batsto Friday Eve June 13th (1777)

My dear Friend

As the bearer waits I have only Time to inform you that a few Days ago a Brig appeared off little Egg harbour Inlet & decoyed of Joseph Sowey & two other of his Boys and that yesterday afternoon a Brig of 16 a Sloop of 12 and a Schooner of 8 & a Pilot Boat of 6 guns were Piloted over the Bar & are now at the Fox burroughs & in possession of a Brig in which I am concerned just ready for Sea & a very fine Vessel belonging to Washington. . . . I think it highly necessary they (The Governor & Council of Safety) should know the situation we are in. I shall go down to Chestnut Neck tomorrow with a number of Men in order to Erect a small Fortification of 8 or 10 Guns to prevent them if possible from penetrating the County

I am in haste

Esteemed & Most Hb Svt. *John Cox*

Protection of Historical Sites
(UNDERWATER)

Chief Advisor
Howard I. Chapelle
Smithsonian Institution
Washington, D. C.

Jackson Jenks
Director

WE WELCOME YOU TO ANY OR ALL OPERATIONS

CITY DESK

You will be receiving reports from young divers from your city that they are working with POHS(Protection of Historical Sites).

We are inclosing the New York Times clipping of the State of New Jersey announcement.

To fill you in on our past record.

POHS was formed in 1957 after we found the ships in Virginia. Howard I. Chapelle, Admiral E. M. Eller, Dept. of History, Dept. of the Navy, and Carl C. Cutler, a founder of Mystic Seaport met with me and said that a protective organization was needed. We formed this organization, since our record reads.

Pamunkey River, near Richmond, Va.

Sept. 1957.....2 Civil War ships, sunk 1862 by J. E. B. Stuart part of Northern Armies' Supply fleet Cmdr. G. H. Mahoney, Commanding, all U. S. Navy underwater units in Washington assisted with three Navy divers in this operation.

March 1958....Sacketts Harbor, New York we chopped through ice to find the Jefferson, a brig of the War of 1812. Found same, retrieved pieces of her.

May 1958 .....Watertown, N. Y. in the 1000 Islands found the Sir Robert Peel sunk in 1838, during the Canadian Rebellion against the Crown.

June 1958 a French Bateau, Battle of Cranberry Creek War of 1812, St. Lawrence near 1000 Islands

June 1958 the Iroquoris, from the French and Indian War.

August, 1958...NO NAME....a master sailing ship off Long Beach Island, N. J.

September, 1958....was called to Batsto, N. J. to identify 40 ft. boat found in Batsto pond....identified same as variation of the Durham boat used by Washington.

June, 1958 Herman City, N. J. found three wrecks of 1800s The Argo...104 ft. fastest sailing ship in area. Two Marys, Jamima Harriett.

We have archaeologists, historians, and curatorial advice on each operation....

NON-PROFIT — NON-COMMERCIAL — MARINE ARCHAEOLOGICAL SOCIETY RECOVERING HISTORICAL SHIPS AND ARTIFACTS AT NO CHARGE FOR MUSEUM PRESERVATION
ROOM 404 — #1 EAST 42ND STREET — NEW YORK CITY 17, NEW YORK

Protection of Historical Sites
(UNDERWATER)

Chief Advisor
Howard I. Chapelle
Smithsonian Institute
Washington, D. C.

1st SCIENTIFIC UNDERWATER

EXPLORATIONS AND RECOVERIES

with

POHS and the STATE OF NEW JERSEY*

with the assistance of

SCIENTISTS
HISTORIANS
U. S. NAVY
EDUCATORS
MUSEUMS

MAY 20th through AUGUST 31st

UNDERWATER DIVERS, CLUBS, and ASSISTANTS:
POHS invites you to spend your vacation or week-ends assisting in the actual recoveries, retrieval of historical materials and the use of preservation techniques used by SMITHSONIAN INSTITUTION and WORLD AUTHORITIES. WE INVITE YOU TO LEARN THE BEST TECHNIQUES.

ROOMS AND MEALS AT LOWER THAN COST RATES

PRESS AND NATIONAL MAGAZINES COVERING RECOVERIES AND EXPLORATIONS.

WATER CONDITIONS:

Depths: 10 ft. to 60 ft. Visability: 0 to 5 ft.
Water Temp.: rubber suits or jackets needed
Current: ranging up to 5 knots

OBJECTS FOUND: Divers finding objects will receive plaques on the object when it is placed in the museum. All objects are the property of the State of New Jersey for the 1st Marine Archaeological Museum sponsored by POHS.

* POHS and the State of New Jersey have signed contract as recommended by Howard I. Chapelle and Kenneth B. Perry of the Smithsonian. POHS is given exclusive rights and cooperation by the State of New Jersey. The State of New Jersey has claim on all objects under New Jersey waters

NON-PROFIT — NON-COMMERCIAL — MARINE ARCHAEOLOGICAL SOCIETY RECOVERING HISTORICAL SHIPS AND ARTIFACTS AT NO CHARGE FOR MUSEUM PRESERVATION
ROOM 404 — #1 EAST 42ND STREET — NEW YORK CITY 17, NEW YORK

Shallow-draft shallop or "Durham" boat, used to transport bog ore from swamp to furnace, found in bottom of Batsto Lake

Dr. Cory Letter (cont.) Oct. 19, 1959.

I am perfectly willing to make a major project in this effort to regain the lost information and material. I do believe that an advisorary board from the community and the state should be formed so as to assure no animosity and good relations.

From the historical, scientific, and navy architectural standpoint I believe a second board should be formed so as to assure accuracy in operation. On this board I might suggest

Howard I. Chapelle — Dr. Albert B. Cory
Captain James Kleinschmidt — Dr. Fredrick Rath Jr.
Dr. John Cotter(archaeol.) — Mr. Per L. Guldbeck(associate of Dr. Rath)
Kathryn B. Greywasce — Carl C. Cutler

This board may be altered to whatever it is felt best. Among the persons on the board we might bring in Mr. Moses so that he might observe at close range the designs of our organization, also the progressive development of the operation.

I suggest that all divers be kept off this wreck site.

This may be done by alerting the Mayor and interested citizens. IF SKINDIVERS ARE ALLOWED TO DIVE IN AND AROUND THE WRECK SITE MANY OF THE LOOSE OBJECTS THAT ARE IN THE MUD MAY BE DISTURBED OR DISAPPEAR.

In the immediate area, a Don Hunt is a skindiver. The young man is good, BUT HE MUST BE KEPT UNDER CONTROL. I discussed projects in the area with him and he has agreed to assist me when I return. Until I return I suggest that he be left as a sleeping dog.

THE SIR ROBERT PEEL.....under 1000 Islands Bridge

The engines of this ship are reasonably intact. The Canadians are interested in this remains. It might be a worthwhile future project.

AUG 3 RECD

Protection of Historical Sites
(UNDERWATER)

July 30, 1959

Chief Advisor
Howard I. Chapelle
Smithsonian Institution
Washington, D. C.

Jackson Jenks
Director

Dear Mr. Perry,

Please read this report carefully and ask Chap's opinion.

I would like an opinion so that I can submit it to the Commissioner, Admiral Eller is writing one, Cmdr. Mahoney, and each State Advisor in the Museum and History Dept.

Sincerely,

Jack

POHS
c/o Bass River State Forest
New Gretna, N. J.

Chap. —
Any comment ?
K

I believe that an advisory board from the community and State should be formed so as to assure no animosity and support good relations. ***Jackson Jenks - 1959***

SAT. 8AM MAY 15TH

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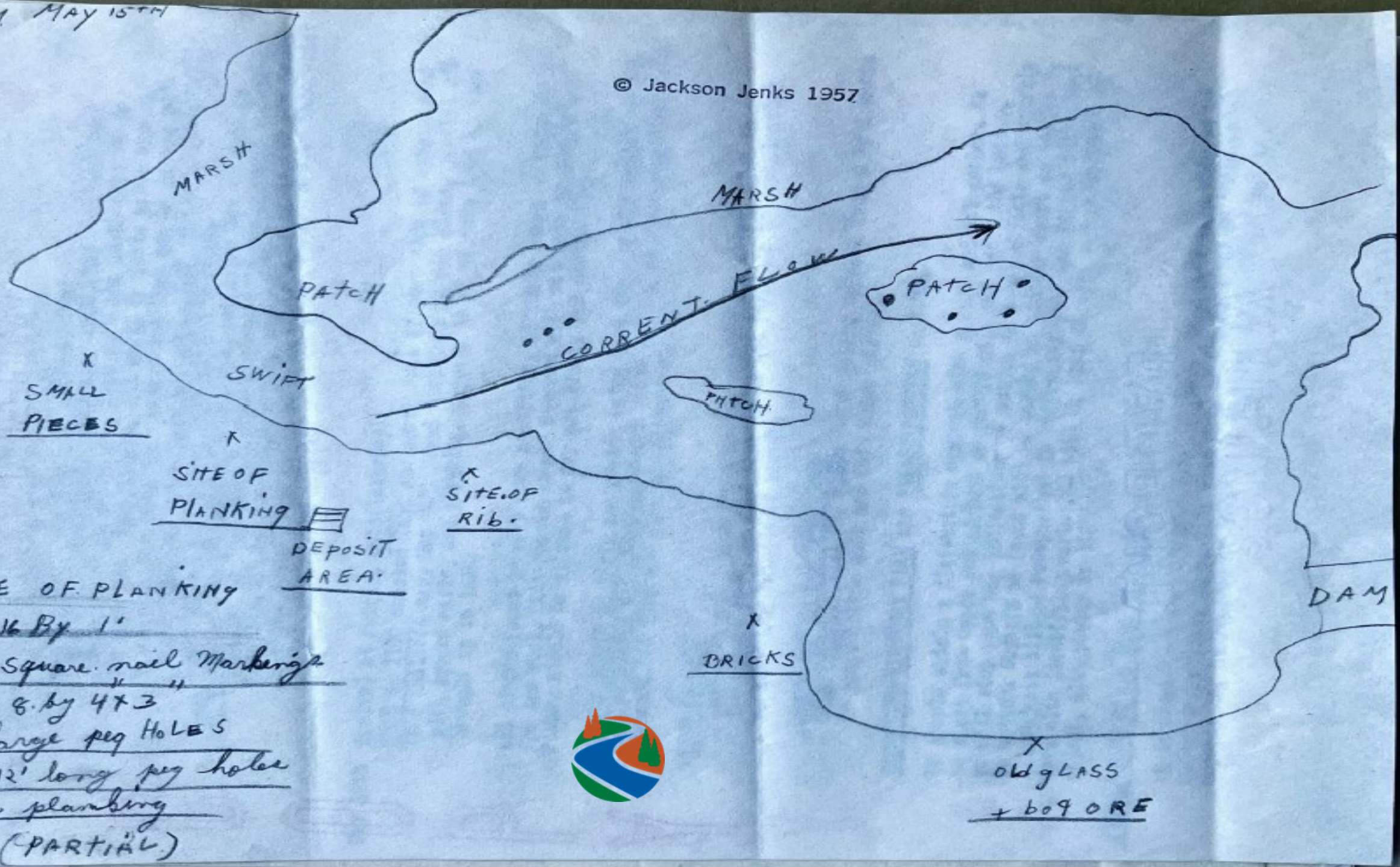


(1) PIECE OF PLANKING 16 By 1' Square nail Markings

(1) PIECE 8. by 4 x 3 large peg HOLES

(1) PIECE 12' long peg holes 5 piece planking

(1) Rib (PARTIAL)

© Jackson Jenks 1957

RICTED REPORT
15, 16, 1959
Jersey Project
Report 1

Report of arrival, preliminary survey of Batsto pond, requests for material, and suggested procedures for present and future preservations.

May 15th Arrival at Batsto, checked in 1600. (Friday)
INSPECTION REPORT: Variation of Durham boat.
Boat sitting partially under corn crib. Has received two sprayings of preservative, last coat one month ago. Needs one more coat immediately. All small or loose parts should be removed from area into area where they can be tagged with plastic tags and under lock and key.....IF WE ARE TO REASSEMBLE these parts must be away from visitor's reach.
1630 Reached Mr. McDonald at home. Have requested man to show us location of "the forks". Have requested no newspapers' releases. have located in New Gretna Hotel, New Gretna, N. J. for one week. Have one diver along so as to work under "buddy" system underwater during preliminary search.

May 16th Arrival at Batsto, 0815(Saturday)
0830 to 1100 checked land and marsh area of port side of Batsto pond (see inclosed map, Map "A") Found locations of old glass, partial rib with square nails, and planking. Appears to be of same type as boat brought up in 1958.

all pieces found in very poor condition. SUGGEST: these be resubmerged for one week, then recovered and covered with wet moss or sawdust. Pieces should be allowed to dry out slowly for six months.

PIECES SHOULD BE KEPT, the reason being that some of the pieces of the boat retrieved are missing. Though these may not be from same boat they may well fit into the plan of reconstruction.

1100 to 1400
Assistant and I took turns using snorkle and safety line in the Batsto pond. We find that it is not feasible to use floating or snorkling methods of search.

WATER AND BOTTOM CONDITIONS
Visability.....1 ft. Black Cedar Water, Current from 0 to 3 knots in pond. Bottom muck and thin water grass.

SUGGESTED RECOVERY PLAN and SEARCH PATTERN on POND.

We should obtain a flat-bottom rowboat with a fore and aft anchor. As we start from upper end of pond we should pole and probe the bottom. we will stop upon any indications of wooden or metal objects and snorkle to bottom. Objects as found will be marked on similar chart as inclosed. All objects will be redeposited in underwater pits and tagged with plast tags with identifying mark. Log will be kept of size and description of object, also photos or diagrams.

FIRMLY SUGGEST THE DISCONTINUANCE OF THE FOLLOWING:

It is understood that certain metal objects found have been chipped by hammer and chisels. It is felt that many of the markings on these metal objects may be removed or destroyed. Objects should be treated by a

COPY

© Jackson Jenks 1957

chemical preservative. There should be water and soil samplings taken and tested as to their chemical and mineral contents. Until underwater or ground artifacts may be placed in a safe deposit area there is no reason to retrieve them. WE MUST CONSIDER PRESERVATION CORRECTLY AS A PRIMARY THING.

Sigfried J. DeLaet, Ghent University, Prof. of Archaeology.
"We must ask ourselves what the influences of climate, soil itself, and water have exerted upon the object. Three factors must be taken into account.
(a) material of which the objects are made
(b) Geological circumstances in which they are found
(c) and the climate or water conditions"

POHS advisors can contribute the correct formulas which are known to obtain the best preservation techniques. We must not falter by rushing or using incorrect methods.

THE VARIATION OF THE DURHAM BOAT

1400-1500

My assistant and I have removed all use pieces of the boat to an area in the storeroom where they are under lock and key. We suggest all pieces be kept in a locked area and treated with the utmost care.

HISTORICAL ARTIFACTS MUST NOT BE DROPPED, KICKED, BROKEN BUT SHOULD BE TREATED IN A FRAGILE MANNER.

PLANS FOR SUNDAY MAY 17th,

0800---1000 labeling of Durham Boat pieces
1000---1200 posting of signs around area where Durham boat lies
roping off of the area.....

WE MUST REMEMBER VERY DEEPLY IN OUR MINDS

TOURISTS LIKE ARTIFACTS AND THESE RELICS

WE MUST NOT ALLOW THIS

We invite your comments, suggestions, and any assistance.

REQUEST: We request that anti rattle and copperhead kits be supplied to POHS due to the forests along the banks and swamps where we must go. We must observe precautions.

Jackson Jenks
Jackson Jenks
Protection of Historical Sites(underwater Director

Jenks, Jackson

Dear Mr. Chapelle, October 2nd, 1958

Well, you should be back slaving by now. Hope you enjoyed your vacation.

REPORT

Location: New Jersey

I inclose the only map which has the mark of location of Revolutionary vessel. My diving chiefs only get the river structure and diving conditions until the arrival on the spot.

Please erase pencil marked location on map(x)

Mr. Truncer of the State has requested this, as both of us feel divers and cannon hunters might try and remove the cannons which are on board her.

On the day of the dive the papers will announce the State's claim to the vessel and that State police and Dept. of Navigation will prosecute anyone found diving in the area. The State has taken two clubs of divers to court and won. This will put the fear of God in them before they try robbing the wrecked vessel.

THE STERN SECTION IS THE ONLY WRECKED PART.....

Have issued this plea for divers and yet will make strict choices from responsible type persons before issueing cards. The river areas from section a to J should be searched so that artifacts, cannon balls or loose material may be gathered up on 1st dive. Statiqary things will be left in place till you can come.

Due to the width of 1100 feet at some areas, I feel we should use 30 divers' teams consisting of 2 men each. Visability is poor and in the area it is useless to think of using only a few, too many large areas would be missed. There is no boat traffic and spread out on the long rope they will be a good 17 feet apart at the wide portions, 8 ft. at the narrows.

We will have a two day search, Saturday and Sunday just as in 1000 Islands(without Mr. Mitchell)....ha...) We have 4,500 feet to cover in lenghh. As things are found they will be put in Dept. of Navigation or large craft. After dive they will be taken and labeled by number and placed in drums of water till preservation methods can be made. Large objects will be submerged in other water areas.

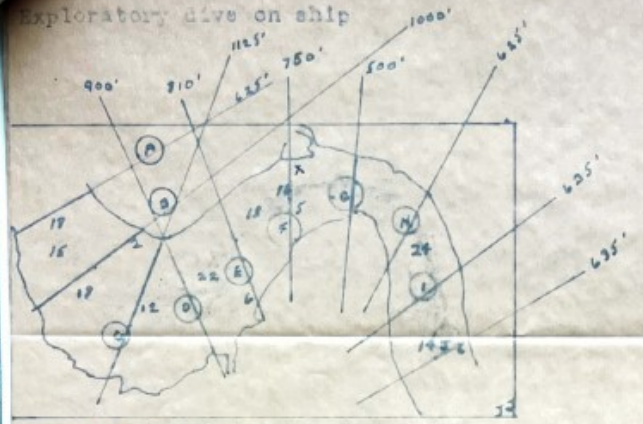
EACH AND EVERY OBJECT WILL BE TREATED AS A DIAMOND.....REGARDLESS OF THEIR COMPOSITION.....

I have discussed the situation with Dr. Bird of American Museum of Natural History. His opinion is that I should not dive but to supervise the entire operation as before. He said he felt I could claim myself a marine archaeologist as others have tabbled me due to the fact that have shown competent work and continued progressive developement.

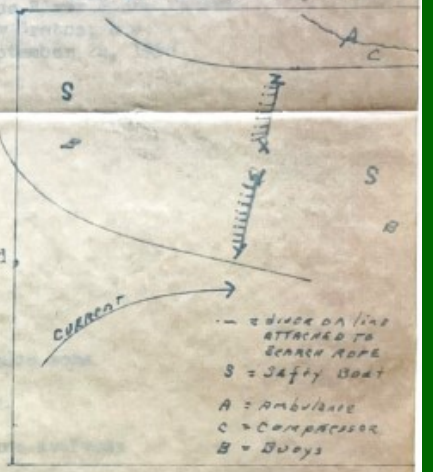
...OF HISTORICAL SITES(underwater)

...RATION: BIG BEND"

Exploratory dive on ship



Depths are shown by numbers in ft
numbers listed in hundreds indica
distance from bank to ban
and are labeled by a let



Area to be searched, shown above

9 DIVES

(a) to (b), diving in 15 to 20 feet decreasing inboard, moderate current,
(b) to (c), diving in max. 20 feet
(c) to (d), diving in max. 15 feet
(d) to (e), diving in max. 25 feet
(e) to (f), diving in max. 20 feet
(f) to (g), diving in max. 10 feet
(g) to (h), diving in max. 25 feet
(h) to (i), diving in max. 30 feet
(i) to (j), diving in max. 15 feet

WATER CONDITIONS

as above moderate current, temperature necessitates rubber suits, visability 5 feet.

EQUIPMENT

Standard masks and flippers, snorkels, weights, rescue pack, standard SCUBA, all gear must be attached by quick release methods.....NO EXCEPTIONS, rules are for your safety.....

SEARCH EQUIPMENT

1. 2 safety craft motor powered, anchored 500 feet up and down stream from divers. They will stop any motor powered craft, until each dive is completed.
   4 motor powered and cars in boat, designated by w, x, y, z,
   w and x will proceed side by side down stream to 1st floating buoy(500 ft.)
   y and z will proceed as close as possible to shore, on opposite sides of the stream downstream to 1st buoy.
   Between w and y, x and z, there will be a rope stretched which will be held at the bottom of the stream by weights. See above right.
2. 2 ropes 1.....500 ft.....1.....650 ft.....
   4 ropes each 40 ft.
3. 10 white buoys to be sunk each 500 feet.
   10 red buoys to be sunk each time something is found
4. rescue ambulance on the nearest highway or road, NOT NEARBY, BUT ON THE SPOT with a registered doctor.
5. 1 compressor with new filter.....to be inspected by my chief divers.
6. Hot coffee and sandwiches on hand for mid-day....no carbonated drinks or greasy foods.....gas would be formed in divers stomach.

DIVERS INSTRUCTIONS: NO DIVER WILL WANDER, LINGER, OR LEAVE HIS DIVING BUDDY AT ANY TIME. DIVERS WILL BE UNDER THE SUPERVISION OF Steph Tilanda and

Revolutionary War Vessels

Chestnut Neck

New Jersey

August 18, 1958

Mr. Jackson Jenks
c/o Beach Hotel, Room #306
Atlantic City, New Jersey

Dear Sir:

I have read your notes on the locating of perhaps 30 Revolutionary War vessel-remains at Chestnut Neck, New Jersey and the description of the scow hull (garvey).

It is very important that every effort be made to explore the fresh and brackish waters of New Jersey for in these waters the wooden hulls of old craft may possibly exist in almost intact condition. We have no plans or pictures of these old types and they are, therefore, of great historical and technological importance, to say nothing of local historical value.

Artifacts are, of course, of interest but most of all the recovery of a reasonably intact Revolutionary sloop, periauger or schooner hull would be of very great nautical archeological importance. So far, as you know, the only recovery of this class was that of a gunboat of Arnold's squadron on Lake Champlain. Hence, we are all very anxious to encourage search for another intact boat.

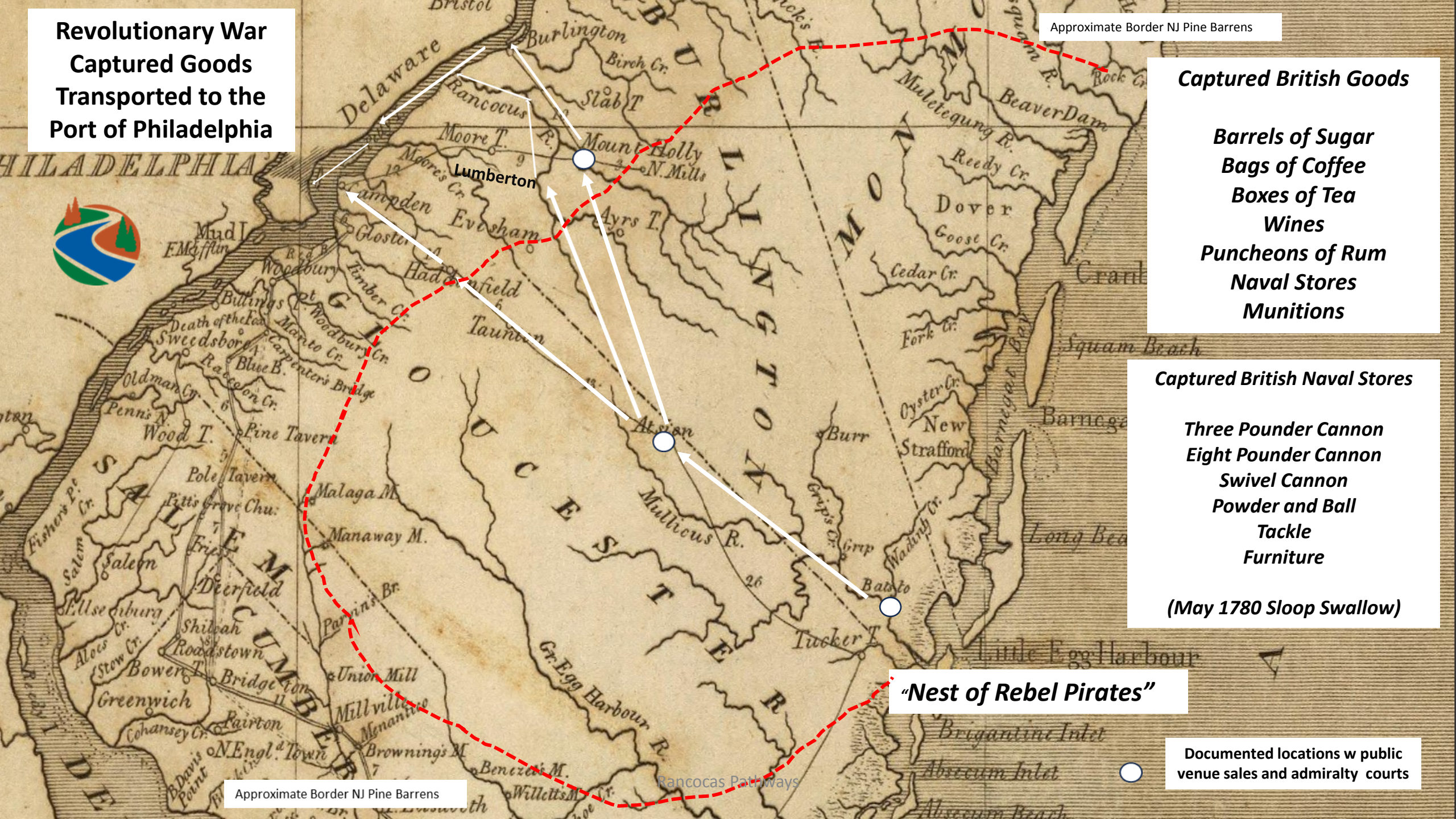
I hope you will make every possible effort to continue this search which you are fully competent to do. I have confidence in you for I know you are aware of the importance of recovering old small craft intact whenever possible. We are always available to you or your sponsors for consultation.

Sincerely,

Howard I. Chapelle
Curator
Division of Transportation

HIChapelle:meb

Revolutionary War Captured Goods Transported to the Port of Philadelphia



During a portion of these trying Revolutionary times the Delaware River was occupied by the enemy's vessels, and it was with much difficulty that merchandise, particularly groceries, could be obtained in or near Philadelphia. Smuggling was considered a legitimate trade, and people resorted to every means to circumvent the revenue officers. Vessels of light draft could navigate the Mullica to "The Forks." Here barrels of sugar and molasses, bags of coffee, boxes of tea, puncheons of rum, and various other articles of trade, were taken on shore, placed upon wagons and hauled across the country, in the direction of Burlington or Philadelphia. All kinds of subterfuge was used to avoid detection. Sometimes a load of salt hay concealed several barrels of molasses or

British Officers Outwitted.

sugar, or a quantity of clams kept from view numerous bags of coffee or boxes of tea. Cedar hoop poles provided a good cover for articles of smaller bulk, and cordwood was an excellent hiding place for other goods contraband of war. Almost every swamp along the route had its secret place of deposit, and the loyalty of the people to the American cause aided much in making this kind of trade successful

British Navy "The Egg Harbor Expedition."

General Clinton and Admiral Gambier decide to organize an expedition to wipe out the privateering center at Little Egg Harbor and destroy the Iron Works at Batsto.
A storm and heavy seas caused the New York City British fleet 4 1/2 days to reach Little Egg Harbor Bay.

Major General Benedict Arnold received notice of the impending attack and ordered Col. Procter's Pennsylvania regiment of artillery to the Little Egg Harbor area. Sevenel prveteer ships were able to put to sea, before the British arrived. Other vessels were sent up to the Mullica River to "The Forks."

British fleet reached Little Egg Harbor around noon. At favorable tide a few of the more light weight ships enter the bay to prevent escaping ships. Armed vessels were stripped and loaded with troops. Local loyalists join expedition onboard the Zebra and inform of the militia at Chestnut Neck.

Chestnut Neck and the Little Egg Harbor River

American Revolution. Major center for Conintenteal privateers who were regularly capturing British Merchant Ships and relieving them of their cargos. The ships were landed in Chestnut Neck and their cargos were transported, first to warehouses at Chestnut Neck or further up the river to a larger community called "the Forks" . Cptured made there way by wagon to Philadelphia.

The Privateers

American government issued letters (called Letters of Marquee) appointing specific ships, owners & captains to takeover British Merchant ships and confiscate the cargos. The cargos were then sold and the proceeds divided up by the Government's Court of Admiralty in Mount Holly on the tidal sgemnt oif the Rancocas Creek.

At the Forks . Bastso Village, a larger settlement further up the river), and at Mays Landing (on the Great Egg Harbor River). Large warehouses were built to hold the cargos, while they awaited sales and shipment.

The Iron Works

The iron works at Batsto on the Little Egg Harbor River was started in 1766. Cannon balls and other military equipment was produced there and used by the Continental Army. The importance of the iron works can be seen in the fact that the workmen were given an exemption from military service.

The Salt Works - On the north side of the Bay were numerous salt works. Salt was a highly prized commodity at a time when vast quantities of food needed to be preserved for use by armies and aboard ships.

According to Mr. Kemps research almost 30 ships and their cargos were sold at "The Forks" and Chestnut Neck in August of 1778. In September at least another 6 ships were sold at Chestnut Neck and "The Forks," including The Venus of London.

Evolution of MCL's Commercial Heritage

17th century, Swedish and Dutch who developed whaling and fishing settlements mainly along the Delaware River.

The English claimed the area as of 1606 under their London Company,

First shipbuilding operations began in the Pine Barrens in 1688, utilizing the cedar, oak, and pitch pine trees, as well as local tar and turpentine.

Sawmills and gristmills opened around 1700, leading to the first European settlements in the Pinelands. Colonial era, the Pine Barrens was the location of various industries. In 1740, charcoal operations began in the Pine Barrens, and the first iron furnance opened in 1765.

Bog Iron was mined from bogs, streams, and waterways, and was worked in about 35 furnaces including Batstso, Atsion, Hampton Furnace in Shomong,[Hanover Furnace in Pembderton
Iron from these early furnaces was instrumental in supplying the American military with weapons and camp tools during the American Revolution the War of 1812, and the Second Barbry War

Commodore Stopehen Decatur Jr sailed to Algiers armed with 24 pound cannons that had been cast at Hanover in 1814.

Batsto Store Book 1830's (Partial listings)

Vessels

- F Consul
- Batsto
- Gen Giles
- Argo
- H Clay
- Stranger
- Mary
- Frelinghuysen
- Martin Van Buren
- Alert
- Pearl
- Tranquil

Trade Routes Sailings

Sail Batsto	Dock	New York
		Philadelphia
		Rancocas/Mount Holly
		Albany
		Portland

1830 Batsto Arrival

Schooner Confidence

Bill of Lading

Flannels, prints, Irish linens, shirting, brown soap, candles, bed-cords, jugs, bowls, flour, shears, knives, fork, table china, glassware

Exports

Lumbering
Bricks
Bog Iron
Agriculture
Cannon Balls
Other

Batsto Store Book 1830's (Imports - Pig Iron)

Coastal Trade

60 Tons Pig Iron from Morris County @ $5 per ton
50 Tons Pig Iron from Staten Island @ $3 per ton
Schuylkill Ore
Kincory Ore (Roebling?)

Overland

128 tons Pig Iron from Rancocas/Mt. Holly (June 1840)
271 Tons Pig Iron from Rancocas/ Mt. Holly (October 1841)

Great Egg Harbor River

Great Egg Harbor River

Great

Egg

Harbor

River

Tidewater

Ferry

Crossing the swift waters of the Great Egg Harbor River was a hazardous undertaking except at the ebb or turn of the tide, and so it was that in 1693 John Somers, partly in his role as Roads Supervisor, and with the authority of the Provincial Congress, established a ferry "at the said Great Egg Harbor, which Person or Persons appointed by them for the Purpose aforesaid, shall and may exact for the Passage of every single person, Twelve-pence, and for Horses and Cattle Twelve-pence per head, and for Sheep and Hogs four-pence per Head, and for all manner of Grain, two-pence per bushel."

Reference: Absmanagmai

Egg Harbor Melon Seed 1883

EGG HARBOR MELON SEED, 1885
RIGGED MODEL, USNM 25658

The Egg Harbor melon seed, a name apparently suggested by the shape of the hull, was a type of wild-fowl hunting boat developed at Egg Harbor, New Jersey, for use on lower Barnegat Bay. This form of sailing-rowing skiff, particularly designed for use in rough-water shooting, was developed by professional duck hunters who sold game to commercial markets during the last half of the 19th century. Designed to be manned by a single gunner, the melon seed gunning skiffs were excellent sailing boats and rowed well; they were lightly built of cedar, and the rudder was controlled by a yoke and steering lines, as in the sneakbox.

The model shows a square-sterned caravel-planked centerboard boat having a moderate sheer, rockered keel with skeg, curved stem, raking transom with rudder hung outboard, sharp entrance, and an easy, well formed run. The midsection shows a slightly rising straight floor, slack rounded bilge, and flaring topside. The centerboard is of the curved dagger type, not pivoted. The boat is decked except for small cockpit nearly amidships which has covers and a spray cloth.

The rig is a single boomed spritsail, the mast well forward as in a catboat.

The model is of a skiff 13 feet 4½ inches extreme length at gunwale, 4 feet 3 inches beam, and about 13½ inches depth from rabbet to centerline of deck amidships at fore end of cockpit. Scale of model is 2 inches to the foot.

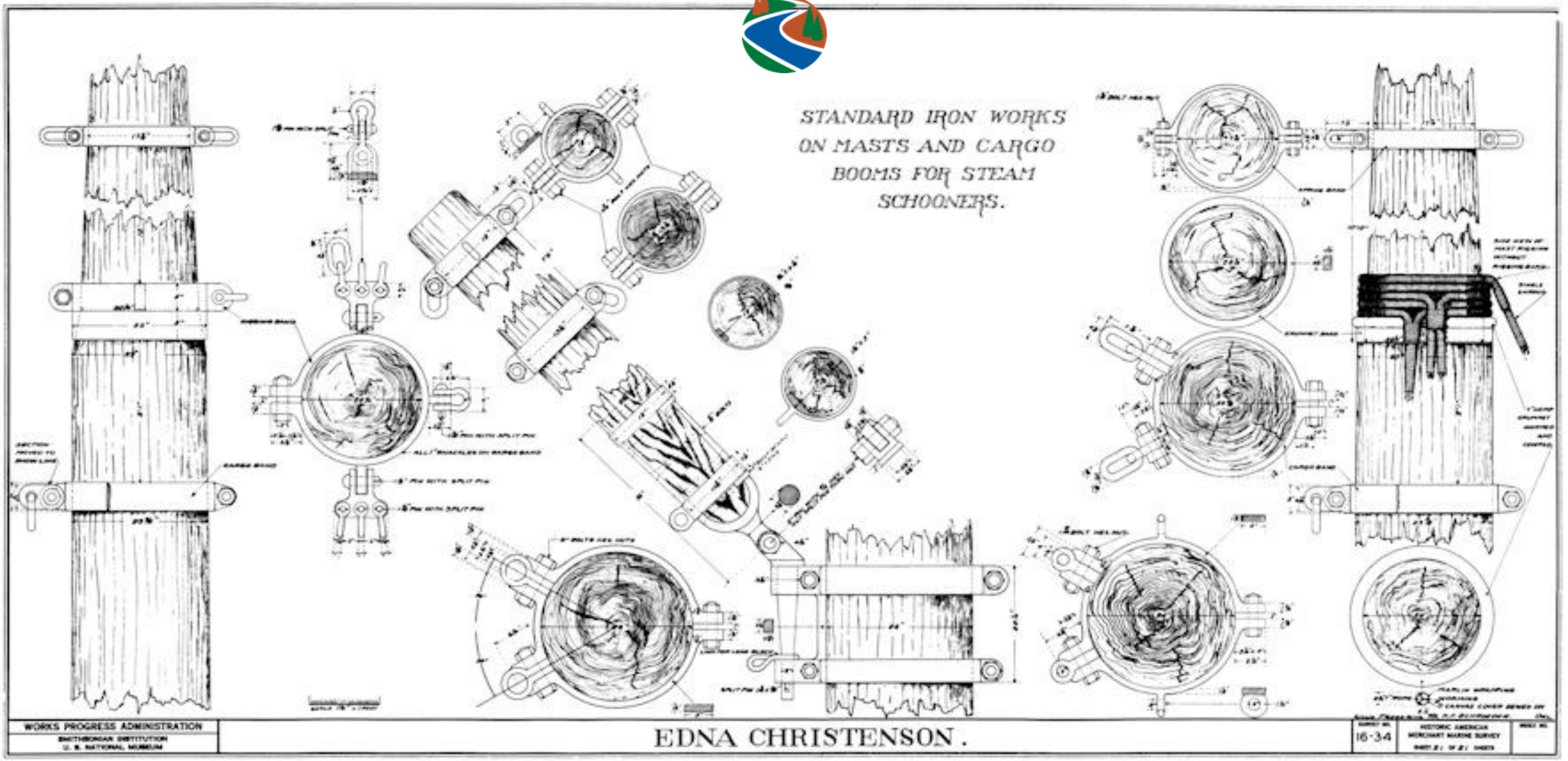
Given by P. Brasher.

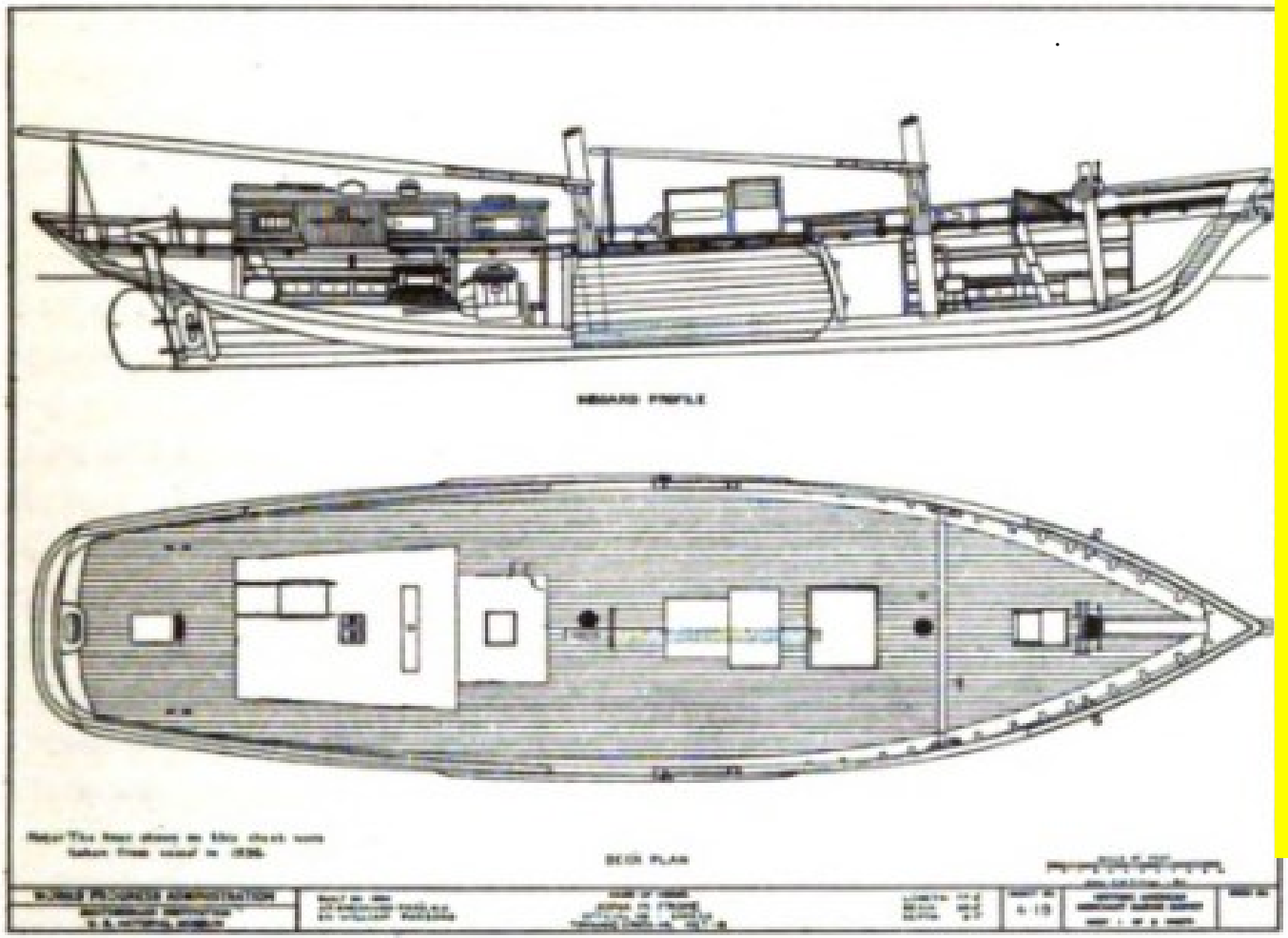
NJ Pine Barrens Cedar

EGG HARBOR MELON-SEED GUNNING SKIFF from lower Barnegat Bay, New Jersey. Rigged model USNM 25658 showing a typical boat of this type. (*Smithsonian photo 44697-a.*)

Historic American Merchant Marine Survey

Works Progress Administration (1932) **a national survey of watercraft, in order to document the design and technical evolution of vessel types significant in America's commercial maritime history.**



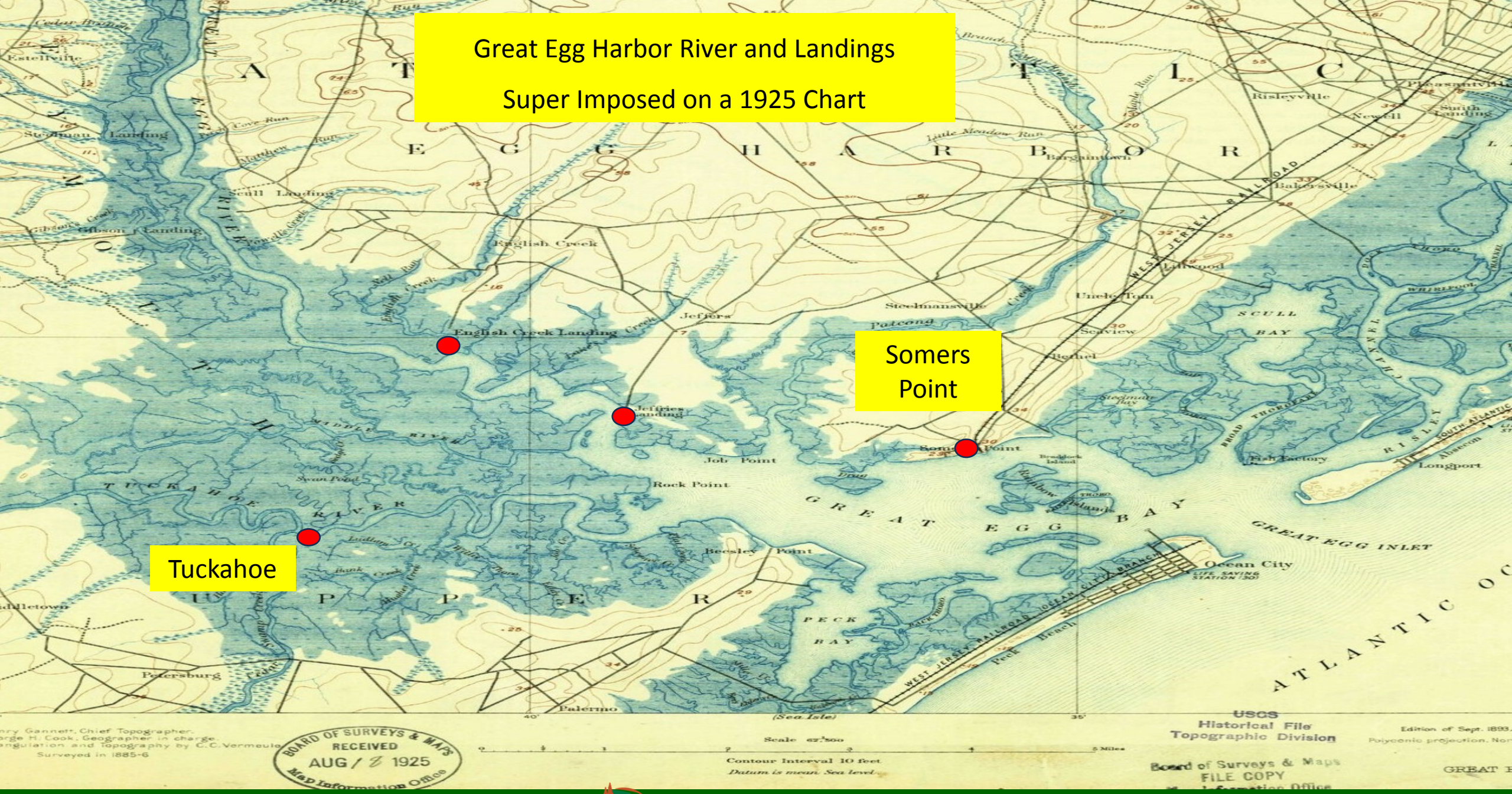


Schooner *Anna M. Frome*. Built at Greenwich Piers, New Jersey, 1904
Inboard profile and deck plan. Specimen drawing produced by the Historic American Merchant Marine Survey. Actual size 17 by 23 inches

Historic American Merchant Marine Survey

Works Progress Administration (1932) a national survey of watercraft, in order to document the design and technical evolution of vessel types significant in America's commercial maritime history

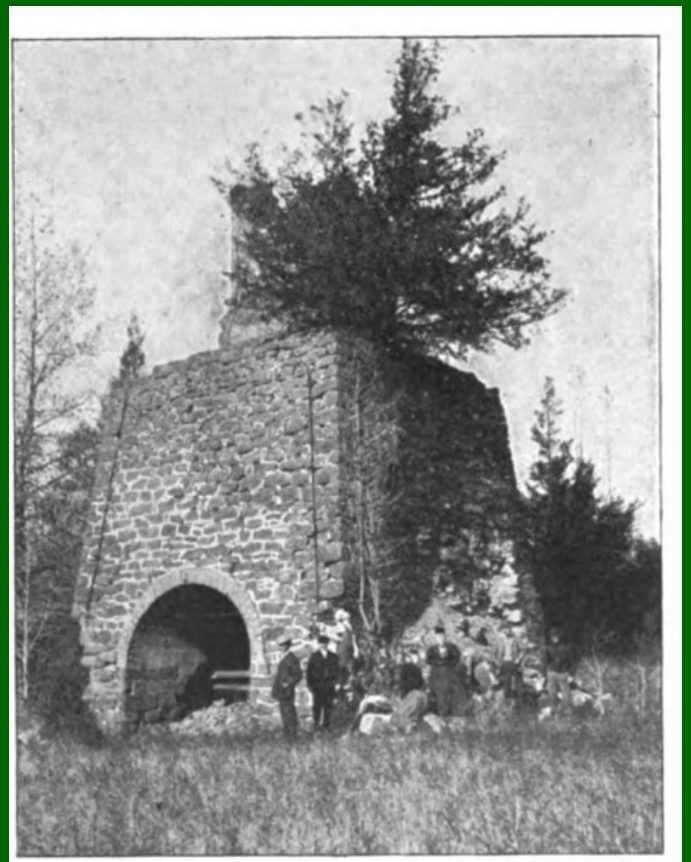
There is known to be 6-8 sheets of New Jersey Coastal and Tide-Water Vessels in the HAMMS Survey


Great Egg Harbor River and Landings
Super Imposed on a 1925 Chart
Somers Point
Tuckahoe
English Creek Landing
Jeffries Landing
Job Point
Rock Point
Beesley Point
Peck Bay
Great Egg Bay
Great Egg Inlet
Ocean City
Somers Point
Longport
Absecon
Atlantic City
Scull Bay
Steelmanville
Jeffers
Petersburg
Palermo
Sea Isle
Contour Interval 10 feet
Datum is mean Sea level
BOARD OF SURVEYS & MAPS
RECEIVED
AUG / 1925
USGS
Historical File
Topographic Division
Board of Surveys & Maps
FILE COPY

South Tuckahoe

South Tuckahoe was established in the early nineteenth century, in response to the development of the lumbering and shipbuilding activities at that time. Throughout most of the nineteenth century, Tuckahoe was a bustling shipbuilding village and farming community. The appointment of a postmaster in 1828 established Tuckahoe as a service village. Tuckahoe also served as a shipping center for nearby industries including glassmaking (established in 1814 and located in what is now known as Marshallville just west of Tuckahoe), and bog iron production at the Etna Furnace (established in 1816 and located in what is now called Head-of-the-River, 4 miles west of Tuckahoe and a cranberry business (operated between 1864 and the 1950s on two hundred acres outside of Tuckahoe). In the early nineteenth century, the Tuckahoe area had a thriving economic community largely due to the important contributions of the shipbuilding business, especially in the supply of coastal schooners, for the county's efforts in the War of 1812.

Tuckahoe

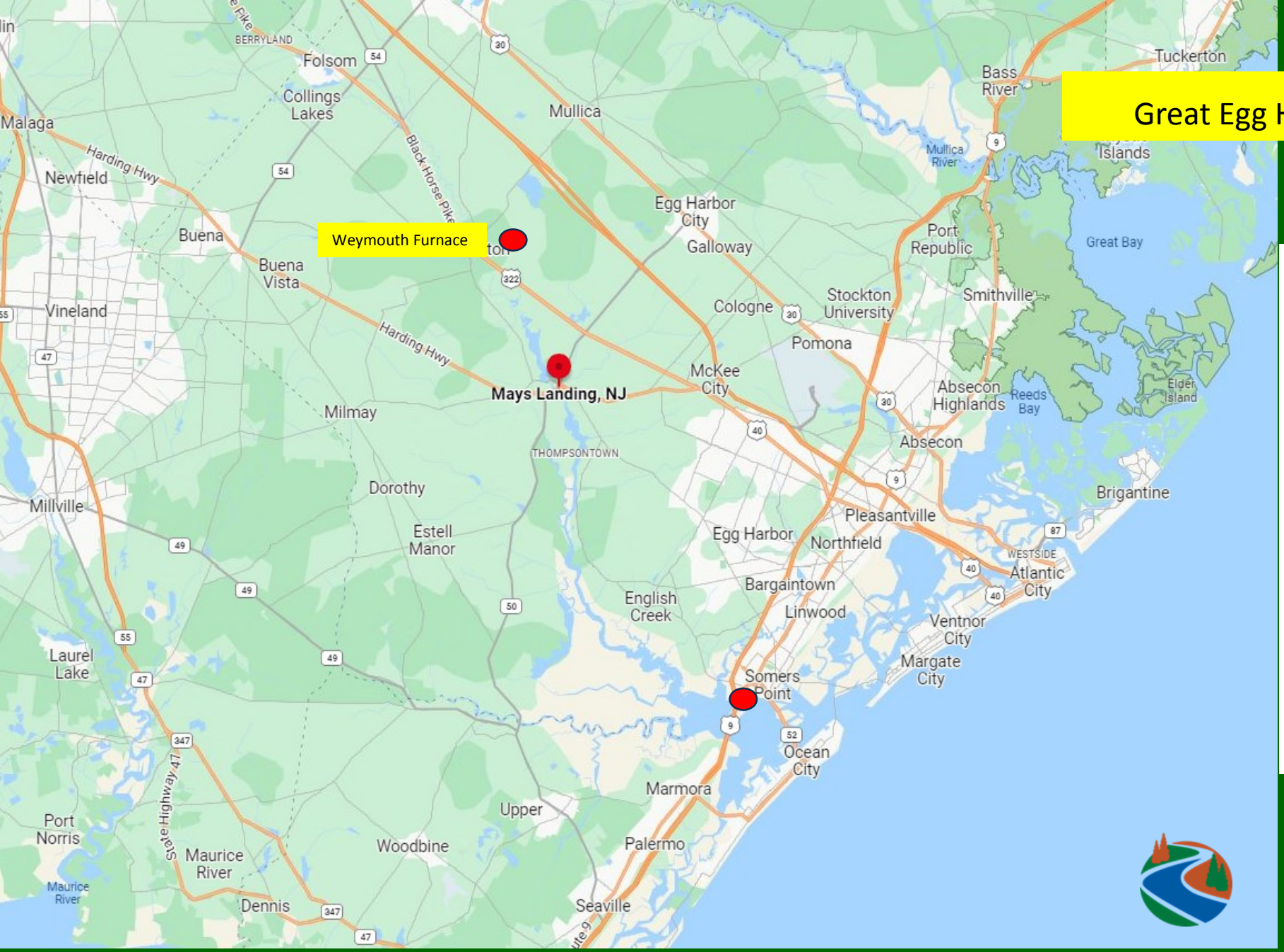


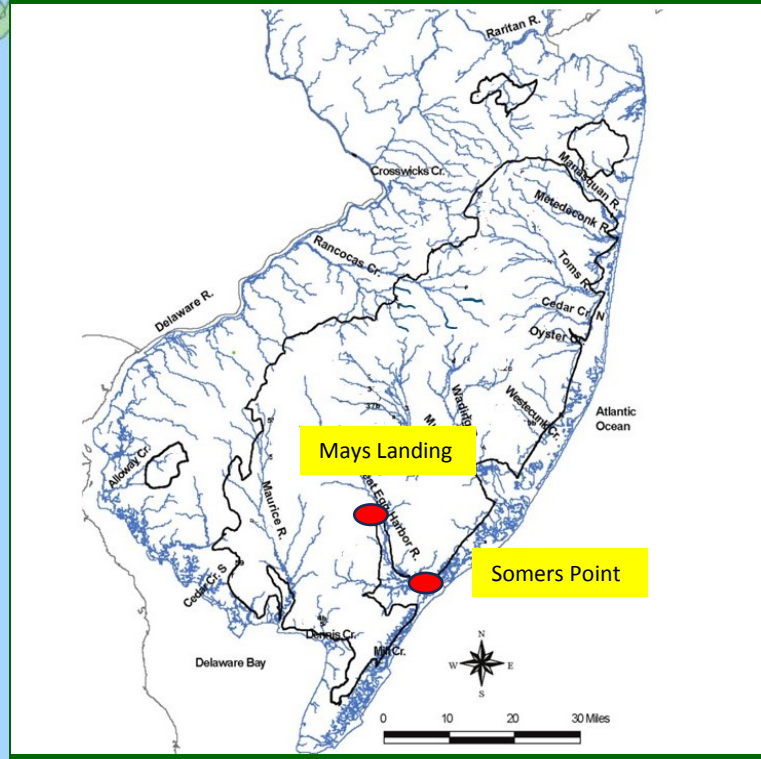
Remains of the Etna Furnace, on Tuckahoe River.

Tuckahoe in 1834, published in *The Gazetteer of the State of NJ*, described the village as follows: "on both sides of the Tuckahoe river, over which there is a bridge, 10 miles above the sea, 46 miles S.E. from Woodbury and by post route 192 from Washington; contains some 20 dwellings, 3 taverns, several stores. It is a place of considerable trade in wood, lumber and shipbuilding. The land immediately on the river is good, but a short distance from it, is swampy and low."

During Civil War, Tuckahoe continued to grow as its shipbuilding business continued to flourish. The shipbuilding business reached its peak in production by the 1870s. The Jonas Steelman shipyard in Tuckahoe was one of three shipyards that produced the largest ships in the county. In 1877, when a group of local residents purchased a steamboat to provide passage between Tuckahoe and Somers Point. This boat, called the Reuben Potter, was used as an alternative method of transportation to the stage for getting to Atlantic City, an easy connection from Somers Point, as well as for local outings, such as for Sunday School.

Great Egg Harbor River and Landings





Black Line marks Pine Barrens Border

Mays Landing History

Mays Landing was the center of shipbuilding in Atlantic County. George May, the founder of Mays Landing, was a blacksmith and shipbuilder. In the mid-18th century, he had opened a store supplying vessels putting into Great Egg Harbor.

Other Mays Landing shipwrights were Samuel Gaskill, James and John Clark and Nicholas Lane.

It was then that Mays Landing reached the height of its shipbuilding. From 1830 to 1880, more than two hundred vessels were built along the Great Egg Harbor River with lumber from native forests and iron from Weymouth foundries. Half of them were produced at Mays Landing.

But as time passed, wood shipbuilding began to disappear due to the lack of suitable timber. Iron was then substituted for hull construction. By 1890, there were only twelve shipyards in South Jersey employing about five hundred men, where once a great industry had flourished along its riverbanks.

The schooner "License" was built for Capt. John Pennington and carried sugar up the Great Egg Harbor River where it was then stored near Babcock's Creek at the foot of a hill. This favored storage spot later became known as "Sugar Hill".

Shipbuilding in Atlantic County/ A Bit of Mays Landing History

Origins America's shipbuilding began at the mouths of rivers and bays. New Jersey's shore communities had all the pre-requisites for successful shipbuilding:

Coastal commerce was close-at-hand varied forest lands provided good timber; ready supply of skilled labor; local furnaces forged nails; fittings and implements

Colonial Sailing Vessels

Whale boats were being built by the early eighteenth century. Then fishing boats were produced. Sloop-rigged craft with two, three or four masts became popular. Gradually, construction shifted from the sloop to the small schooner fitted for lumber and charcoal trade. American ships were now known for their modeling and durability.

The size of vessels was gradually increased from three hundred to eight hundred tons, costing from $3,000 to $7,000. Ships left Mays Landing filled with charcoal and cordwood for calls in New York, Philadelphia, Virginia, the West Indies and South America.

The Ship Builders

South Jersey shipyards were plentiful and busy. A good portion of Atlantic County residents depended upon shipbuilding for their livelihood. By the first half of the 19th Century, there were shipyards in Absecon, Bargaintown, Port Republic and Mays Landing. Shipyards were also in Bakersville (known today as Northfield), and Leedsville (now known as Linwood). Absecon Creek was a major center with its small stream and deep channel. Over twenty-three ships were built at Absecon Creek and registered at Great Egg Harbor between 1858 and 1879. Seven of them were 3-masted schooners over 100 feet long.

George Wheaton, also a shipbuilder, turned out two dozen schooners at his yard where the mouth of Babcock’s Creek empties into the Great Egg Harbor River. Israel Smith’s shipyard in English Creek produced schooners and smaller craft. Shipyards dotted the landscape at Green Bank, Port Republic and Batsto. Sloops and schooners were turned out at shipyards in Somers Point.

In the Census of 1840, Atlantic County shipyards produced more than all the coastal counties in New Jersey. The value of ships and vessels produced in Atlantic County that year was $104,000 as compared to Cape May County ($39,000), Cumberland County ($44.000), and Burlington County ($15,000).

Mays Landing became the center of shipbuilding in Atlantic County. George May, the founder of Mays Landing, was a blacksmith and shipbuilder. In the mid-18th century, he had opened a store supplying vessels putting into Great Egg Harbor. Other Mays Landing shipwrights were Samuel Gaskill, James and John Clark and Nicholas Lane.
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Shipbuilding began to disappear due to the lack of suitable timber. Iron was then substituted for hull construction. By 1890, there were only twelve shipyards in South Jersey employing about five hundred men, where once a great industry had flourished along its riverbanks. The era of the great sailing ships in American commerce had passed. The schooner "License" was built for Capt. John Pennington and carried sugar up the Great Egg Harbor River where it was then stored near Babcock’s Creek at the foot of a hill. This favored storage spot later became known as "Sugar Hill".

Mays Landing and Privateers

George May, after whom the village of May's Landing was named, built a shipyard and trading post near Babcock Creek in 1756. During the Revolutionary War, militia privateer, Captain Samuel Snell, captured 19 British ships off the river's inlet, selling their cargo and ships at the docks at May's Landing. The early 1800's saw Mays Landing become a thriving waterfront town with George Wheaton building over 100 sailing vessels with lumber harvested from area pine forests. In the 1850's Senator William Moore owned a fleet of more than 50 sailing vessels engaging in commerce along the entire eastern seaboard sailing commodities of sugar, molasses and rum, arrived from the Far East by sailing ships then sailed to Philadelphia.

In nearby Weymouth, cannons and cannonballs for the War of 1812 were produced on the site of Atlantic County Park at Weymouth Furnace, until it was destroyed by fire. By the twentieth century, shipbuilding began to disappear with the decline in suitable resources. Iron was then substituted for ship hull construction.

Whaleboat Privateer's – When captured by British easily replaced due to proximity of NJ Pine Barrens Timber

These small boats grew in numbers as the war for Independence progressed. They worked well together – a bit unusual for the average privateersman – and a flotilla of four or five presented a combined firepower that could hit an enemy vessel from many sides at once. Merchantmen, transports, supply ships and occasionally an armed vessel of fair size fell into their bag of prizes.

Nantucket and Vineyard Sounds off New England, Long Island Sound, and the Chesapeake Bay areas were favorite haunts for the whaleboat privateersmen. But busiest of all was the entire New Jersey coastline and New York Bay. Perhaps this was largely due to Adam Hyler of New Jersey, one of our most famous flotillamen. As soon as the British had occupied New York City in 1776, Hyler led his swarm of hornets between Egg Harbor and Staten Island. Occasionally one of his boats fell victim to those sent out by the British fleet, but new ones were quickly built as replacements. Hyler's activities were the greatest between the years of 1781 and 1782.

Reference: C. Kieth Wilbur

Great Egg Harbor River
National Wild and Scenic River

129 miles of the Great Egg Harbor River and its tributaries designated into the National Wild and Scenic Rivers System. The Great Egg, as it is known locally, drains 304 square miles of pristine wetlands in the heart of New Jersey's Pinelands Reserve (the famous "Pine Barrens") on its way to the Atlantic Ocean. The river's proximity to millions of people, together with it being the largest canoeing river in the Pine Barrens, makes the Great Egg an important recreation destination.

The watershed has been occupied since pre-historic times, lived upon traditionally by the Lenape Indians before European occupation in the early 1700s. The lands contained all the necessary materials for shipbuilding, and in the Revolutionary War its "bog iron" made cannon balls, while its hidden coves sheltered privateers. Blast furnaces, sawmills, glass factories, and brick and tile works followed until the Industrial Revolution drew its people away. Today, the development of the area's prime agricultural land has contributed greatly to the cultural diversity of the area.

Great Egg Harbor National Wild and Scenic River

Iron Furnace at Weymouth

Furnace ruins located along the Great Egg Harbor River, in Weymouth, 0.4 miles north of Black Horse Pike, on easterly side of secondary road to Hammonton.

REMOTE AND PICTURESQUE, the Great Egg Harbor River flows through the cedar swamps, pine, and oak woods past the near-ghost village of Weymouth. Here, the waters describe a horseshoe curve, and nearly surround all that today remains of one of South Jersey's busiest iron furnaces.

A tall brick chimney towers some sixty feet above crumbling Jersey stone walls. Stone arches still span tiny sluicelike creeks, branching from the main river. A mineral spring that offered a healthful but odorous drink to the visitor only half a dozen years ago is marked only by the stone tub it once filled.

A bar of pig iron, cast of Jersey bog ore at Weymouth, early in the 1800's. Ironworkers nicknamed this a pig, the molten iron in its sand forms resembling suckling pigs.

Vines and weeds scale the fallen walls in an effort to claim the furnace's remains and hide them from view. It is difficult to picture the furnace as the beehive of activity it presented during the early nineteenth century.

An early gazetteer of New Jersey, published in 1834, describes Weymouth: *"—Blast furnace, forge and village, in Hamilton t-ship, Gloucester Co., upon the Great Egg Harbor River, about 5 miles above the head of navigation. The furnace makes about 900 tons of castings annually; the forge having four fires and two hammers, makes about 200 tons of bar iron, immediately from the ore. There are also a grist and saw mill, and buildings for the workmen, of whom 100 are constantly employed about the works."*

Weymouth Furnace was established in 1801 by Charles Shoemaker, George Ashbridge, Morris Robeson, John Paul, and Joseph M. Paul, who purchased the vast tract from the West Jersey Society of Proprietors on November 6, 1800, with a net area of 78,060 acres. By 1802 Ashbridge, acting as manager, was advertising for a *"full set of Forgemen to work a New Forge, now erected and in complete order."*

Using native Jersey bog ore, the workers at Weymouth proceeded to turn out a wide variety of iron products; stoves, plates, iron pipe, mortars and pestles, were just a few of the many items.

The iron ore was dug from the nearby swamps, and in 1818 a canal was built between the furnace and the "ore ponds." The ore was then loaded on flat-bottom barges and poled to the furnace. Traces of the canal still remain. And even today, in the city of Philadelphia, iron pipe is found that bears the imprint of Weymouth Furnace—a raised W.

Foundations of mill building along an old raceway

WEYMOUTH FURNACE

c. 1800-1862

Gloucester County
(now Atlantic County)
On Great Egg Harbor River

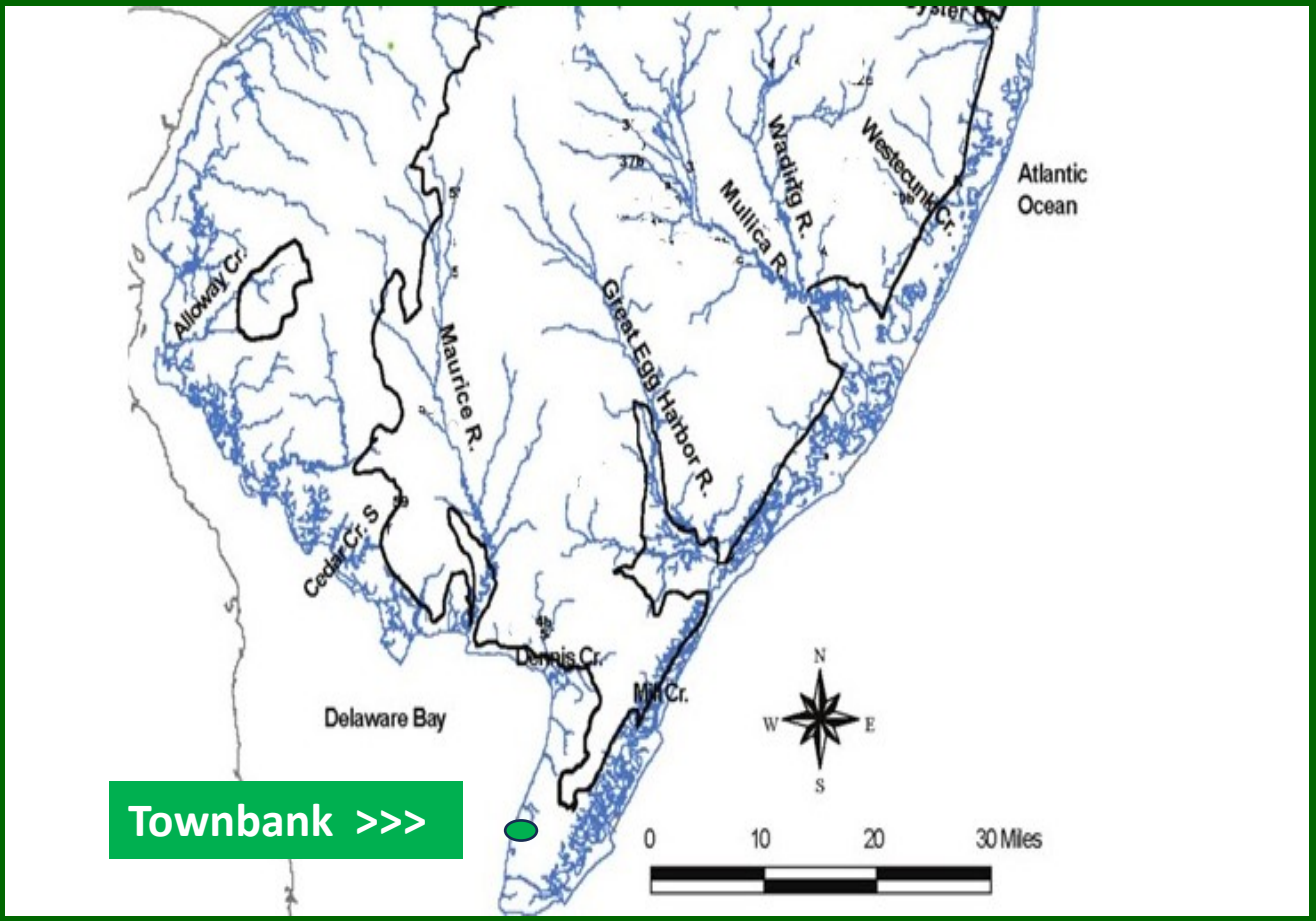
Built by Charles Shoemaker, George Ashbridge, Morris Robeson and others. About 1808 the furnace was sold to Samuel Richards of Atsion. Both the forge and the furnace were destroyed by fire in 1865.

Products: Bar iron, stoves, cannons, cannon balls, iron pipes and grave markers.

The first iron water pipe laid in Philadelphia was made at Weymouth, The old meeting house, built in 1807 for the employees, is still in use.

Townbank

Townbank - Cape May County



When the first white settlers came to southern New Jersey they found themselves much hampered in their explorations of the interior by the Great Swamp which prevented their building roads across the land, and they had to use boats to travel. It is not certain how or when they discovered the sunken forest, but it probably was very early in the State's history.

For many years there has been at Dennisville a sawmill that cuts the logs into planks and shingles. Captain Ogden Gandy, at 90 years old, rans the sawmill. He remembers the days when ships of 200 to 1,000 tons were built along Dennis Creek.

At that time most of the men in this neighborhood were seafarers. Between voyages, young Gandy used to mine the cedar logs and help to cut them into boards and shingles. The cedar wood is used in boatbuilding, although it is not tough enough for the hulls of large ships. It is used for the center boards of boats and for parts of motor boats, and other small craft.

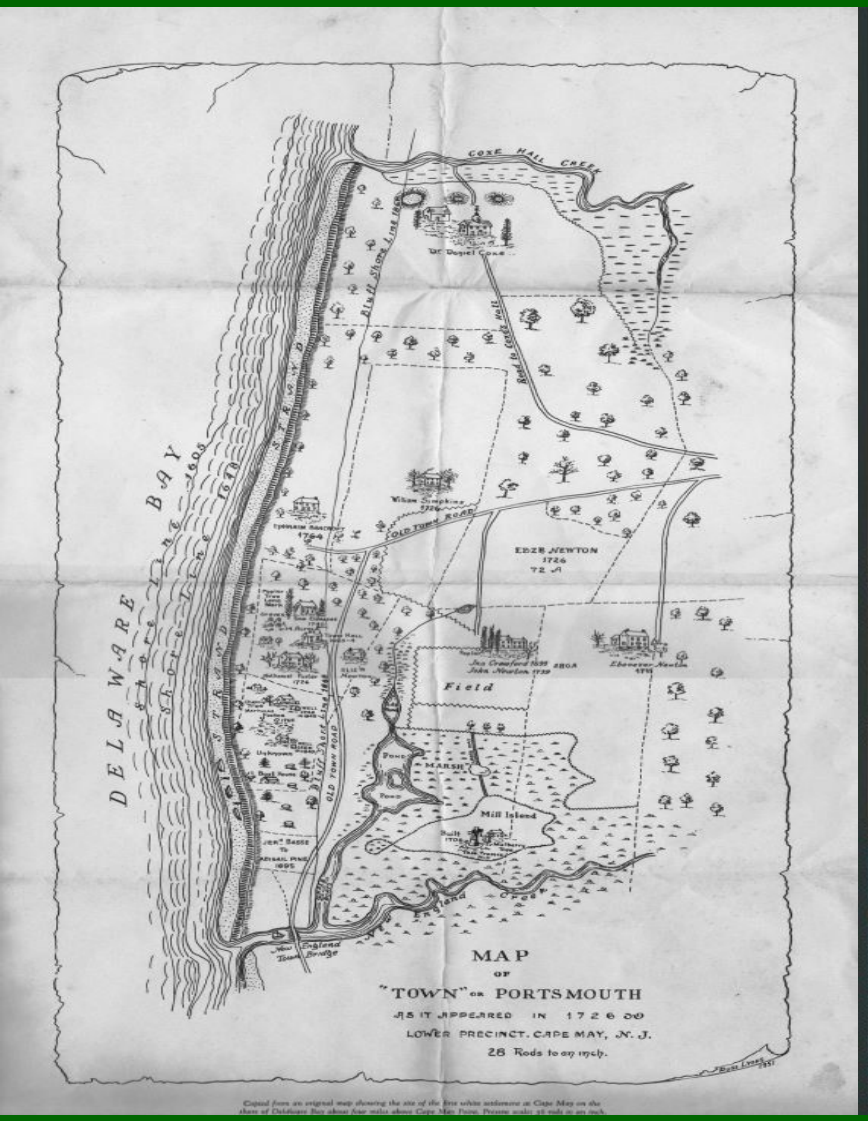
The men who go out into the swamps to mine the submerged cedar are called "swampers." Armed with "progues," which are iron rods about 12 feet long pointed at one end with a ring or loop at the other, the swampers poke around in the deep muck until they strike a sound log. With his progue the swamper finds out just how the log lies, then he and his helpers shovel off the muck until the log is in view.

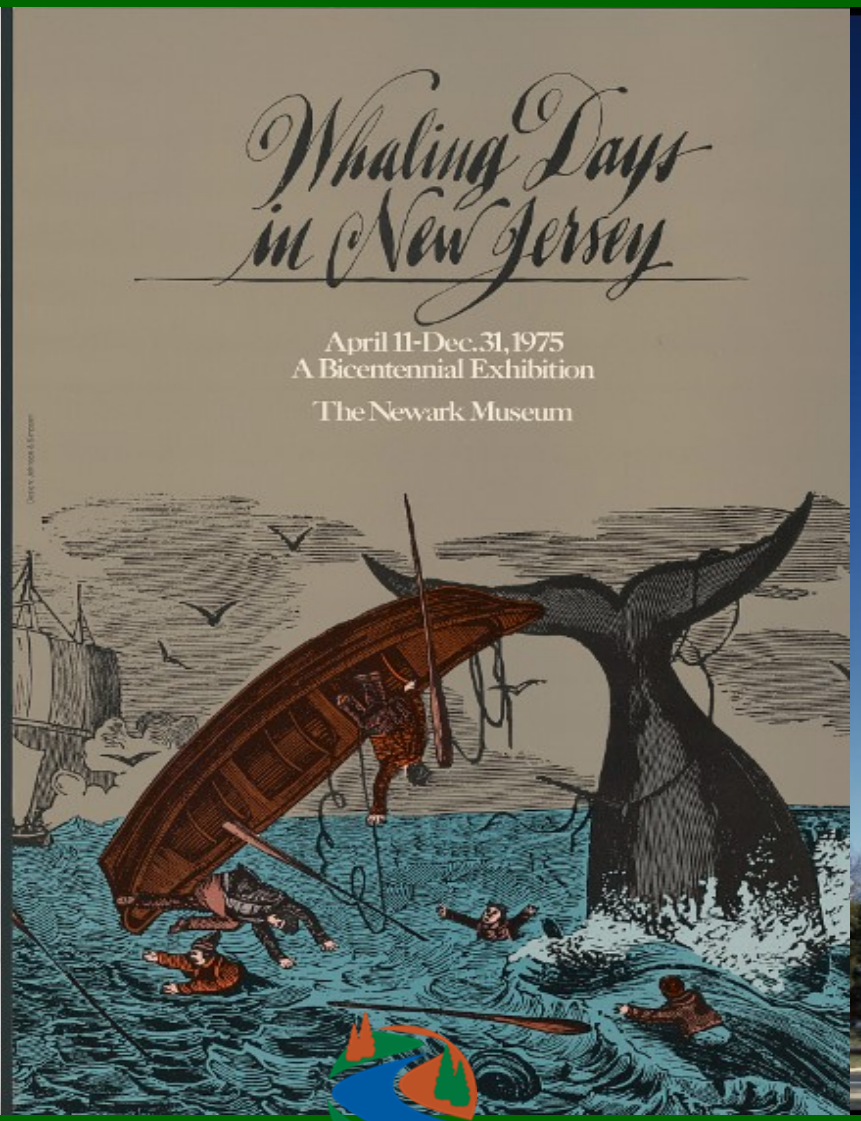
Reference: Dennis Township Museum

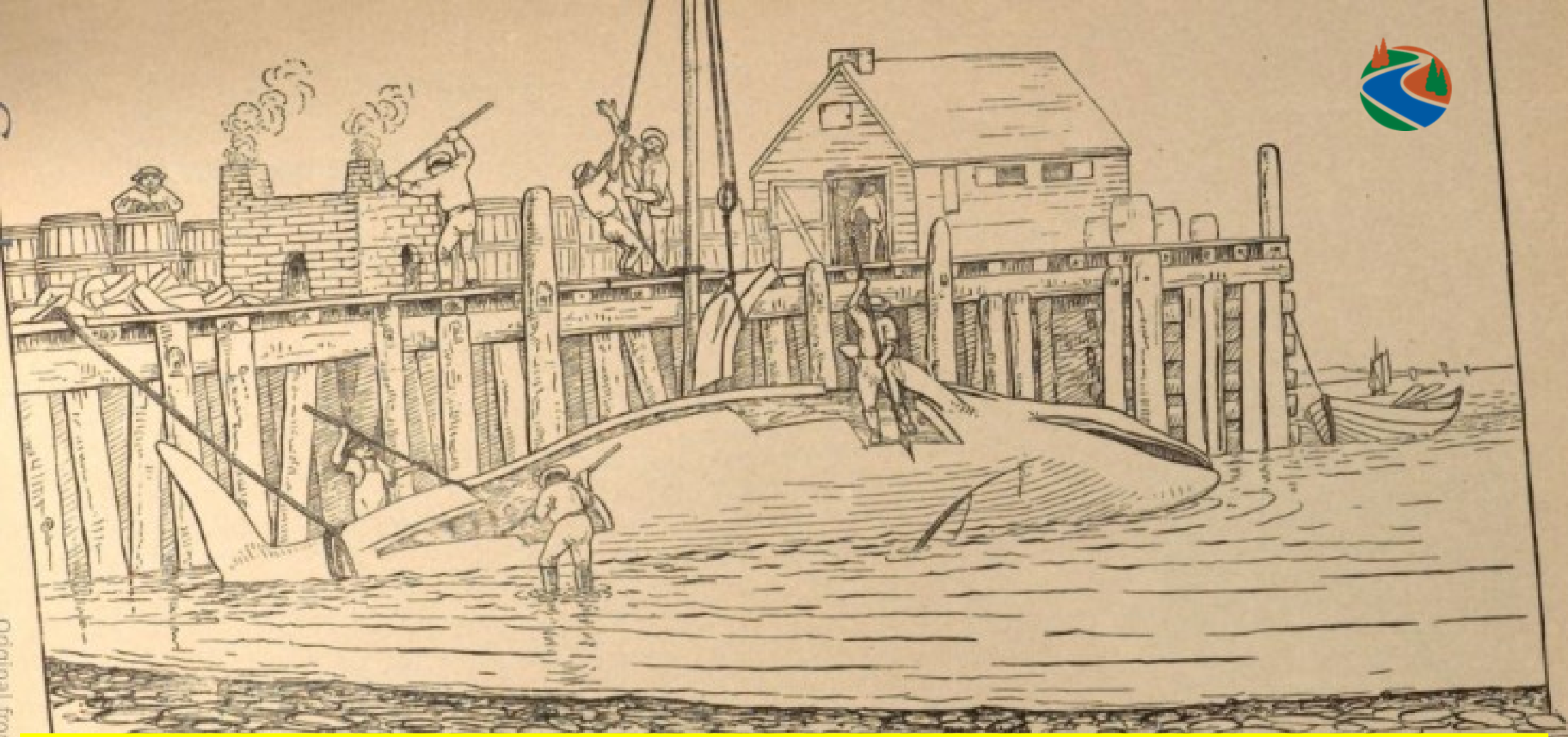
Townbank-Whaling

- Historic Townbank (aka New England Town, Portsmouth Town, and Falmouth) was the first settlement in New Jersey founded by Long Island and New England whalers around the year 1632, they settled on the sandy bluffs along the Delaware Bay shore. Among these settlers were Joseph Whilden & his wife Hannah Gorham, grandchild of John Howland, of the Mayflower Pilgrim. This location is now called Townbank, NJ.
- Legend has it that, in the 17th century, it also was one of the most successful whaling communities in the New World. In March 1633, Dutch fur trader, David DeYries, wrote in his journal, “Our people have caught seven whales, we could have done more if we had good harpoons, for they had struck seventeen fish and only saved seven.” Fifty years later, in a letter to the Commissioners of the Free Society of Traders, William Penn wrote, “Mighty whales roll upon the coast, near the mouth of the Bay of Delaware; eleven caught and worked into oil one season. We justly hope a considerable profit by whalers, they being so numerous and the shore so suitable.” Two years later, in 1685, the Burlington Court record noted that a Cape May Native American sold a whale to settlers.
- The English court physician, Dr. Daniel Coxe, left written accounts about his establishment of a whaling enterprise in Townbank in the mid- 1600s. “I have at the Expense of above three thousand pounds settled a Towne and established a fishing for Whales which are very numerous about Cape May both within the Bay and without all along the sea coast which I am assured if well managed will bring in above 4000E per Annum all charges Defrayed.”. Whale oil was refined to produce a crude oil used for light and lubrication, while whale baleen was used for corset stays, carriage springs, umbrella ribs, buggy whips, shoelaces, hat brims, collar stays and skirt hoops.
- Whaling continued through most of the 18th century, with whalers rowing up and down the coast from mid-winter to early spring. However, by the start of the American Revolution in 1776, few whales were found in the region. In the following decades, whaling interests moved to other trades such as all types of fishing & land farming, building, import of retail goods, & tourist industry to name a few.

Lewis Cresse, two months of the Delaware Bay reported in the l750s
"We never saw a whale nor the spout of a whale that we knew of in all the time







1884

Representation on how whales once landed were harvested for whale oil, blubber/meat, bones and other products. Much like was done at Townbank, Cape May.

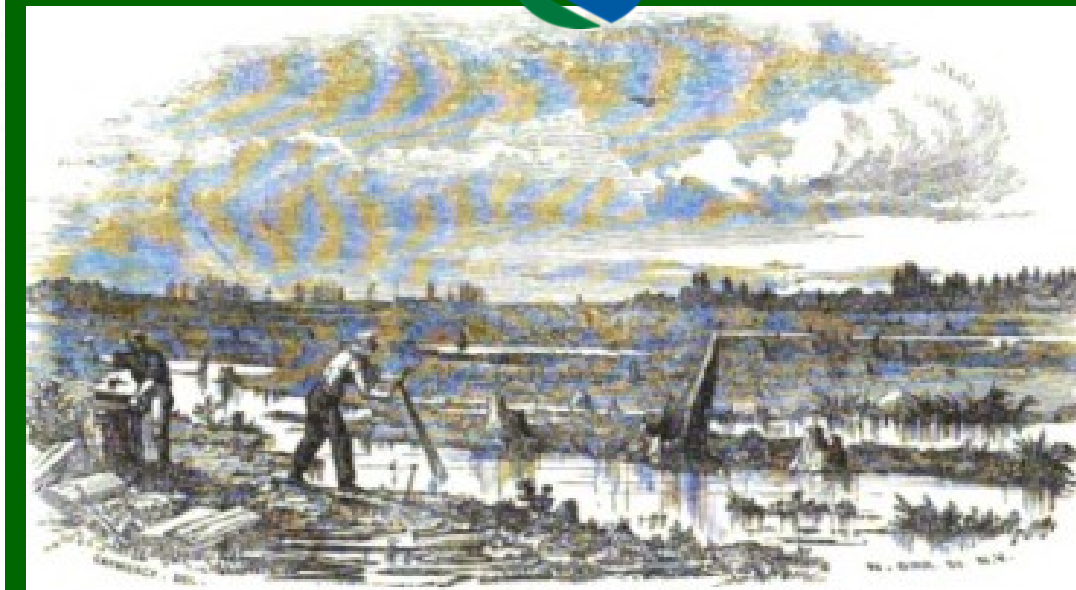
Dennis Creek
Mining Pine Barrens Buried Cedar Trees for use as timber/ship building and shingles
1855

SAWING CEDAR LOGS AND MAKING SHINGLES.

SECTION ACROSS SALT-MARSH AND CEDAR SWAMP, AT DENNISVILLE.

1. Marsh, mud, and grass roots. 2. Cedar-swamp earth and buried timber. 3. Sand and gravel. 4. Layer of sedge roots.

Horizontal Scale, 1000 feet to an inch. Vertical Scale, 20 feet to an inch.


RAISING OR MINING BURIED CEDAR TIMBER.

Maurice River

Maurice River Sand Bucket Dredge Around 1902

Port Elizabeth - Maurice River - Southwestern Border NJ Pine Barrens

Early American - 1720 - Port of Entry

Maurice River

Indian Name Wahatquenack

Principle River flowing into the Delaware Bay

1623 named the *Mauritius River* by Dutch

Bulk transportation of ore and iron manufactured carried on channel of Menantico Creek up to Schooner Landing, a place of considerable business, and then by ordinary road

1705- Daniel England's saw mill at Buckshutem

1789 Act of Congress established districts for the collection of duties imposed on imported goods : District of Bridgeton Towns of Bridgeton, Salem and Port Elizabeth as Ports of Delivery. All vessels required a trade license. Owners required to reside in the port district.

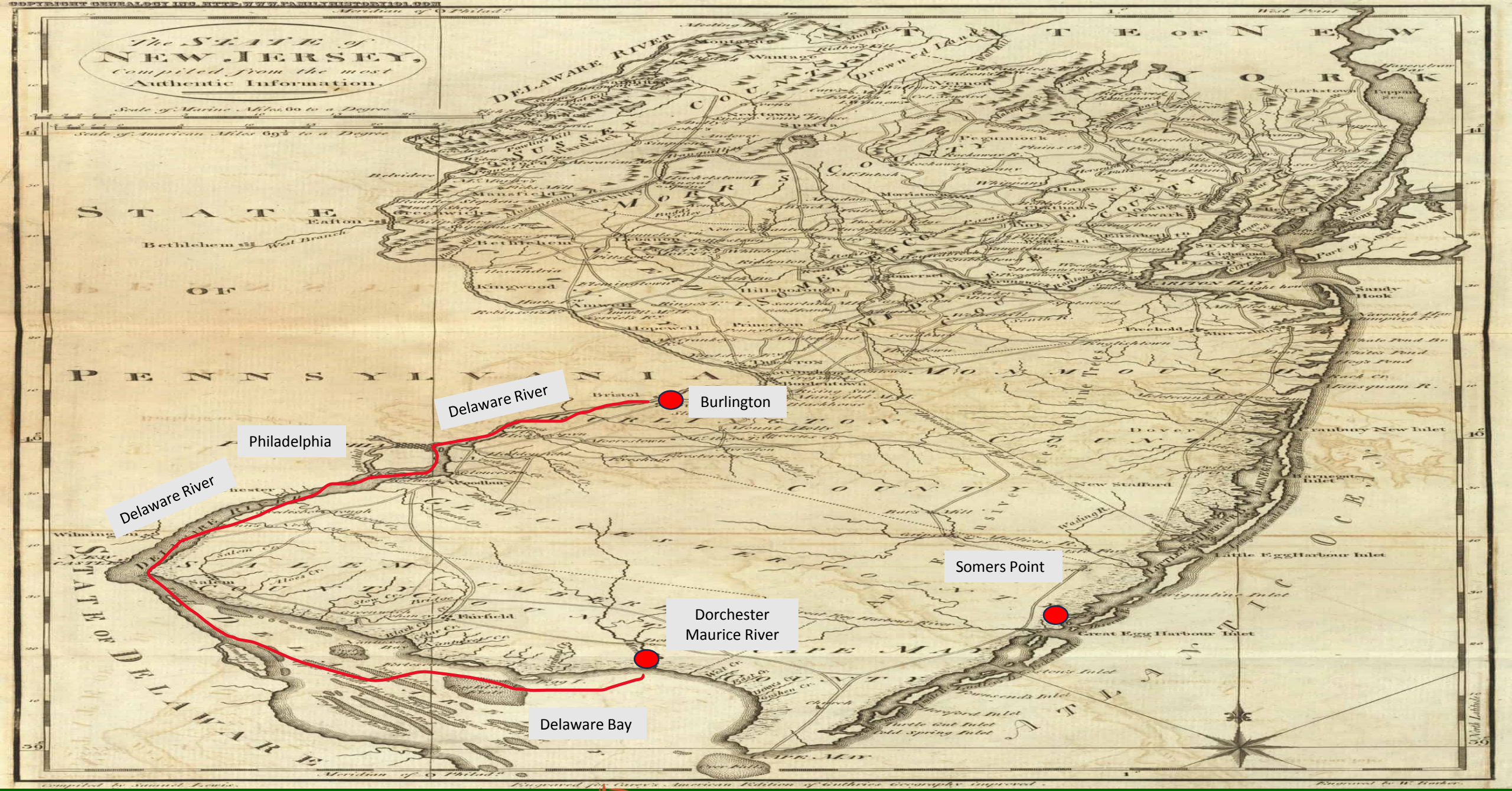
1800 Leesburg, a place for building coastal vessels (ship building). Mattox Landing, individuals engaged in coasting, bay and river trade

Natural Oyster beds at the Maurice River Cove.

Burlington (Delaware River) to Lower Part of Cumberland County in 1691 (Delaware Bay)

by the Indians until 1688, when most of it was purchased by Daniel Coxe, March 30, April 30, and May 16.

The Council soon ordered surveys made in various parts of the province for different persons. In the month of April, 1691, Thomas Budd and John Worledge started from Burlington in a small vessel, came down the bay, and made a number of surveys in the lower part of Cumberland County and in Cape May. On the east side of Maurice River they laid out a twenty-thousand-acre survey for Robert Squibbs, Sr., and Robert Squibbs, Jr., of Westminster, Middlesex County, England. At the same time they ran out the town plot of Dorchester, which contained two thousand acres, and extended from Squibbs's line up the river above the present town of Dorchester, which was not built until the present century.


The STATE of
NEW JERSEY,
Compiled from the most
Authentic Information.
Delaware River
Burlington
Philadelphia
Delaware River
Somers Point
Dorchester
Maurice River
Delaware Bay

In 1771 John Bell bought what is now Port Elizabeth and sold it to Mrs. Elizabeth Clark Bodly, who laid out the town and supplied it with a name in 1785. In that year Congress named Port Elizabeth, then a glass manufacturing and shipbuilding center, as a port of entry.

Later, when the glass factory was moved to nearby Millville and the shipbuilding industry was brought closer to Delaware River, Port Elizabeth's business disappeared along with the old church on the river bank. Maurice

Port Elizabeth

ESTABLISHED AS A PORT OF DELIVERY.

In 1789 an act of Congress was passed establishing districts for the collection of duties on imports, and the eastern side of the Delaware, from above Camden to Cape May, was made the district of Bridgeton, with Bridgeton as the port of entry, and Salem and Port Elizabeth as ports of delivery. Port Elizabeth was considered a fine location for business, particularly in wood and lumber; consequently a number of enterprising young men of business saw the advantages of the place, purchased lots, and built dwellings, storehouses, etc. Among these were James and Thomas Lee, Joshua Brick, Isaac Townsand, and Stephen Willis. The place grew rapidly, a large trade was carried on with the West Indies from Maurice River directly for a number of years; but the greater advantages of New York and Philadelphia ended all foreign trade from here more than fifty years ago. Port Elizabeth, in the early part of the present century, was one of the two leading towns in the county; Bridgeton being the other.

A port of delivery is a **harbor where ships unload their cargo at the end of a Particular voyage. It is also known as the port of discharge**. For example, if a ship is carrying goods from China to the United States, the port of delivery would be the harbor in the U.S. where the ship unloads its cargo.

Mount Holly and Burlington were Official Early American Ports during this period

Navigation Chart

Delaware Bay, Maurice River Cove, Maurice River, Cohansey River

NJ Pine Barrens National Reserve

"in the early morning the first lines of timber teams from the NJ pine barrens on their way to Port Elizabeth's wharf would measure half a mile in length" (mid 1800's)

East Point Lighthouse

Port Elizabeth

Port Norris

Extensive hoop-pole business, products shipped to Southern States and West Indies (1865-1885)

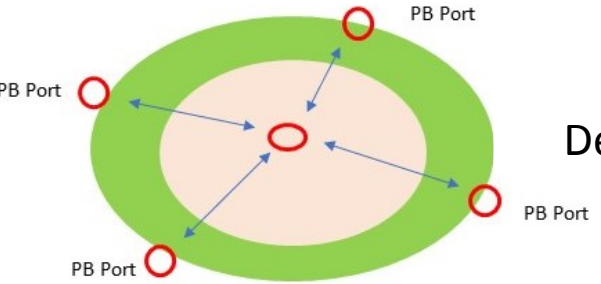
<<< East Point Lighthouse

<<< Maurice River Cove

PROPERTY OF SAMUEL HILLIARD,
PROPRIETOR OF THE CELEBRATED GLASS SAND PITS, MAURICE RIVER, NEAR MILLVILLE, N.J.

Port Elizabeth Sand Mining - Since 1841
NJ Pine Barrens Sand

Pine Barrens Commodity
Sand Mining



Delivery

Market

North River
Port of Albany

Photo AC Press 2022

Tug Boat Company Assigns Contract to Barge 2,000 Metric Tons of Pine Barrens Sand from Maurice River to North River, Port of Albany

Meaghan
Marie

Coast Wise
Sand Trade

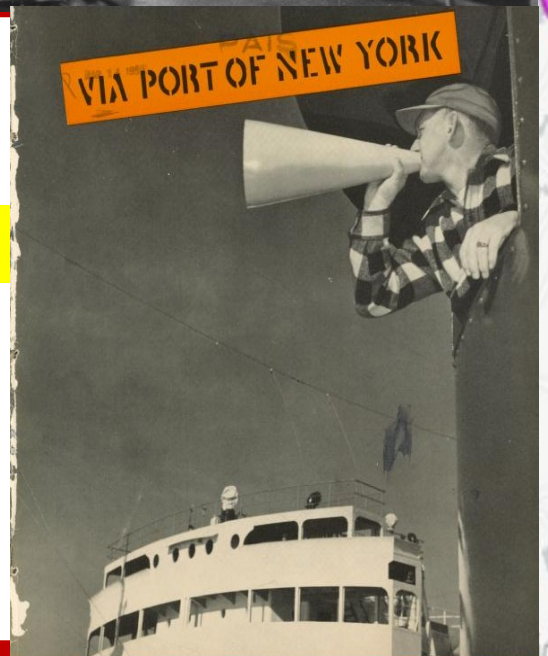
Sailing Maurice River
Sand Barge

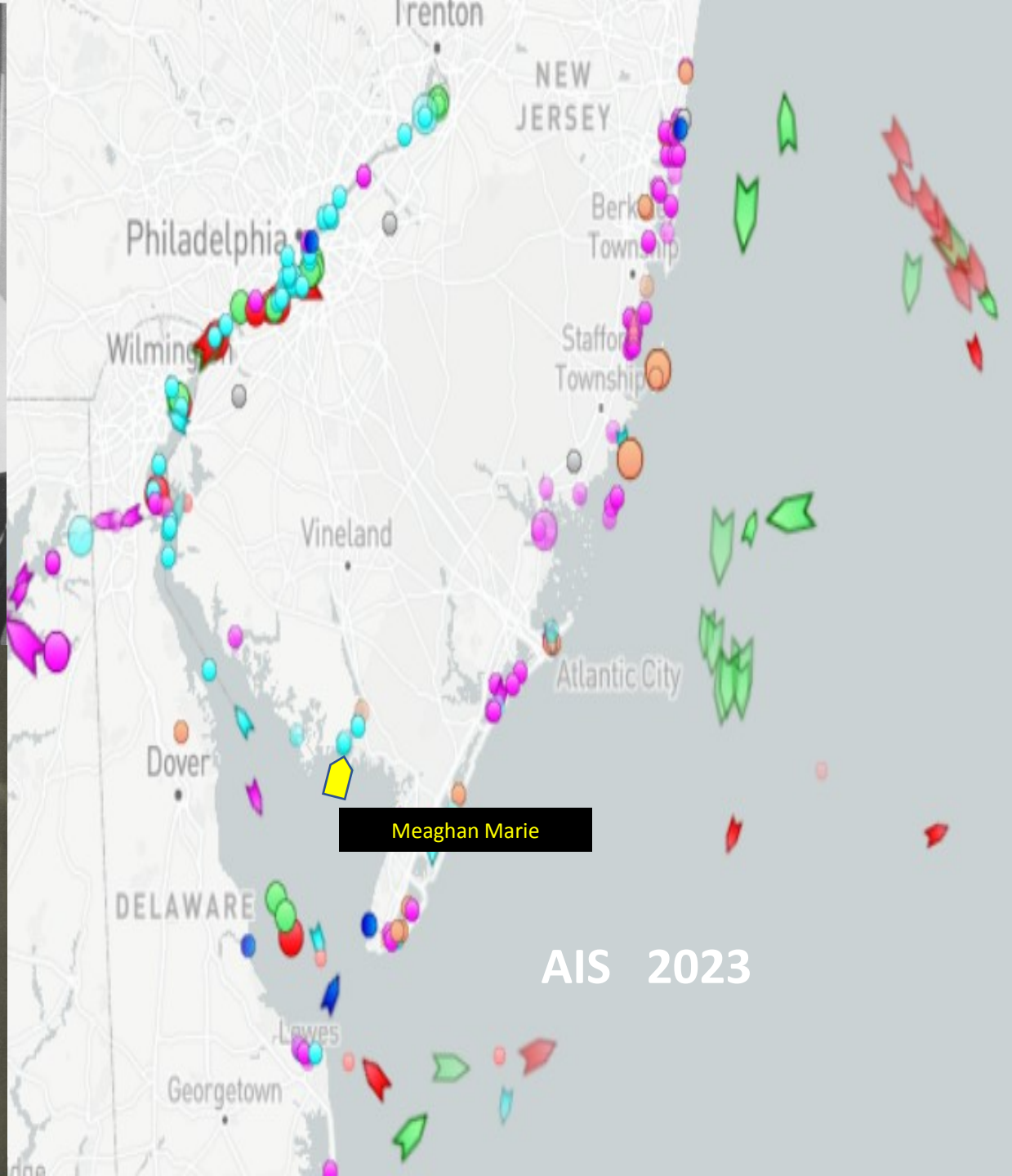
28 August 2023

TBS MARINE SAFETY AND COMPLIANCE
TILLER TECHNICAL
the ACTion group Est. 1999
Potamoi Industries Maritime Technologies

That Was Then, This is Now

ioCurrents
ShipTracks ALWAYS ON WATCH
OPTIPORT
REYGAR LTD Marine systems
BERGAN MARINE SYSTEMS
MOXIE MEDIA TRAIN TRACK REPORT
10ure
SHIPNET





Tugboat Dispatch Sheet Delaware River, Bay
For Demonstration Purposes Only

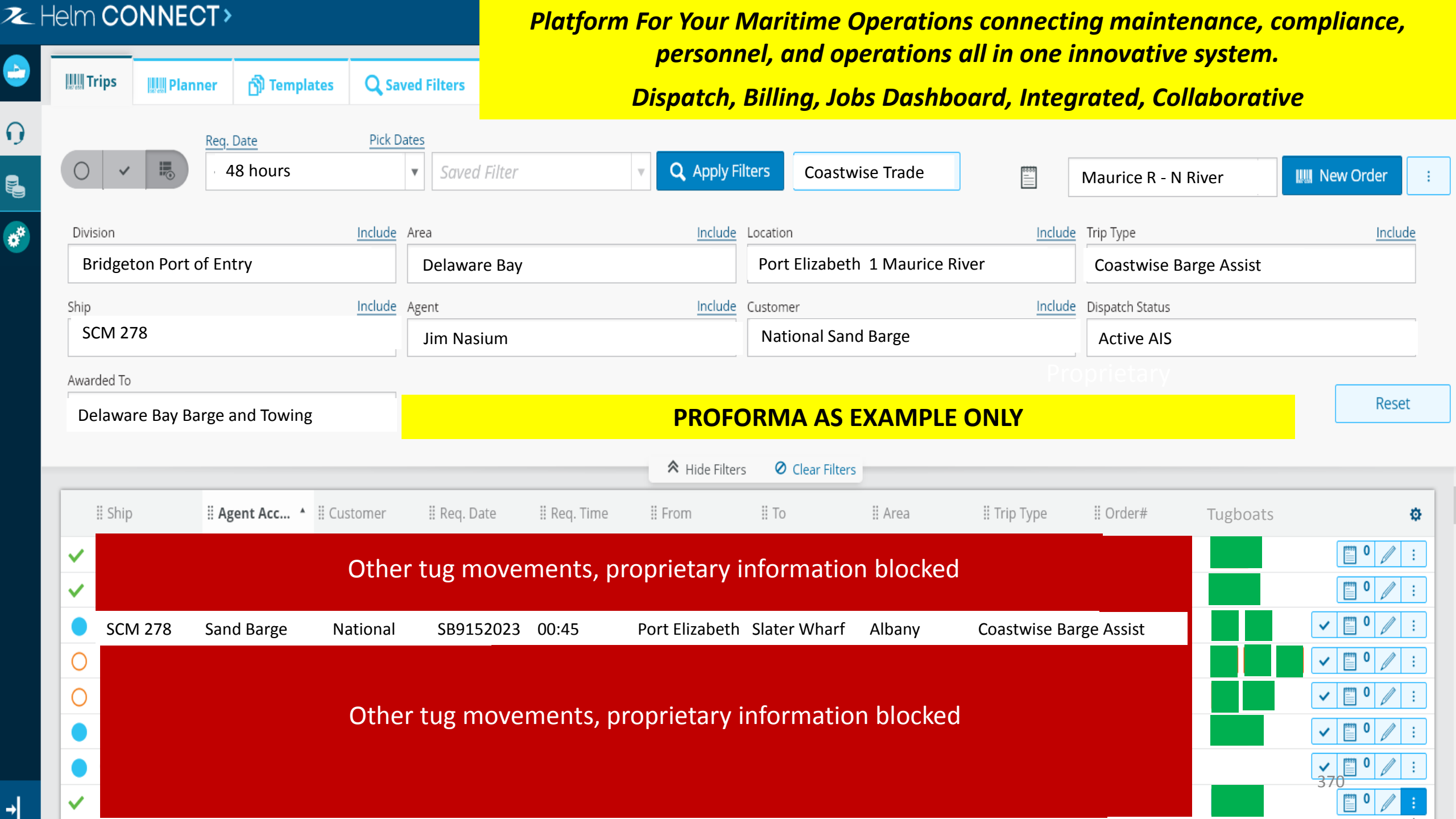
MARCUS HOOK - 1HR 23M
TIDES-PHILADELPHIA HIGH: LOW: - 1HR 07M

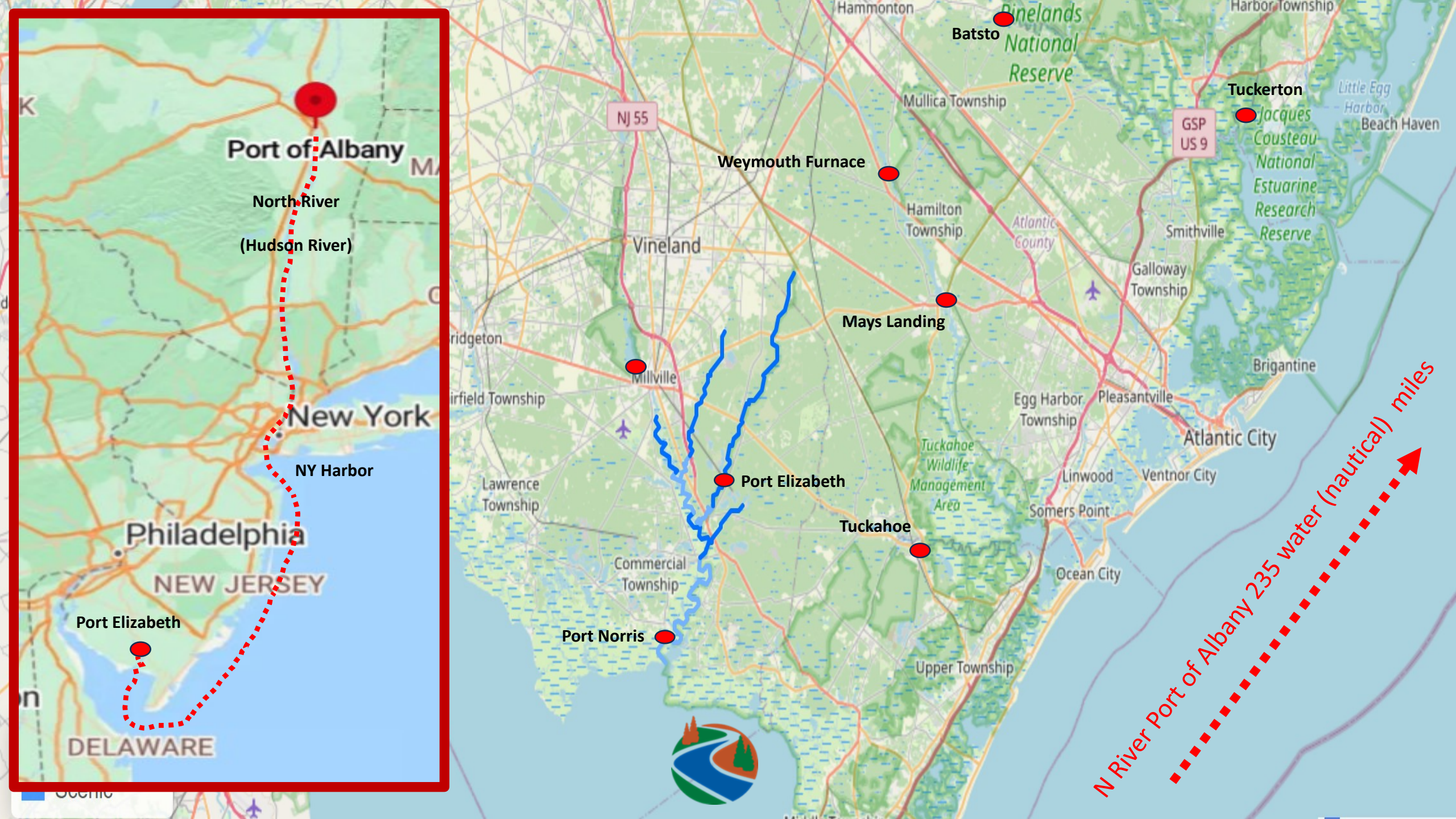
Condor	Teresa	Reid	Beverly	Robert-	Responder	PILOTS

Crew and Crew Rotations Standing Watch Operational Notes

TUGS LEFT	HELM	TIME	SHIP	FROM	TO	START	FINISH	TUGS	MASTER IN CHARGE	DRAFT	OWNER OR CHARTERER	REMARKS
	Y	0100F*	MSC Shristi NO BT	4/5 Packer/SST 2700'	Stream	01115 0115	0130 0130	2. Beverly* Reid*	WD	11.4M		equested 2 tractors for sa
	Y	0300F*	Jordan Rose/RCM-252	Stream	Buckeye Pensauken	0300	0335	Teresa*	**		Rose Cay	Teresa OOT after this job
	Y	0645F*	Independent Quest 1200 HP BT	Stream	Penn Terminal North Berth SST			2. Beverly* Responder>*	JT		ICL	M e
	Y	1230F	Sifnos Lady	Stream	1A Sun MH/PST	1300	1456	2. Reid* Responder>		26'3	Crowley	591ft long
	Y	1430F	AS Camellia	Stream	2/3 Packer/PST 1175'	1515	1630	1? Beverly		10.5m	msc	Cargo Delay
	Y	???	Jordan Rose/RCM-252	Buckeye Pensauken	Stream			1	**		Rose Cay	
		1800F	B. Franklin/RTC-81	Stream	Buckeye Wilmington	1845	1930	1	**		Reinauer	
	Y	1800t	Sunshine State	Paulsboro	Stream	1835	1900				Moran	
		1900F	Pequeco II	Chester	W.R. Grace	1915		Purple Hays	**		Hays	
		2130t	Clipper sky	stream	3C sun mh			2				
		0045F	SCM 278	Stream	WHIBCO 2			1. Megahn Marie	SK		WHIBCO	Slater Pier N River
											UNTIL FURTHER	

24 hour Tugboat Dispatch Sheet Delaware River, Bay
For Demonstration Purposes Only


Helm CONNECT
Platform For Your Maritime Operations connecting maintenance, compliance, personnel, and operations all in one innovative system.
Dispatch, Billing, Jobs Dashboard, Integrated, Collaborative
Trips
Planner
Templates
Saved Filters
Req. Date
Pick Dates
48 hours
Saved Filter
Apply Filters
Coastwise Trade
Maurice R - N River
New Order
Division
Include
Bridgeton Port of Entry
Area
Include
Delaware Bay
Location
Include
Port Elizabeth 1 Maurice River
Trip Type
Include
Coastwise Barge Assist
Ship
Include
SCM 278
Agent
Include
Jim Nasium
Customer
Include
National Sand Barge
Dispatch Status
Active AIS
Awarded To
Delaware Bay Barge and Towing
Proprietary
PROFORMA AS EXAMPLE ONLY
Reset
Hide Filters
Clear Filters
Ship
Agent Acc...
Customer
Req. Date
Req. Time
From
To
Area
Trip Type
Order#
Tugboats
Other tug movements, proprietary information blocked
SCM 278 Sand Barge National SB9152023 00:45 Port Elizabeth Slater Wharf Albany Coastwise Barge Assist
Other tug movements, proprietary information blocked


Port of Albany
North River
(Hudson River)
New York
NY Harbor
Philadelphia
NEW JERSEY
Port Elizabeth
DELAWARE
Batsto
Pinelands National Reserve
Tuckerton
Little Egg Harbor
Jacques Cousteau National Estuarine Research Reserve
Beach Haven
Mullica Township
NJ 55
GSP US 9
Weymouth Furnace
Hamilton Township
Atlantic County
Smithville
Galloway Township
Vineland
Mays Landing
Millville
Brigantine
Egg Harbor Township
Pleasantville
Atlantic City
Tuckahoe Wildlife Management Area
Linwood
Ventnor City
Somers Point
Port Elizabeth
Tuckahoe
Lawrence Township
Commercial Township
Ocean City
Port Norris
Upper Township
N River Port of Albany 235 water (nautical) miles

1880's

Tidewater marshes feeding grounds for rail and reed birds.

West Jersey Game Protective Society 200 members came into Port Elizabeth via 4-5 steam and sailing yachts

100,000 to 125,000* rail birds killed per season

375 rail birds killed in two tides by a single gunner (1882)

Ref: F.W. Bowden

1881 NJ Enacted laws to stop wanton slaughter of rail birds

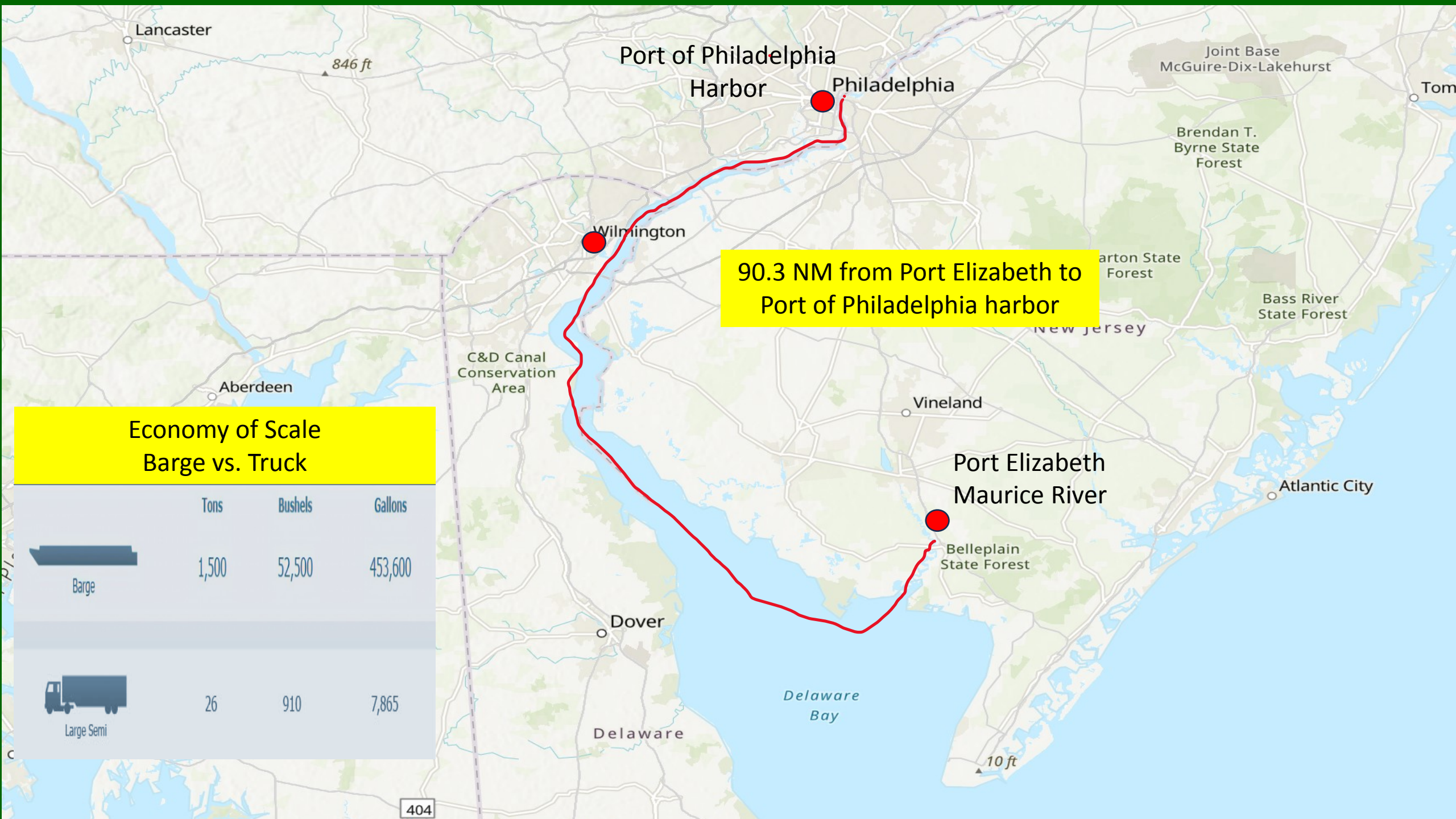
* Bowden notes possible exaggeration on number of birds killed there are documented records of 10,000 birds killed at one time by a single gunner.

Tidal marshes of the Maurice River and its tributaries include the largest tidal, freshwater emergent marshes in New Jersey. Ref: NJDEP 2008

Port Norris sand barge moves up onto Delaware River Port for Offloading Philadelphia Harbor

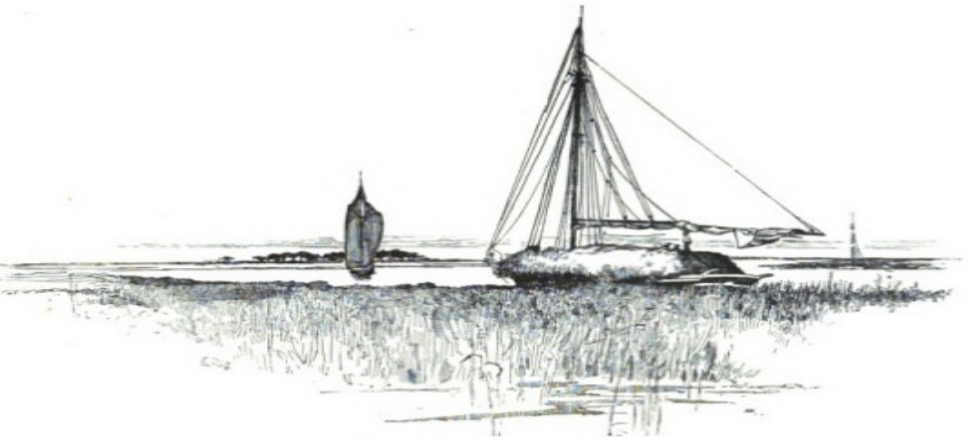
Port Norris down on Maurice River

7-24-2023



Economy of Scale
Barge vs. Truck

	Tons	Bushels	Gallons
Barge	1,500	52,500	453,600
Large Semi	26	910	7,865



Hay Sloop in the Jersey Tidewater Marsh
Maurice River
Reference: Vacation cruising in Chesapeake and Delaware bays. J. T. Rothrock. 1880

South Jersey Tradition

Salt Hay Rope

Other uses of salt marsh hay: stable bedding, fodder, packing for shipping of Pine Barrens glassware and pottery, insulation in Pine barrens ice houses

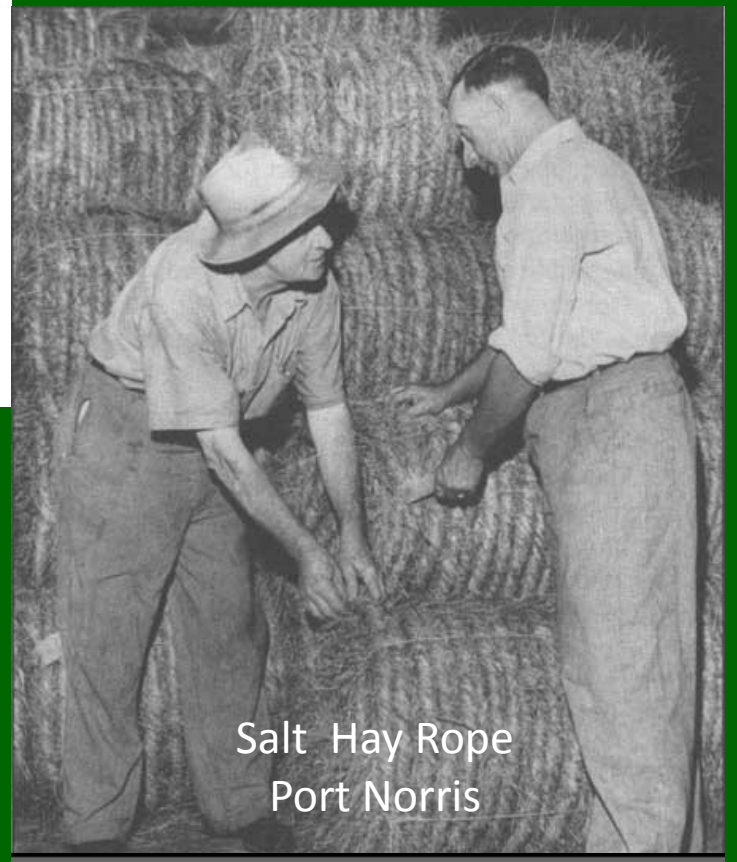


Figure 33. Owen J. Carney, Sr. (left) and Austin Berry (right) discuss Carney's spools of salt-hay rope. *Gibson's Private Collection.*

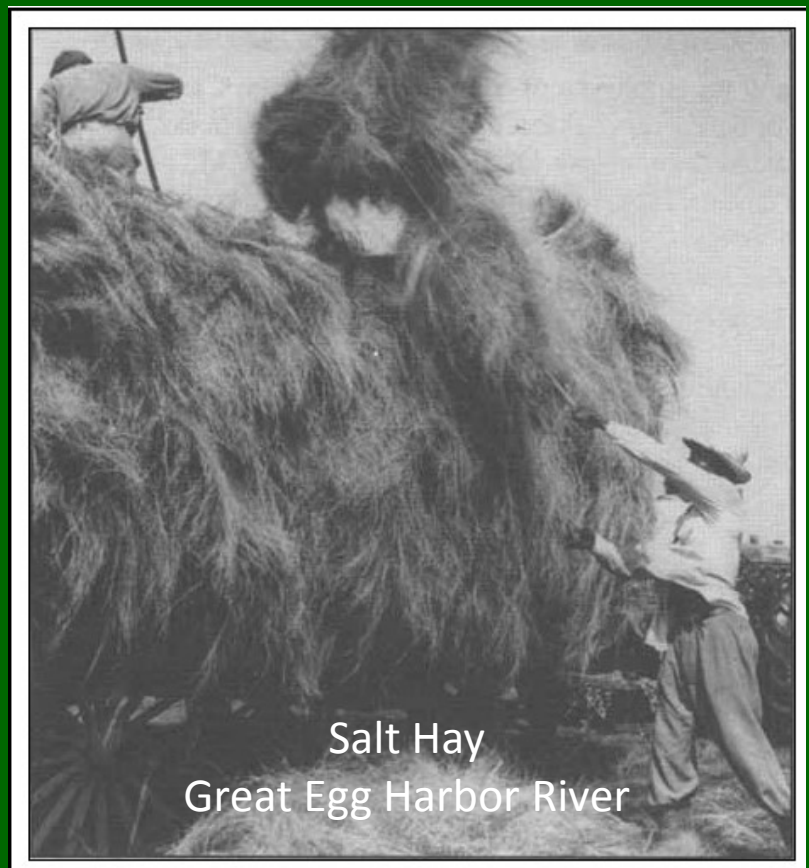
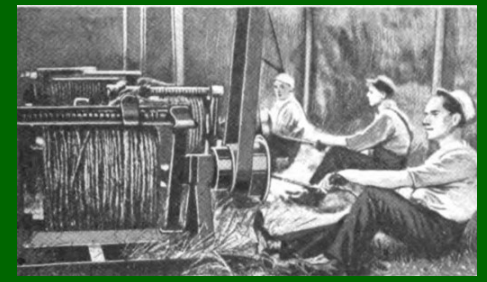
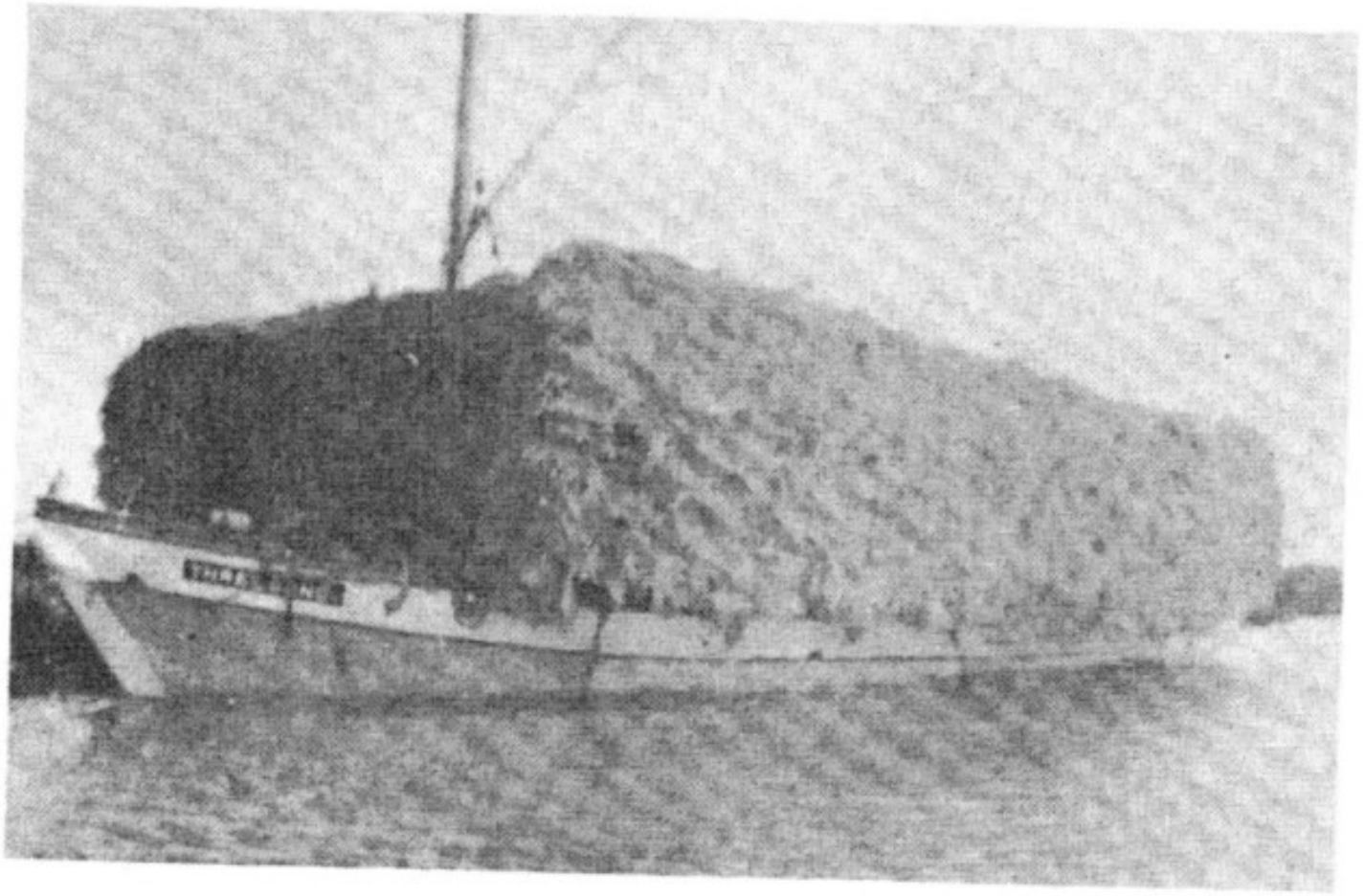


Figure 25. Until the 1950s, salt hay was loaded onto wagons via pitchfork. *Gibson's Private Collection.*

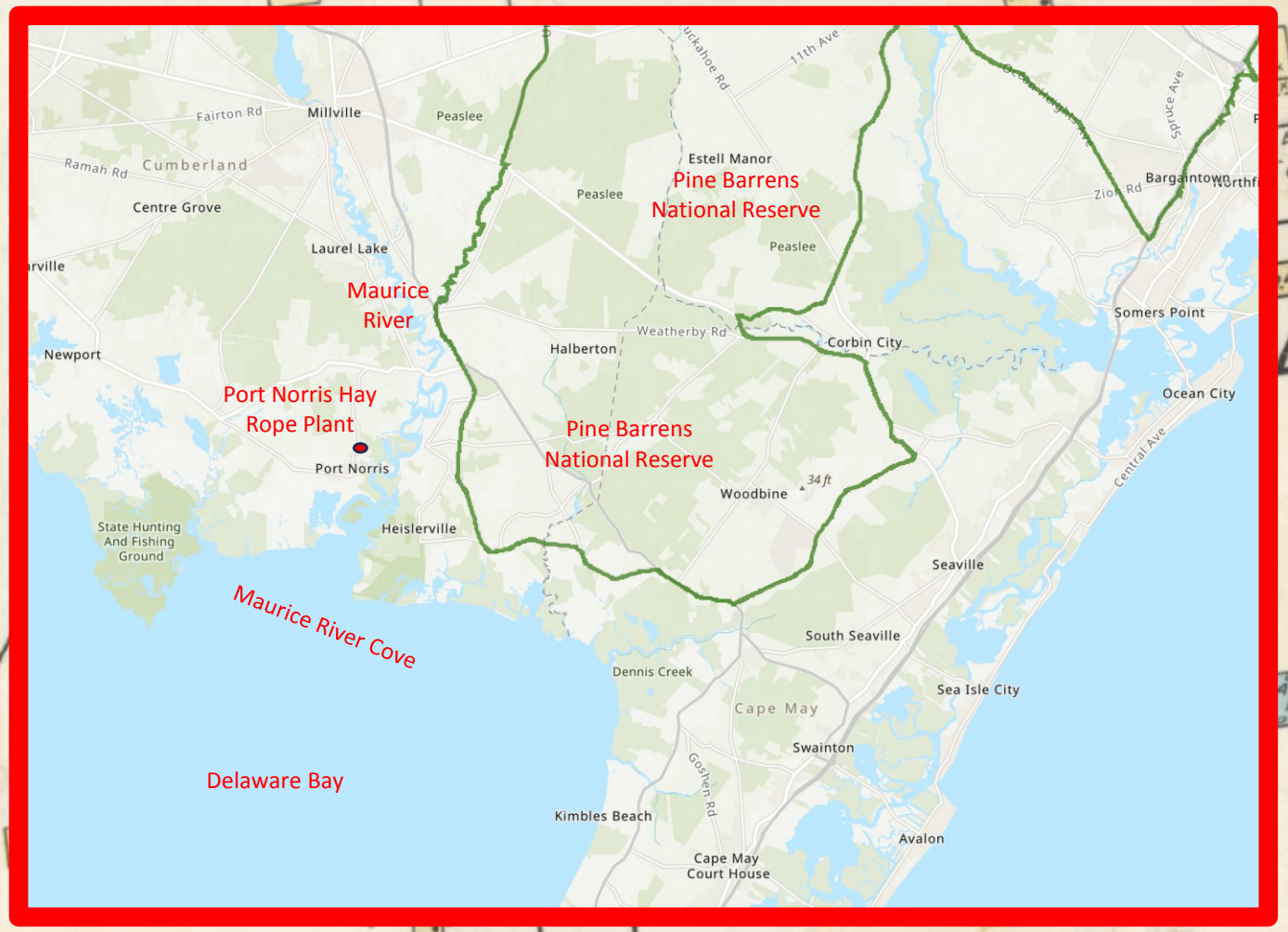
Reference: NJ Coastal Heritage Trail





The salt hay business shown in the pictures is the freight boat "Three Brothers" with 80 tons of hay aboard. This was loaded in Long Reach on the Maurice River from the Cadwalader farm which

In 1921 according to the Soil Survey of the Millville Area, between 10,000 and 12,000 acres of salt hay were cut each year along the Maurice River. The better grades of hay, which were usually cut before the first frost, brought between $5 to $6 a ton locally and $8 to $10 a ton at more distant markets.



PORT NORRIS HAY ROPE CO.
HAY ROPE PLANT

NO WATCHMAN:- HEAT: STOVE:-
LIGHT: GAS.- 300'-2½" HOSE AS SHOWN:-
WATER SUPPLY FROM TANK (5500 GALS.-
FILLED BY ELEC. PUMP.-

STORAGE OF HAY ROPE
1-2
1-2
MAKING OF HAY ROPE
W.T.
HOSE HO.
SCALES
LINCOLN
SCHOOL
VACANT

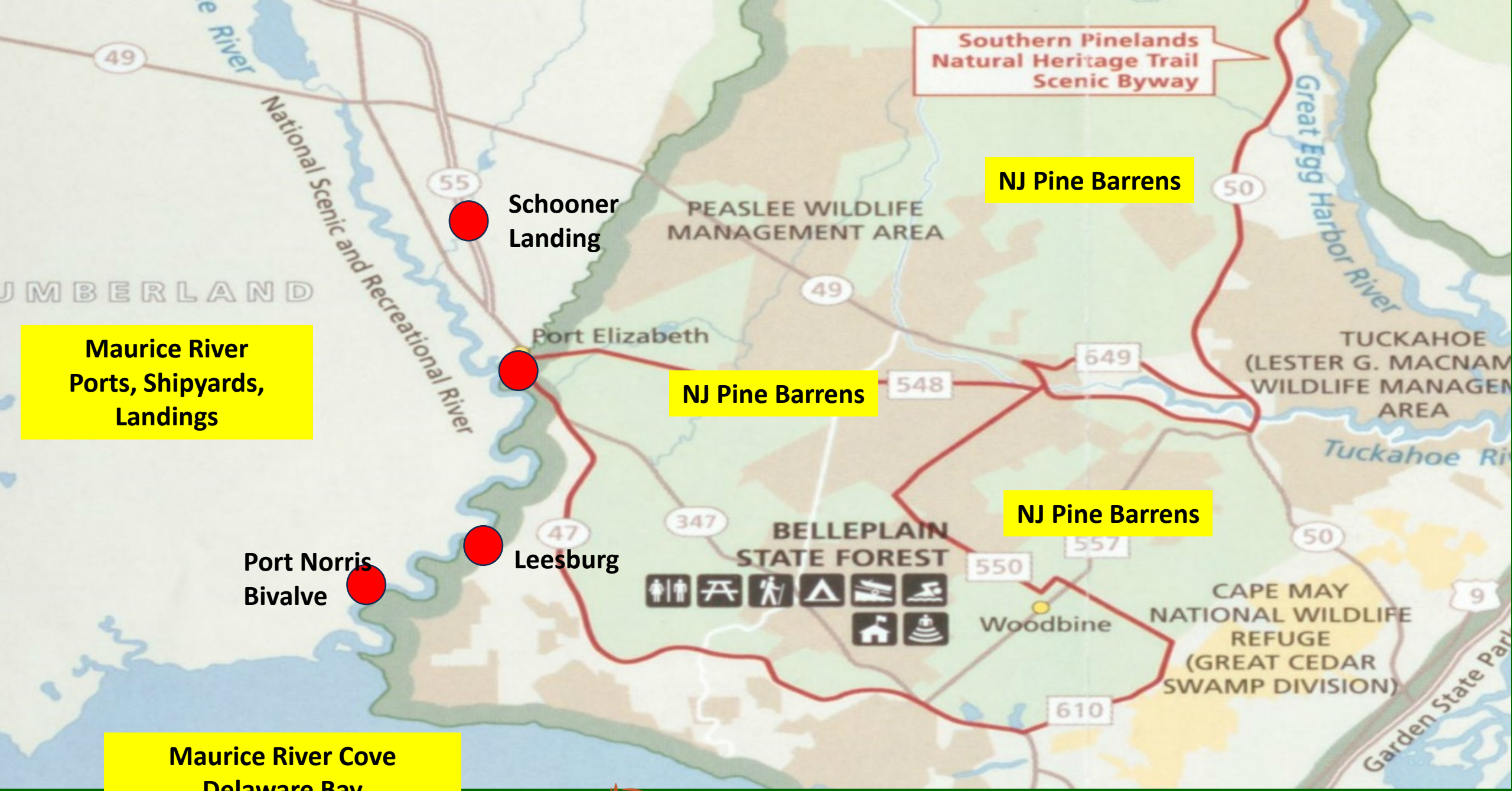
Maurice River National Wild and Scenic River

In 1993, the Maurice River and several tributaries including Menantico and Muskee Creeks and the Manumuskin River were added to the National Wild and Scenic River System.

The Maurice (pronounced "morris") River corridor is an unusually pristine Atlantic Coastal river with national and internationally important resources. As part of the Atlantic Flyway, its clean waters and related habitats are vitally important to the migration of shorebirds, songbirds, waterfowl, raptors, rails, and fish. Other important resources include a rare and endangered joint vetch, short nose sturgeon, striped bass, and a pre-historic settlement site. Historically, the Maurice is home to a rich fishing, boating, and oystering heritage.

The Maurice River flows through what was once an oyster harvesting town; you can still see buildings and activities related to this industry. The river supports New Jersey's largest stand of wild rice and 53% of the animal species that New Jersey has recognized as endangered, excluding marine mammals. The Maurice River is a critical link between the Pinelands National Reserve and the Delaware Estuary both nationally and internationally important.

The Maurice River corridor serves as the western boundary of the Pinelands.


Southern Pinelands
Natural Heritage Trail
Scenic Byway
Great Egg Harbor River
National Scenic and Recreational River
PEASLEE WILDLIFE
MANAGEMENT AREA
Port Elizabeth
TUCKAHOE
(LESTER G. MACNAM
WILDLIFE MANAGEN
AREA
Tuckahoe Ri
BELLEPLAIN
STATE FOREST
Woodbine
CAPE MAY
NATIONAL WILDLIFE
REFUGE
(GREAT CEDAR
SWAMP DIVISION)
Garden State Par
49
55
50
548
649
347
47
557
550
9
610
Schooner
Landing
Leesburg
Port Norris
Bivalve
NJ Pine Barrens
NJ Pine Barrens
NJ Pine Barrens
Maurice River
Ports, Shipyards,
Landings
Maurice River Cove
Delaware Bay

Ram VII (IMO: 8765838)

Off-Shore Supply Vessel "Jack-Up"

Leesburg, Maurice River
08/29/2023

Photos from the web site of the Maurice Township Heritage Association

Welsbach Dorchester 1965 C. G Pusher Tug pC

Welsbach built by Dorchester Shipyard 1965 Coast Guard Pusher Tug, inland Tender original Name Spike photo courtesy of Paul Cox

Stowman's Shipyard Dorchester

Workers inside the Stowman Shipyard Dorchester NJ

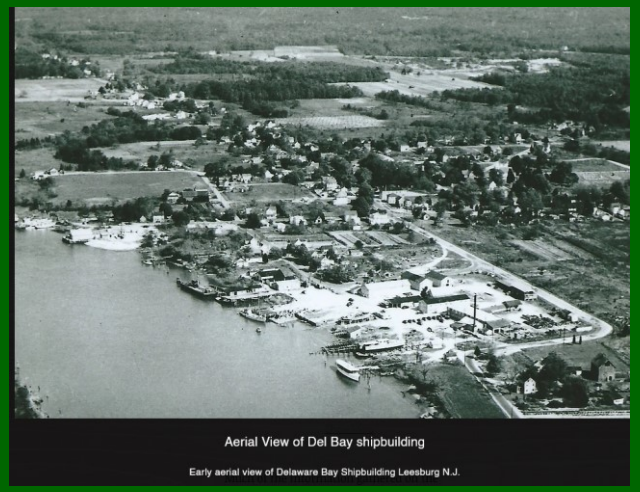
Delaware Bay Shipyard

Delaware Bay Shipyard photo courtesy of Drew Tomlin

ATR 58 April 23 1944 Delbay

Atlantic Tug Rescue 58 built by Delaware Bay Shipyard Leesburg N.J. launched April 23 1944 delivered to US Navy 1945 photo courtesy of Paul Cox

Stowman Shipyard was established in 1890 by Charles Stowman.



Aerial View of Del Bay shipbuilding

Early aerial view of Delaware Bay Shipbuilding Leesburg N.J.

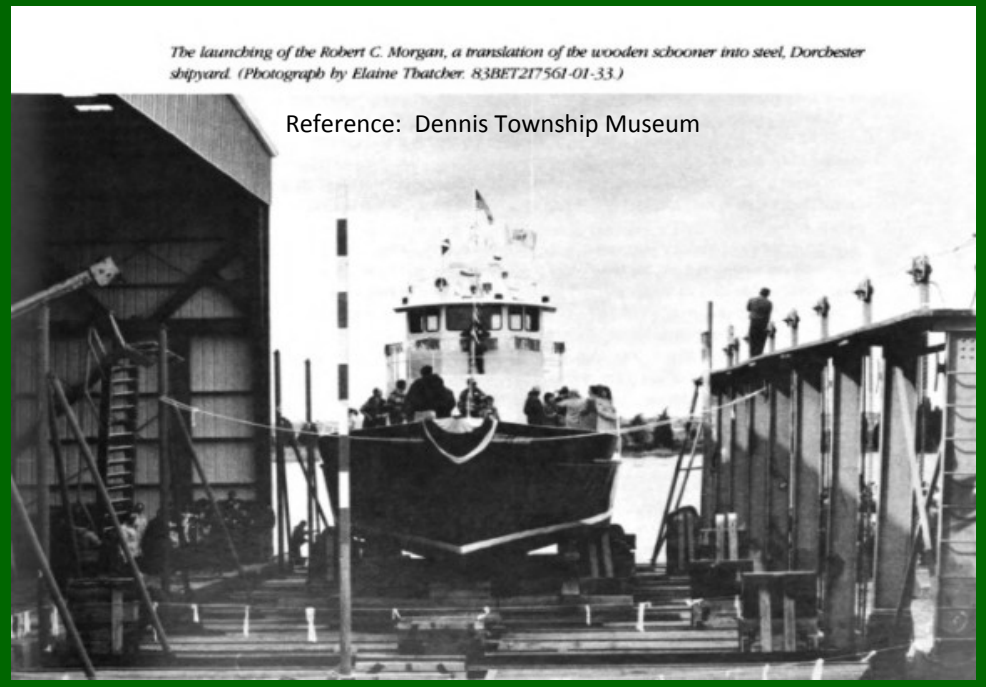
Delaware Bay Shipbuilding Co. Inc. was formed in 1920 by Dr. Malcolm Sharp, a medical doctor who was the son of a seafaring man.

1944 ATR 59 Delbay Shipbuilders

Atlantic Tug Rescue built by Delaware Bay Shipyard Leesburg N.J. launched Sept. 1944 delivered to US Navy 1945 sold in 1947 as the Mytle E. Wilson photo courtesy of Paul Cox

End Use NJ Pine Barrens Timber Maritime, Essence of Community

Port Norris



The launching of the Robert C. Morgan, a translation of the wooden schooner into steel, Dorchester shipyard. (Photograph by Elaine Thatcher. 83BET21756I-01-33.)

Reference: Dennis Township Museum

Circa 1908
Reference: Dennis Township Museum

Figure 28. Sailmaker Ed Cobb working in the sail loft of a building that is extant in Bivalve. Rutgers Collection, early 20th century.

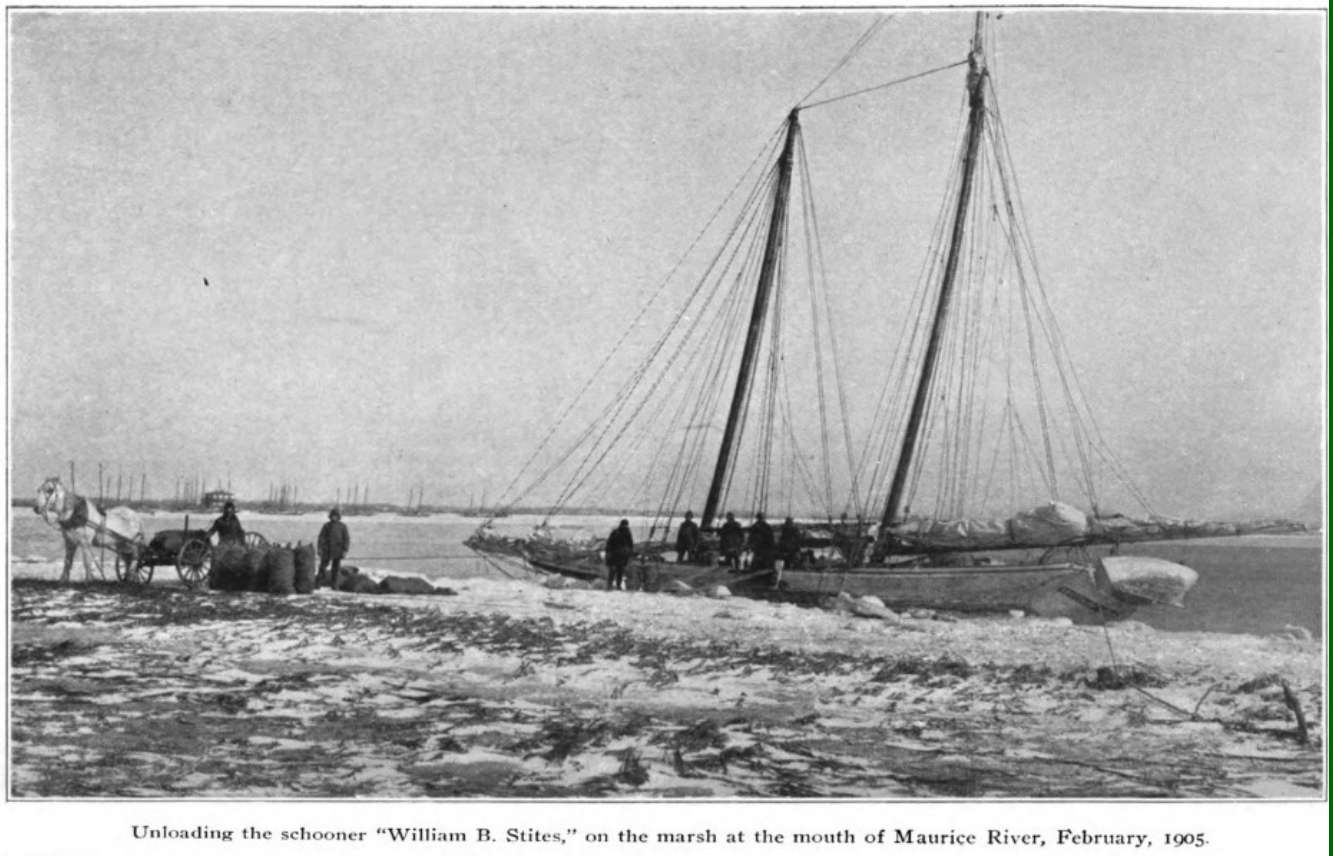
NJ's Oyster Fleet Early 1900's

An aged oysterman and his cabin.

Laying out oysters in floats from schooner.

Maurice River Cove				
	Total Vsls	Total Tons	Value	
Schooners	107	2,586	182,000	
Sloops	105	1,057	40,000	
Camden				
	Total Vsls	Total Tons	Value	
Schooners	21	575	42,000	
Sloops	3			
Delaware Bay/Baltimore				
	Total Vsls	Total Tons	Value	
Schooners	48	1.286	92,000	
Sloops	7			
Total Fleet	7,000 Tons Carrying Capacity			
Sept-Februray				
Schooners	100		200,000	2,000 each
Schooners	100		150,000	1,500 each
Schooners	50		37,500	750 each
Sloops	25		37,500	1,500 each
Sloops	100		100,000	1,000 each
Sloops	51		2,091	400 each
totals	426		527091	
NJ Oysters Commission	NJ Labor and and Industry		October 1887	
	month	total	Total Value	
Schooners	700	4200	420,000	
	600	3,600	360,000	

Report of the Bureau of Shell Fisheries. 1904-1905.



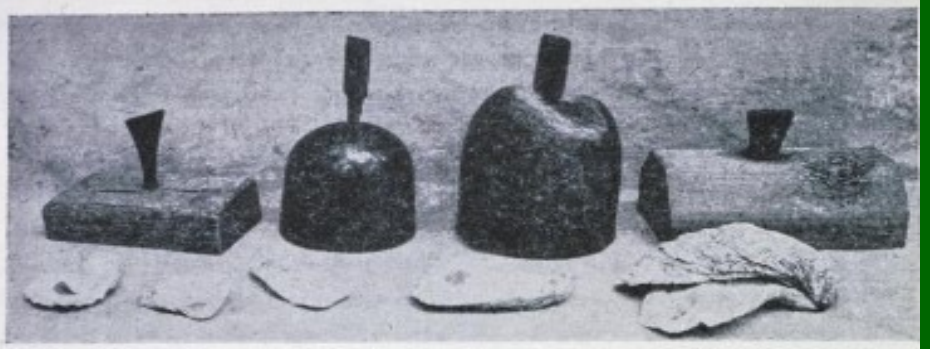
Unloading the schooner "William B. Stites," on the marsh at the mouth of Maurice River, February, 1905.

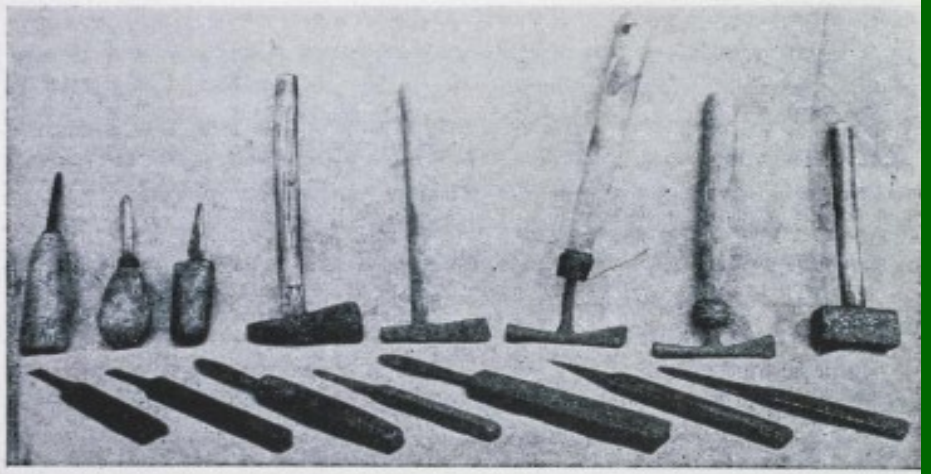
Shipper and group of his workmen at Bivalve.

Timber from Southern Region Pine Barren

into the boat. Skill and endurance were needed to continue this work for any considerable time.

After being brought ashore, the oysters were opened or "shucked." Tools peculiar to that purpose were de-

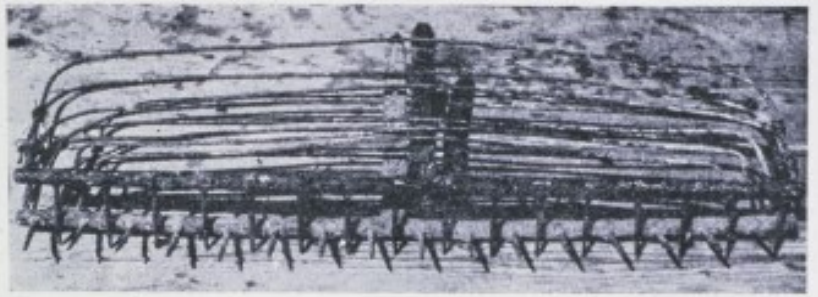




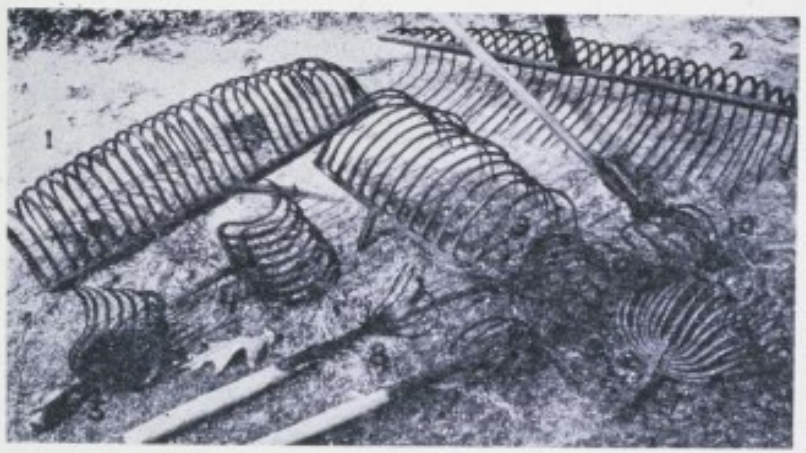
(Courtesy New Jersey Agricultural Society)

Oyster tools and shells

vised through long years of experience. Many a professional opener could shuck 3,500 oysters a day. He worked at a bench which had a hole in the right side of the top,



Oyster tong heads sixty years old, from "Woody" Horner, of Tuckerton



Clam and oyster rakes

(Courtesy New Jersey Agricultural Society)

Two Shinnecock clam rakes from Long Island

Report of the Bureau of Shell Fisheries. 1904-1905.

Fast in ice at mouth of Maurice River.

Timber for vessel construction from southern region Pine Barrens

www.bayshorecenter.org

Pine Barrens MCL Resource

BAYSHORE CENTER AT BIVALVE
WHERE HISTORY AND THE ENVIRONMENT MEET

Home | Tickets & Events | Our Ship | Museum | Education | Get Involved | About | Shop | News | Donate

The Bayshore Center at Bivalve (BCB), a working waterfront museum, is dedicated to advancing the understanding of the human impact on the environment. The organization owns and operates the historic Schooner AJ Meerwald, a sailing classroom and vehicle to enjoy the area's waterways. The museum, located in the historic shipping sheds in Bivalve, NJ, is the AJ Meerwald's home port. The AJ Meerwald docks in various ports in and around New Jersey. The Schooner AJ Meerwald, built in 1928, serves over 4,000 passengers annually, sailing from selected ports in NJ as well as visiting other ports in Pennsylvania, Maryland, and New York. Educational programs focus on marine science and history (e.g. plankton, water quality, etc.). The AJ Meerwald also provides private charters and public sails.

Mission

Through the state's official tall ship, the oyster schooner AJ Meerwald and an historic waterfront museum, the Bayshore Center at Bivalve will advance the understanding of the human impact on New Jersey's aquatic environment through education, advocacy, and programming.

Vision

BCB envisions a New Jersey with clean, safe and healthy water for recreation, consumption and commercial fishing.

Pine Barrens MCL Resource

Port Norris 2nd Phase of Commercial Growth Oystering

The second phase of the maritime development of the region was dependent on railroad transportation and later on ice-making technology. Where oysters were originally shipped in the shell because they could survive out of water for some time, the construction of railroads and later the invention of icemaking machinery made it possible to ship shucked and canned oysters a considerable distance.

Port Norris established a water-to-train link in the marine industrial park located directly on the Maurice River. When this district became large enough to warrant its own Post Office, it was named "Bivalve" to celebrate its tasty products. By 1876, the D.J. Stewart Illustrated Atlas of Cumberland County, New Jersey reported that practically the entire community was involved either directly or indirectly in oystering: Port Norris is located on the west side of the Maurice River, twenty-two miles from Bridgeton. Port Norris is literally a landing place and depot for oysters, and nearly all of its inhabitants are engaged in the oyster trade.

1875 average of ten car-loads of oysters shipped from Port Norris weekly. Building boom in Port Norris began with the arrival of the railroad. The railroad was to have terminated in Port Norris, but it was quickly decided to save the additional handling by connecting the railroad directly to the waterfront.

This spur had already been constructed by 1876 when it appeared on the Stewart Atlas plate for Port Norris. With the advent of low cost ice-machinery after 1890, refrigerated, shucked oysters became the standard of the oystering industry

Reference: Maurice River NJ Coastal Trail

Maurice River Ship Maintenance Structures

Ship Maintenance Structures: A second group of buildings relating to the maritime theme of the Maurice River Cove are those devoted to the construction and maintenance of the vessels which plied the waters, including ship yards, sail lofts, and ship chandleries. Several of the businesses, including the sail lofts, to be located back from the water but within the port area. Buildings that survive date from 'the late 19th and early twentieth centuries.

With the notable exception of the late 19th century Newcomb Chandlery in Bivalve, whose low, wood-shake gambrel roof recalls the Colonial Revival, the maritime structures are functionally expressive, with rooms and heights determined by the requirement of use, whether in the docks and adjacent packing houses or the tall sail lofts, they all exhibit a high degree of integrity related to their lack of use as two generations of oyster parasites have reduced the maritime economy.

Significance: The shipyards, sail lofts, and ships chandleries were the facilities that supported the local Maurice River maritime trades and continued the oldest activities of the port, including shipbuilding and coastal shipping. By the 1870s, as the port shifted to an almost total dependence on oystering, the yards served the specialized requirements of that industry.

Reference: Maurice River NJ Coastal Trail

Port Norris Regional Maurice River Lower Delaware Bay Boats

The third group of structures that are Part of the Port Norris region maritime heritage are the vessels, many of which remain in the active oyster and fishing fleet, though some travel up and down the coast. Historic boats are listed by Margaret Mints in Man, the Sea and Industry (1992). The later regional boats are characterized by a distinctive spoon bow shape, and share common characteristics of hull breadth and stern shape. Most are well documented, so that it would be possible to add an inventory of known vessels. Further, these are also represented by the archaeological remains of hulls that are scattered around the area in various ditches and banks where they were hauled and ultimately abandoned.

Significance: The lower Delaware Bay developed its own maritime boats that were as distinctive as the log-canoes of the Chesapeake, or the deep hulled schooners of the Penobscot River in Maine. They tended to be broad and flat in hull shape to handle the coastal waters, but were large enough to handle the weather and size of the Bay. Because of scarcity and continuing losses, determining criteria for significance reflect known Maurice River origins and use within the oyster and coastal trading industry. A few vessels date from the first period of the Maurice River maritime activity before 1876, while the majority of survivors date from the later era when the oyster industry was at its peak in the early 20th century. These are primarily covered by Criterion C as a significant example of a distinctive ship building type.

Reference: Maurice River NJ Coastal Trail

NJ Pine Barren MCL's Outliers

Bridgeton on the Cohansey River and Town Bank on the Lower Cape May Peninsula are integral parts of the Pine Barrens MCL.

Cohansey River maritime heritage and landscape traces back to the founding days of NJ; Town Bank (aka New England Town, Portsmouth Town, or Falmouth*) was the first whaling settlement in New Jersey founded by Long Island and New England whalers around the year 1630. Whaling was the fulcrum of commerce for this early American village.

These two locations evolved, exploited, harvested and traded NJPB natural resources.

* October 1, 1630, ten Dutch patroons were involved in establishing a whaling venture in Delaware Bay

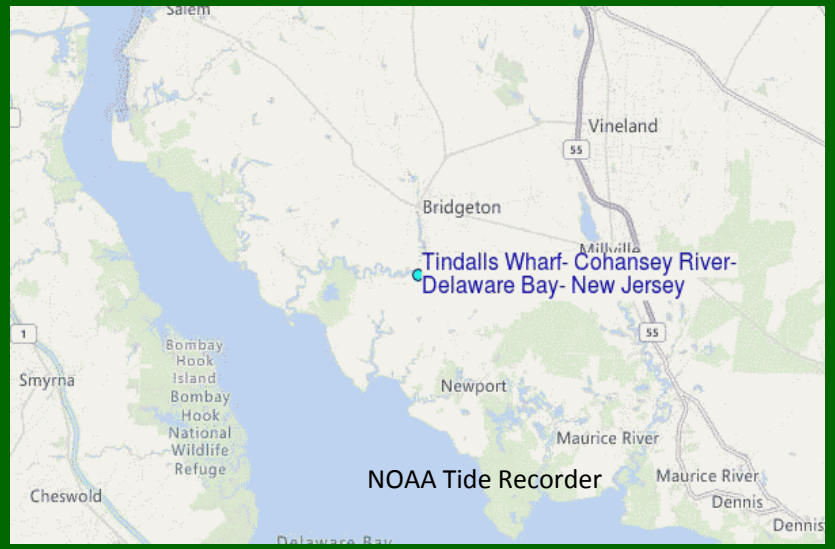
Cohansey River

Cohansey River

Bridgeton

Sailing out of Greenwich

Delaware Bay Federal Navigation Channel

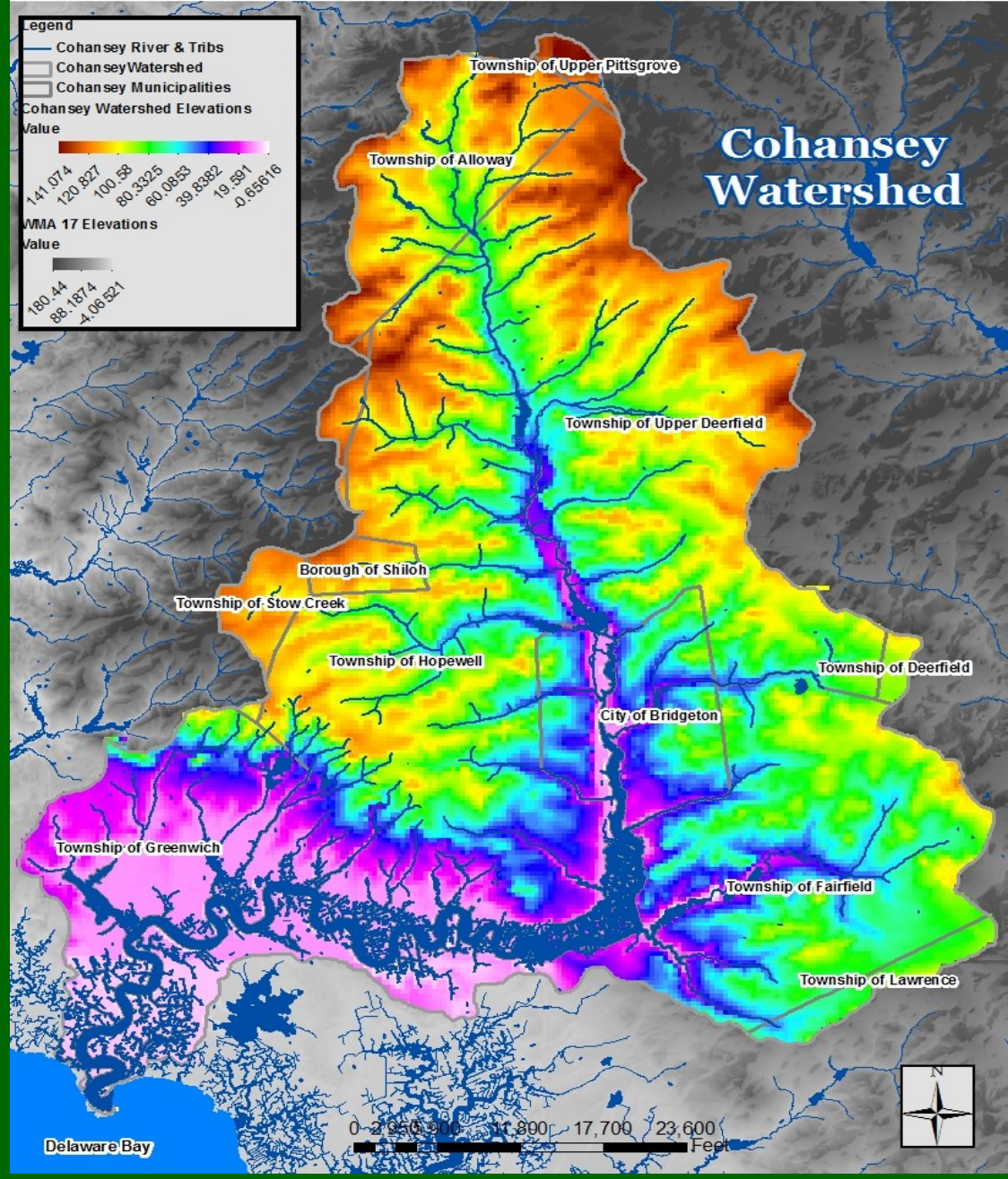


Off Cohansey River – Ship John Shoal Light

Bridgeton, Cohansey River

The first recorded European settlement in what is now Bridgeton was made by 1686 when Richard Hancock established a sawmill here. Settlers established a pioneer iron-works in 1814.

Bridgeton straddles the tidal Cohansey River and is located near the center of the Delaware Bay lowlands. Bridgeton was a early American Port District



SCHOONER CAPSIZED.—On Christmas night last as the schooner Chester, Capt. Banks, was coming down the bay, she was struck by a flaw, and capsized. A few days after, the steamer Cohansey took a company of hands, accompanied by another vessel to right her up, in which they succeeded; but as the weight of her spars and her riging kept her down, she could not be kept upright. We regret to learn that they were obliged to abandon her for the present, in consequence of the cold and ice.—[*Bridgeton Chronicle*

10 January 1851

No. 7, is the undivided one-half part of a Wharf Lot, situate on the west side of Cohansey Creek, in Bridgeton, bounding on lands of Wm. Rice, Lehman Blew, Reneer Dare. Said Wharf being 129 feet front on the Creek, and 107 feet in depth.

1852

Poultry.—The steamer Cohansey took about six tons, and the Miantonomi about three tons weight of poultry, from this place on Tuesday of last week. This was the heaviest freight in poultry ever taken in one day from Salem. Several tons more were received on board each boat at the several stopping places along the route to Philadelphia.

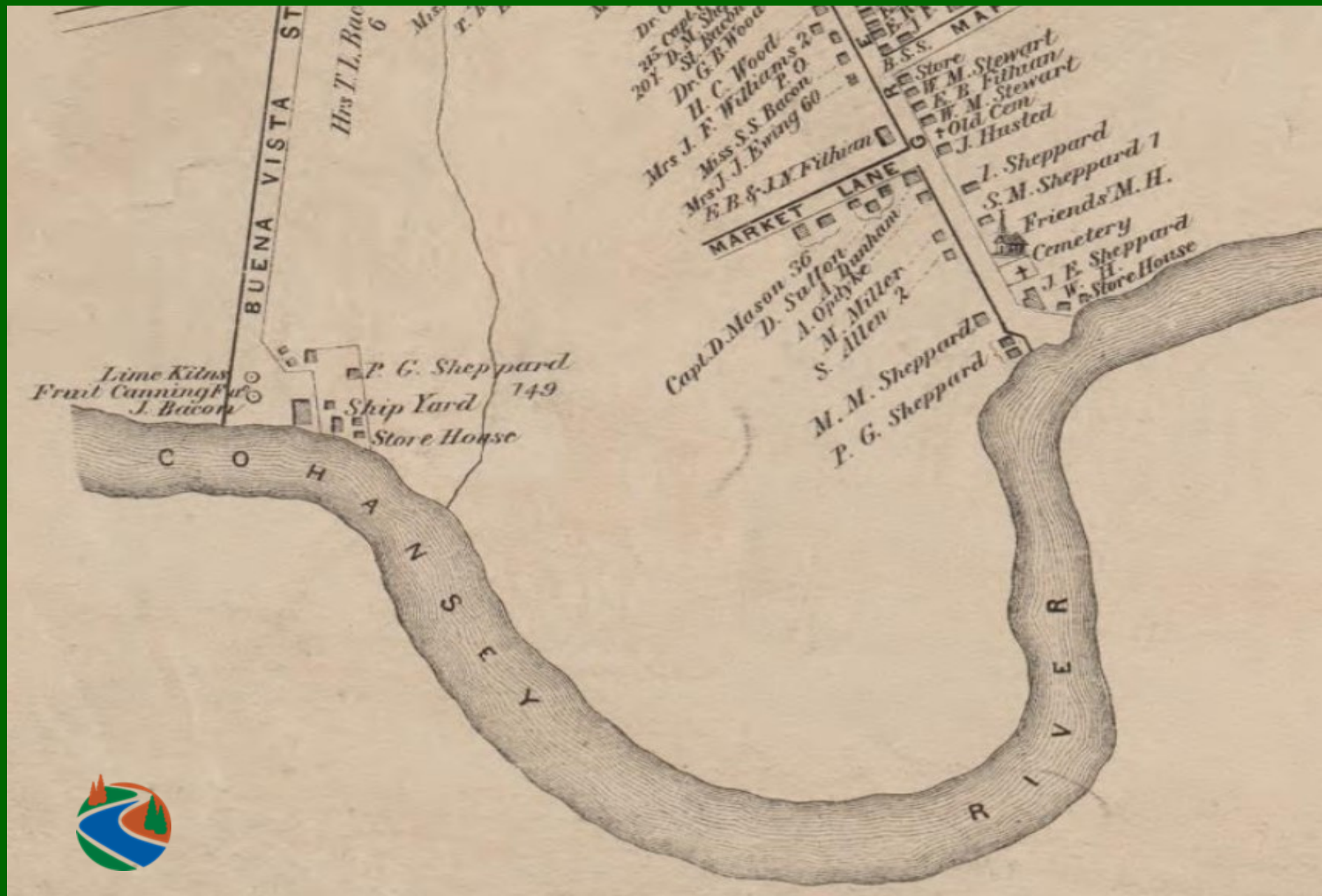
Salem Sunbeam.

1853

Bridgeton NJ 1886

Cohansey River Landings
1876

Greenwhich, Cohansey River
1876

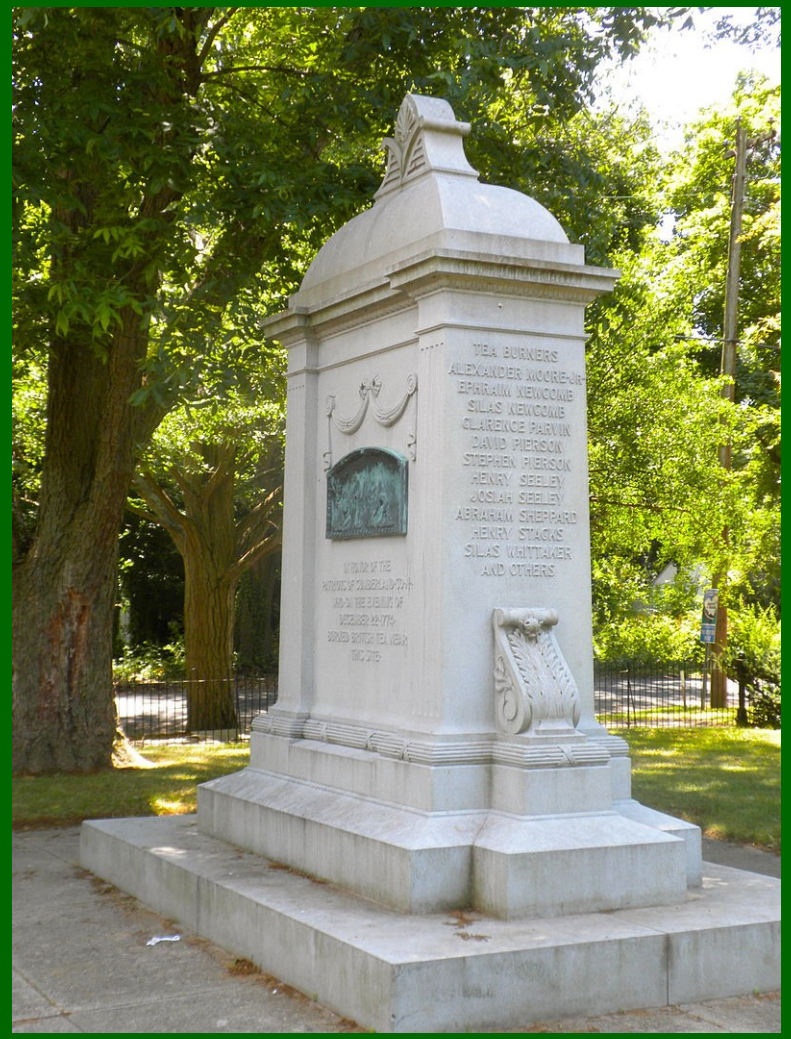


STOW CREEK
GREENWICH
HOPEWELL
FAIRFIELD
BRIDGETON
CITY OF BRIDGETON P.O.
Shiloh P.O.
Roadstown P.O.
Bowentown Sta.
Greenwich P.O.
Fairton P.O.
Cedarville P.O.
Bethel
Newport Cr.
Cohansey Creek
Back Neck
Fishing Cr.
Bacons Neck
Buena Vista
Jacobs
Laings Wharf
Old Ferry Landing
Tindalls Land
Malfords Land
Greenwich Land
Deans Cr.
Macumpsic Br.
Pine Mount
Springtown
Roadstown
Recapse Run
Middle Marsh Creek
Division Cr.
Abbotts Cr.
Oyster Cr.
Sayres Creek
Cohansey Light
Bay City Sta.
Phipps Creek
Stow Creek Landing
Bishops Run
Proposed R.R.
SHILOH PIKE
ROADSTOWN ROAD
UPPER GREENWICH
GREENWICH
VINELAND
VINELAND
OLD BEAVER DAM ROAD
MILLVILLE
BUCK
BUCK SHOOTUM
NEW ENGLAND CROSS ROADS
Old Pyles Ch.
Goshtown
Lebanon
Station
Pub. School
North Cedarville Station
BRIDGETON
A.M.E. Ch.
S.H.
Friends M.H.
Town Hall

Greenwich Tea Party

Took place on December 22, 1774, in Greenwich, a small community in Cumberland County, New Jersey, on the Cohansey River. Of the six tea parties during this time, it was the last and the least well-known due to the small size of Greenwich.

Many colonists viewed boycotting tea as a way to show loyalty to the American cause. The Greyhound was a ship transporting tea that was piloted by Captain J. Allen. Captain Allen decided to change the ship's course from Philadelphia to Greenwich to avoid possible conflict with colonists in Philadelphia over the ship's cargo. Once the ship arrived in Greenwich, the tea was stored in Dan Bowen's cellar, who sympathized with the British. They decided on a verdict and, possibly dressed as Native Americans, they broke into the cellar, took the tea, and set it on fire.



John Dubois Maritime Museum 949 Ye Great St, Greenwich, NJ 08323

The John DuBois Maritme Museum

Open 12-4pm Saturday and Sunday.
Taylor Carter Curator.

The John DuBois Maritime Museum

The John DuBois Maritime Museum houses a large collection of Southern New Jersey Maritime related items from the 19th and early 20th centuries. A large and unique collection of builders' models of local craft show the plans used to build a new ship from the model itself. Exhibited are tools used to carve ribs, planking, masts and booms. Also displayed are many blocks, "deadlines" and "rigging." The museum is proud to have on of the largest collections on the East Coast of caulking tools.

Shipbuilding and seafaring

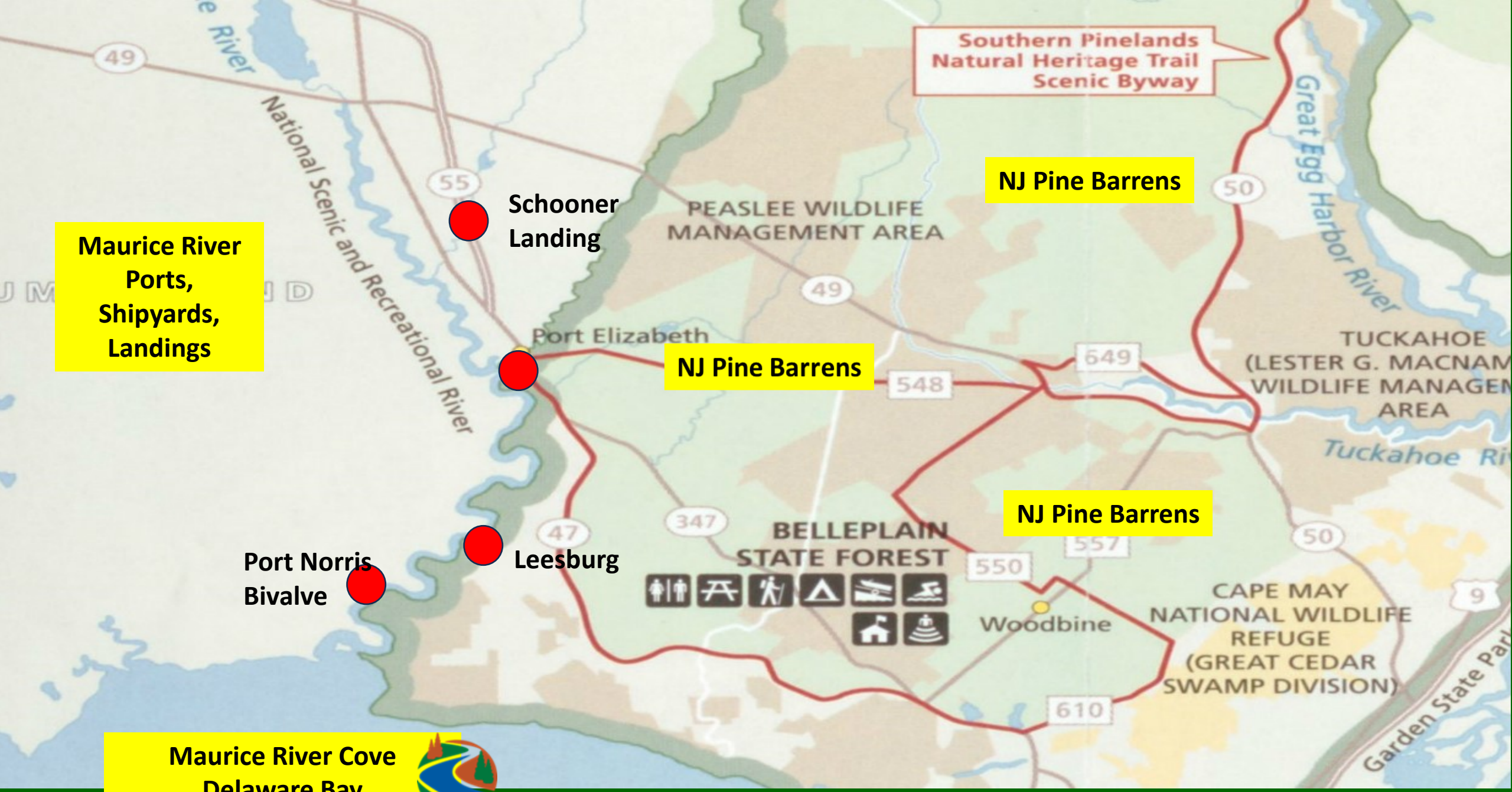
Sneakboxes, garveys, and oreboats (1700-present): Sneakboxes and garveys are indigeneous to the New Jersey coast and were the basic means of short-distance travel until automobiles became common. Small boat builders and their places of business played important roles in communities along the coast and up the major rivers, especially the Mullica, Great Egg Harbor, Maurice, and Toms. Today, these small boats are still in demand for such activities as waterfowl hunting and shellfishing. Related sites can be found in most commercial and community centers.

Schooners and sloops (1700-1900): Until 1850 schooners and sloops were the major carriers for goods from the eastern section of the Pinelands. No rural industrial center, such as Batsto or Mays Landing, could have existed without its boatbuilding industry. During the last half of the 19th century, the introduction of railroads made schooners and sloops increasingly obsolete. By 1900, these ships were no longer being constructed. Several sites of large boatworks have been located at the forks of the Mullica River, and in Mays Landing, Dorchester, and Leesburg. No associated buildings are extant. While some of these boats may still exist in the Chesapeake region, only sunken hulls are left in the New Jersey coastal areas. The list of known wrecks is extensive. However, this list does not include the many aging vessels driven into banks on extreme high tides to become bank retainers.

Power boats (1930-present): The construction of rum runners, PT boats, and recreational power boats in the Pinelands has been a source of local pride since the 1930's. These boats are internationally known, and the older ones from local boatworks are considered to be collector's items. Working sites can be found on the Bass and Mullica Rivers, and at Egg Harbor City and Mays Landing. Most of the builders are long-time residents.

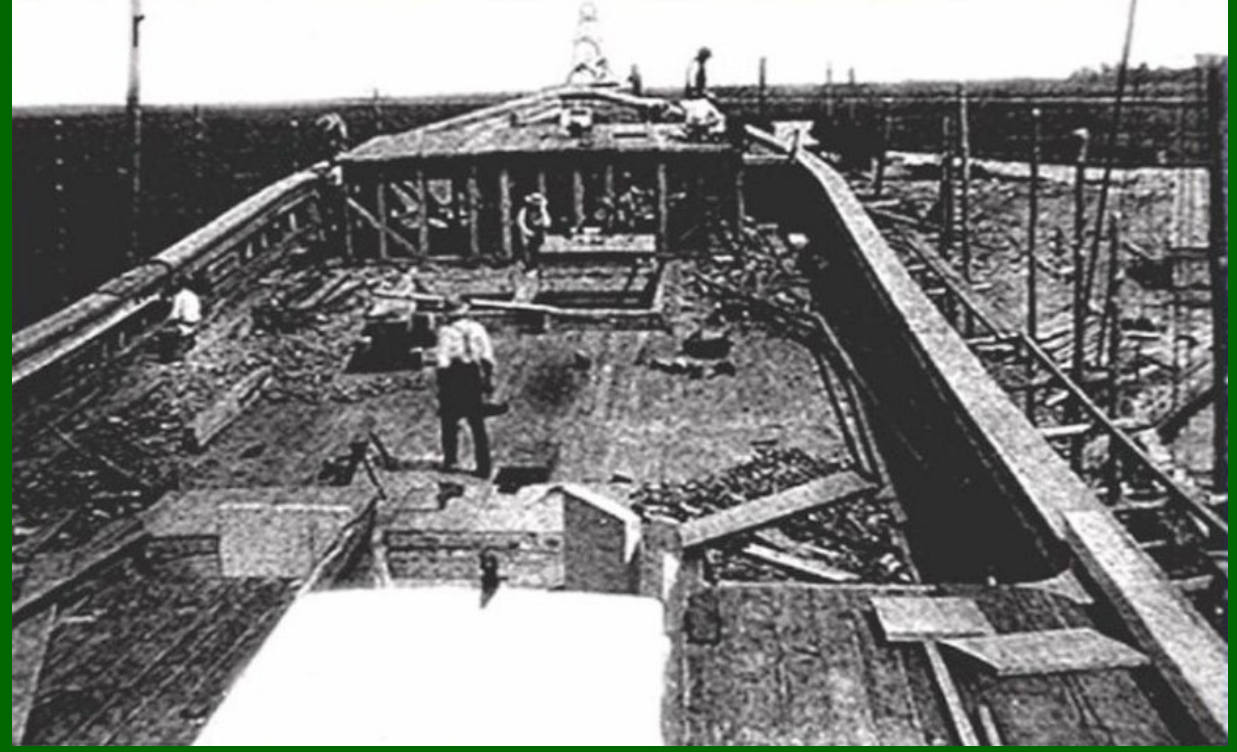
In summary, there are numerous documentary references to, and physical remains of, shipbuilding and seafaring activities in the coastal Pinelands from the Revolutionary War period to the present. Historic evidence exists of the boats and ships, shipyards, lighthouses, Coast Guard stations, and workers' housing, as well as the tools of the carpenters, carvers, glaziers, joiners, sailmakers, coopers, and blacksmiths who were involved in the various aspects of construction. Two sites in the Pinelands National Reserve associated with these activities have received state or national recognition. The Barnegat Lighthouse in Ocean County is listed in both the State and National Registers of Historic Places. The Mullica River-Chestnut Neck Historic District, located in parts of Atlantic, Burlington, and Ocean Counties, is listed in the State Register. This district includes the site of the original settlement of Chestnut Neck, (a center for smugglers during the colonial period and privateersmen during the Revolutionary War), as well as the remains of vessels destroyed and sunk by the British in 1778. At least two of these vessels have been located in the Mullica River.

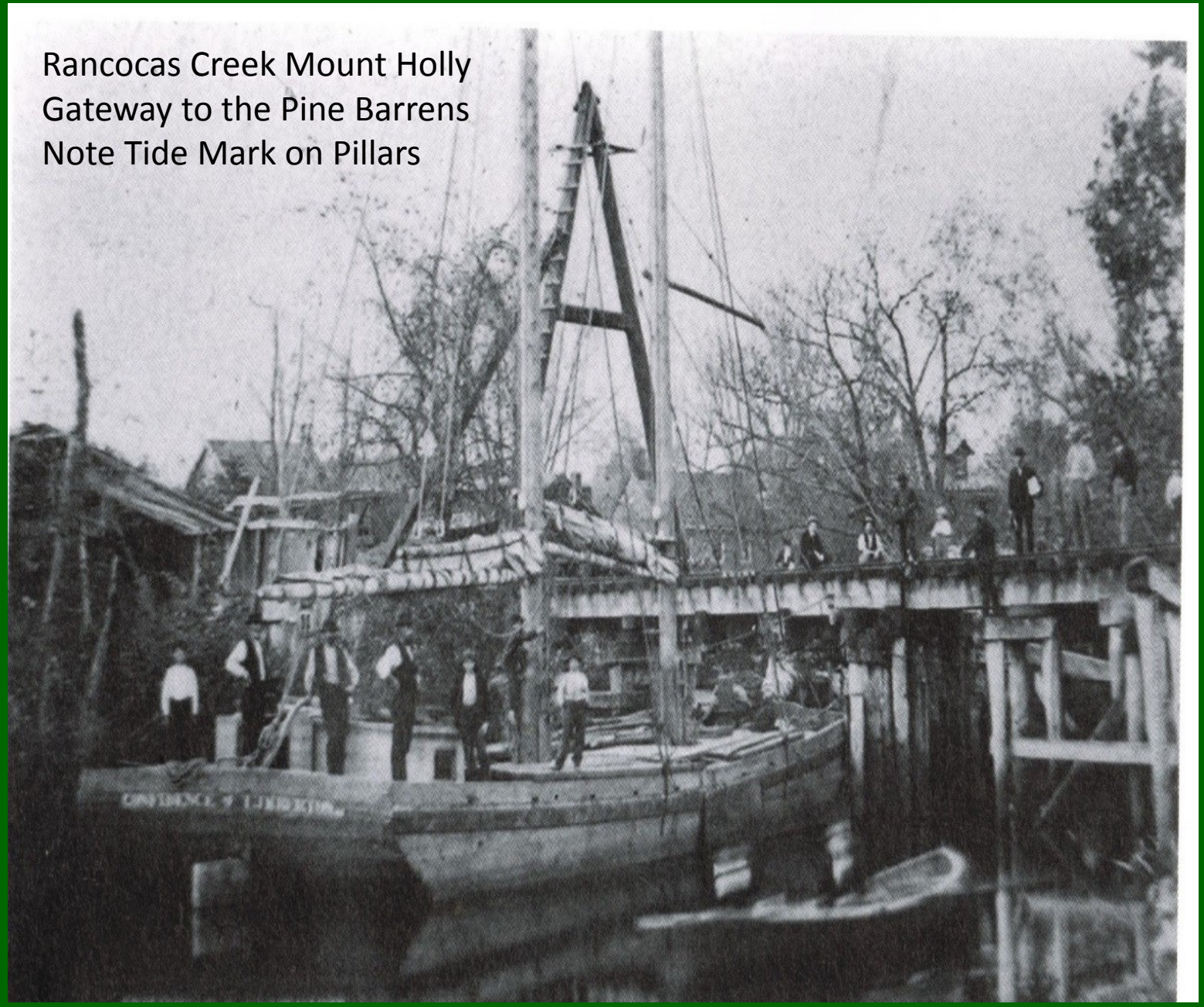
Reference: NJPB Comprehensive Management Plan


Maurice River Ports, Shipyards, Landings
Schooner Landing
Port Elizabeth
Port Norris Bivalve
Leesburg
NJ Pine Barrens
NJ Pine Barrens
NJ Pine Barrens
Maurice River Cove Delaware Bay
Southern Pinelands Natural Heritage Trail Scenic Byway
PEASLEE WILDLIFE MANAGEMENT AREA
BELLEPLAIN STATE FOREST
Woodbine
CAPE MAY NATIONAL WILDLIFE REFUGE (GREAT CEDAR SWAMP DIVISION)
TUCKAHOE (LESTER G. MACNAM WILDLIFE MANAGEN AREA
National Scenic and Recreational River
Great Egg Harbor River
Tuckahoe Ri
Garden State Par
49
55
50
47
347
548
649
550
557
610
9

Reference: Dennis Creek Ship Yards

Dennis Township Museum





Rancocas Creek Mount Holly
Gateway to the Pine Barrens
Note Tide Mark on Pillars

Part Three

Tidal Hinterlands

MCL's allows us to explore the diversity of human experiences, behaviors, and interactions with the waterways that form the maritime system, from far inland to across the global ocean. (ref: Westerdhal)

What is a Hinterland ?

The land or region lying behind a ocean coast, coastal waters and or a river bank.

Atsion, at the angle of Gloucester, Atlantic and Burlington Counties, like Batsto, was famous for its bog iron furnaces. As late as 1834 this furnace made about nine hundred tons of castings, and the forge nearly two hundred tons of bar iron annually. This estate, like that at Batsto, passed into the hands of the Richards family. The decline of the iron industry here, as at Batsto, was due to the opening of the mines in Pennsylvania. Many of the Indians at Edgepelick, three miles distant, were employed as workmen at the Atsion furnace.

The extent of the iron industry in South Jersey and the manner in which the work was performed may be judged by the advertisements which appeared in the newspapers about the time of the Revolution. Many of these might be given, but a few will suffice:

[Advertisement in the Pennsylvania Evening Post of November 14, 1776.]

Philad. Nov. 10, 1776.

Wood cutters wanted at Batsto Furnace, at the Fork of Little Egg-harbour, in West New Jersey, where sober, industrious men may make good wages, by cutting pine wood at two shillings and six pence per cord, which will be given by the manager of the works, or the owner in Philadelphia.

N. B. Wanted also on freight, a number of shallops to go round to Egg-harbour for iron.

[Advertisement in the Pennsylvania Journal of May 8, 1776.]

Manufactured at Batsto furnace, in West New Jersey, and to be sold either at the works or by the subscriber, in Philadelphia, a great variety of iron pots, kettles, Dutch ovens and oval fish kettles, either with or without covers, skillets of different sizes, being much lighter, neater and superior in quality to any imported from Great Britain; pot ash and other large kettles, from 30 to 125 gallons, sugar mill-gudgeons, neatly rounded and polished at the ends, grating bars of different lengths, grist-mill rounds, weights of all sizes, from 7 lb. to 50 lb., Fullers plates, open and close stoves of different sizes, rag-wheel irons for saw mills, pestles and mortars, sash weights and forge hammers of the best quality. Also Batsto pig iron as usual, the quality of which is too well known to need any recommendation.

JOHN COX.

[Advertisement in 1777.]

Mountholly, in New Jersey, June 23, 1777.

Wanted at Batsto and Mountholly iron works, a number of labourers, colliers and nailers, and two or three experienced forgemen, to whom constant employ and the best wages will be given. Four shillings per cord will be paid for cutting pine and maple wood. For further information apply to Mr. William Cox, at Col. Cox's counting room, in Arch street, Philadelphia, or to Mr. Joseph Ball, manager, at Batsto, or to the subscriber at Mountholly.

RICHARD PRICE.

N. B. The workmen at these works are by a law of this state exempt from military duty.

NJ Pine Barrens Ship Building

1878 Jersey Shore Coastal Creek Vessels Reference: Harper's Weekly

NJPB maritime industry prior to the Revolutionary War flourished. NJPB provided raw material for ship building: timber, cedar, oak, pine , maple, hickory, walnut, wild cherry. NJPN yield tar from tree sap to caulk hulls, pine resins produced turpentine for hull preservation and iron products for ship hardware and naval stores. By 1800 NJPB supplied 10% of all vessels needed for commerce in the Delaware River Port of Philadelphia/Camden.

Reference: Pinelands Comprehensive Management Plan

Shipbuilding in Atlantic County

Colonial Sailing Vessels

Whale boats were being built by the early eighteenth century. Then fishing boats were produced. Sloop-rigged craft with two, three or four masts became popular. Gradually, construction shifted from the sloop to the small schooner fitted for lumber and charcoal trade. American ships were now known for their modeling and durability.

The size of vessels was gradually increased from three hundred to eight hundred tons, costing from $3,000 to $7,000. Ships left Mays Landing filled with charcoal and cordwood for calls in New York, Philadelphia, Virginia, the West Indies and South America.

South Jersey shipyards were plentiful and busy. A good portion of Atlantic County residents depended upon shipbuilding for their livelihood. By the first half of the 19th Century, there were shipyards in Absecon, Bargaintown, Port Republic and Mays Landing. Shipyards were also in Bakersville (known today as Northfield), and Leedsville (now known as Linwood).

Absecon Creek was a major center with its small stream and deep channel. Over twenty-three ships were built at Absecon Creek and registered at Great Egg Harbor between 1858 and 1879. Seven of them were 3-masted schooners over 100 feet long.

George Wheaton, also a shipbuilder, turned out two dozen schooners at his yard where the mouth of Babcock's Creek empties into the Great Egg Harbor River. Israel Smith's shipyard in English Creek produced schooners and smaller craft. Shipyards dotted the landscape at Green Bank, Port Republic and Batsto. Sloops and schooners were turned out at shipyards in Somers Point. In the Census of 1840, Atlantic County shipyards produced more than all the coastal counties in New Jersey. The value of ships and vessels produced in Atlantic County that year was $104,000 as compared to Cape May County ($39,000), Cumberland County ($44.000), and Burlington County ($15,000).

Lumbering

Cedar Trees

Soft, Durable, Straight Grain for ship building. Vessel yards, top masts, hulls, bowsprits, sails; Shingles; For Cooperage – vats, tanks, churns, piggins, firkins, tubs

Church Organ Pipes

Ben Franklin Poor Richards Almanac 1793

Rancocas Pathways

Tugs Built at Leesburg on the Maurice River. New Jersey Oak Used in These Vessels.

New Jersey Pine Barrens Oak
Maurice River

Fig. 4. Oak timbers for the construction of ships and barges are an important product of New Jersey sawmills.

Mount Holly N Branch Rancocas Creek Saw Mill
Logs floated down from Pine Barrens

Tip of hat to Heidi for Use

MINING CEDAR TREES.

The Fallen and Submerged Forests in the Southern Part of New Jersey.

The fallen and submerged cedar forests of this part of New Jersey, which were discovered first beneath the Dennisville swamps seventy-five years ago, still afford employment to scores of people in their excavation, and are a source of constant interest to geologists. There are standing at the present day no such immense specimens of the cedar anywhere in the country as are found embedded deep in the muck of the Dennisville swamps. Some of the trees that that have been unearthed are six feet in diameter, and trees four feet through are common.

Altho[illegible]ust have passed since these gr[illegible]ell and became covered m[illegible]eneath the surface, such trees as fell, according to the general theory, while yet living trees, are as sound to-day as the day they were uprooted. These trees are called windfalls, as it is thought they were torn

1889

CEDAR TREE with roots cut off and ready to be sawed in and planks. Men armed with long iron rods sound beneath surface for buried timber.

Sawing Off Log Buried In The Swamp

Reference: Dennis Township Museum

Pine Barrens

Atlantic white cedar lumber for shingles, flooring, furniture, buckets, barrels, shipbuilding, docks, and more.

FIG. 1: WHITE OAK LOG ON ITS WAY TO MILL: BURLINGTON COUNTY.

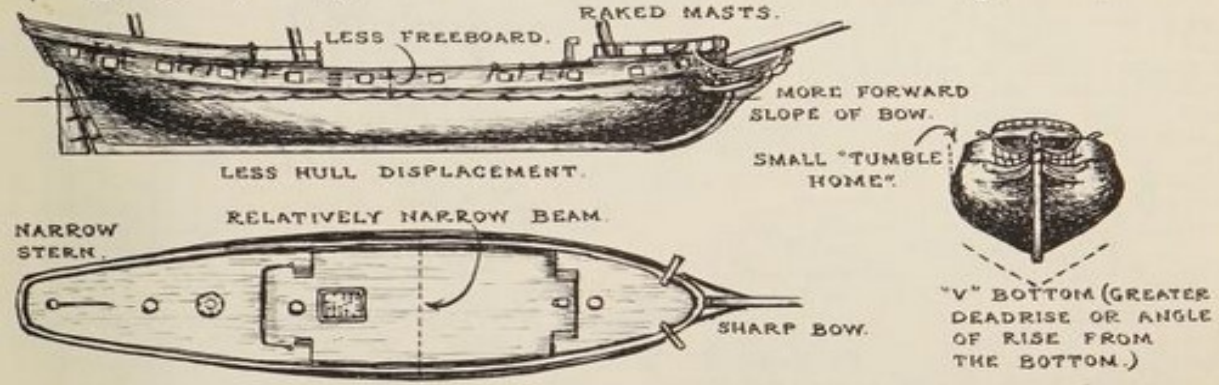
FIG. 3: LOGGING WHITE CEDAR: A CLEAN CUT IS NECESSARY: OCEAN COUNTY.

"SHARP" AMERICAN HULLS

THE SPEEDY SHARP-BUILT HULL. THE TOPSAIL SCHOONER RIG WAS A FAVORITE.

The average cargo vessel of the eighteenth century was bulky by nature. Resembling a wooden box set adrift, they were the beasts of burden on the high seas. But there were those American merchant craft that were decidedly not average. They were small and sleek, and rather frankly designed to do service in smuggling or illegal trading. The Crown's restrictive trade acts had long been out-maneuvered and out-sailed by these sharp-hulled sailors. Those from New England carried a higher freeboard to take on the sloppy North Atlantic weather while those built in the Chesapeake Bay region needed less height above the calmer southern seas. But aside from a few regional differences, they carried similar streamlined profiles. Converted to privateersmen, they initially took a heavy toll of British wartime shipping.

THE NEW PRIVATEER BREED ~ The enemy reacted quickly by placing more armament aboard his cargo ships and



sending over more of the Royal Navy on convoy and watch-dog duty. By early in 1776, the shipyards along the American coastline were busy with the answer. The sharp lines of the New England and Chesapeake swift vessels were enlarged into a privateer built specifically for the purpose. Actually, no hull was built to exceed one hundred and twenty feet in length. They were still small enough to carry whatever rig struck one's fancy, be it schooner, brig, brigantine, snow or whatever. And under that spread of sail was the sharp hull that would pleasure any privateering captain.

Storage space was decreased, for there were fewer provisions and less ammunition needed for short cruises. Prize goods taken aboard would include only the valuable smaller items. Cannon that lined the deck were small bore and lighter requiring less "tumble home" to bring

NJ Pine Barrens Maritime Cultural Landscape Forest Ecology Natural Resources

<<< Reference. C. Keith Wilbur. American Privateers

Maritime Cultural Landscape, NJ's Coastal Hinterland NJ Pine Barrens

Fernwood Springs
NJ Pine Barrens Western Fringe

Reference: Richard Forman, Pine Barrens Landscapes, 1979

1799: Collector of Customs records – 20 sailing vessels regularly docked at Somer's Point. Vsls made 16 trips per year to Philadelphia and NYC. Cargo timber from Egg Harbor hinterland, the NJ Pine Barrens. Each voyage per year moved 35 thousand board feet per voyage or 11,200,000 board feet per year. Fuel Wood by 1833 steamboats w "their hug maws" fed an insatiable appetitive w thousands of shallop loads of Pine Barrens wood . Between 1815-1945 one hundred vessels of 20-100 tons sailed from the Mullica River carrying cordwood. 50 other vessels operated from Barnegat Bay. Heavy cutting is recorded in the 1840 census around the Great Egg Harbor River and Mullica River

Atlantic White Cedar

Tree up to 80 feet high. In the pine barrens tree height is down to around 50 feet. Tree bark is reddish, greenish bark, fissured into flat connected ridges. Inner bark maybe torn into down long, strong strips. Favors wet areas, produces a light, soft, strong, close grained, ; light, brown to reddish, fragrant wood. Produces a resinous sapwood.

Used for boatbuilding, shingles, interior finish, fence posts, railway ties, cabinets, woodware, interior ship

Building. Inner bark used to make baskets.

Indian Annie, of Tabernacle, cedar baskets are works of art.

ATR 14 vessel Class Notes
Built and Launched Cohansey and Maurice River Shipyards

- On 12 Sep 41 the chief of the Bureau of Ships sent a long letter to the Chief of Naval Operations on the "need of rescue tugs to tow in disabled vessels." He stated that it was imperative in time of war to salvage, as far as possible, every ship which had been placed in peril of sinking by reason of damage incurred through enemy action or resulting from marine casualties.
- On 19 Jan 42 CNO directed the construction of ATR 1-40 as Part of the U.S. Navy's Maximum War Effort (1799 Vessel) Program, and on 5 Aug 42 VCNO directed the construction of ATR 50-89 using tonnage still available in this program.

  Presumably to minimize the impact of the rescue tug program on other Navy ship procurement, the Navy decided to have the vessels built of wood and equipped with relatively simple triple expansion steam machinery. The hulls could then be built by small shipbuilders not involved in the main Navy shipbuilding effort while the engines could similarly be built by small local machine shops.
- The 80 wood ATR's took an average of 9.4 months between keel laying and launch and 13.6 months between keel laying and commissioning while the first 79 steel 143' equivalents (omitting ATA 219-238) took an average of 1.9 months from keel laying and launch and 5.2 months from keel laying to commissioning. The ATR-1 program included seven ships that were ordered in 1942 and not completed until 1945, including one that was commissioned only one day before Japan's surrender.

  On 16 Apr 43 the Under Secretary of the Navy directed the construction of the next batch of ATRs . On 13 May 43 BuShips formally recommended that ATR 101-140, be changed from wood to steel construction, and CNO approved this recommendation on 3 Jun 43. These were built to the 143-foot BAT/ATR design and are listed here as the ATA-174 class.

Reference: USN Heritage Program

NJ Pine Barrens Atlantic White Cedar Forest

Port Norris and Maurice River Ship Building

In addition to the support of the maritime trades, the forests in the NJ Pine Barrens provided good sources of the principal woods of American ship-building, including oak and cedar.

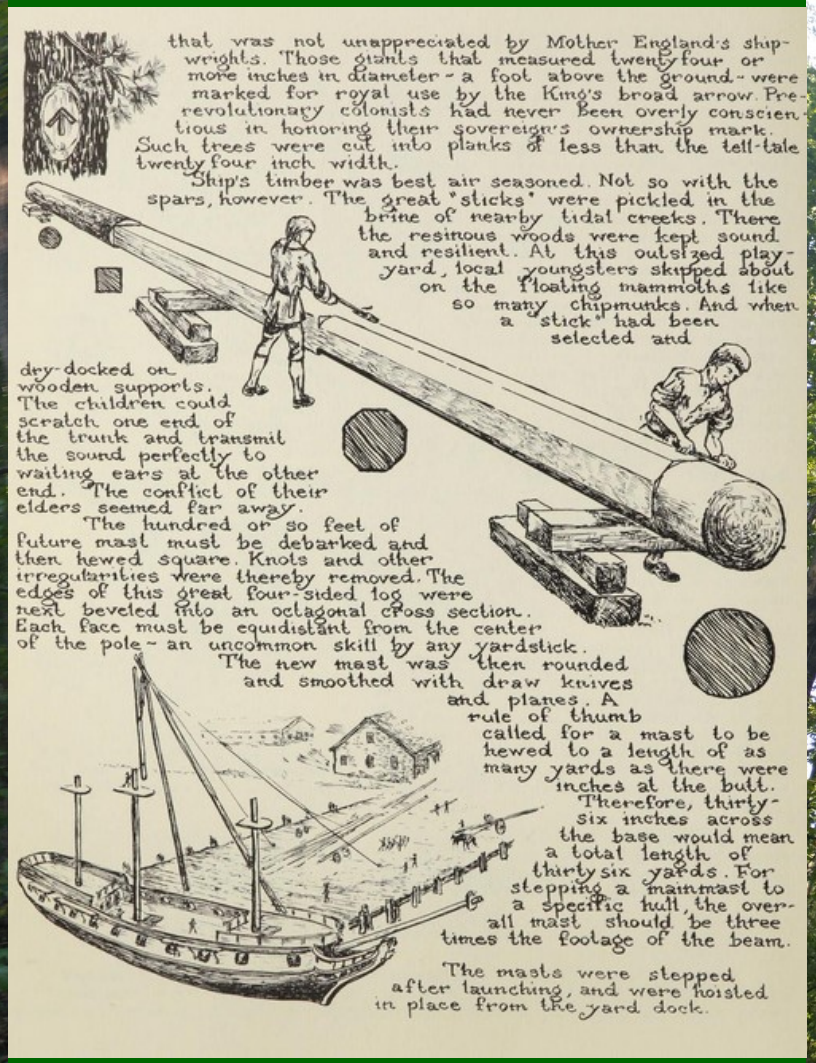
Shipyards in Port Norris and on the Maurice River, Dorchester, Mauricetown and Leesburg.
availability of water-powered saw mills and the availability of wood, and protected, relatively deep water in the rivers.

These shipyards produced vessels that were suited to the combination of small river ports and broad reaches of the Delaware Bay and River including the Pine Barrens Tidewater Rivers and Creeks.

In the 18th century, shallops were built at Port Norris; by the 19th century the handier schooner had replaced the shallop and continued to be built into the early 20th century. Locally-made schooners had a characteristic "spoon" bow and relatively shallow draft to meet the conditions of the bay. Many of these wooden fishing vessels, most originally fore-and-aft (schooner) rigged, but since motorized, survive as Part of the Atlantic fishing fleet.

Clyde A. Phillips, built in 1928 as the A.J. Meerwald in Dorchester, New Jersey restored at Bivalve to its original appearance as a two-masted schooner. (ref National Historic District Maurice River)

NJ Pine Barrens Maritime Cultural Landscape Forest Ecology
Rancocas Creek Watershed



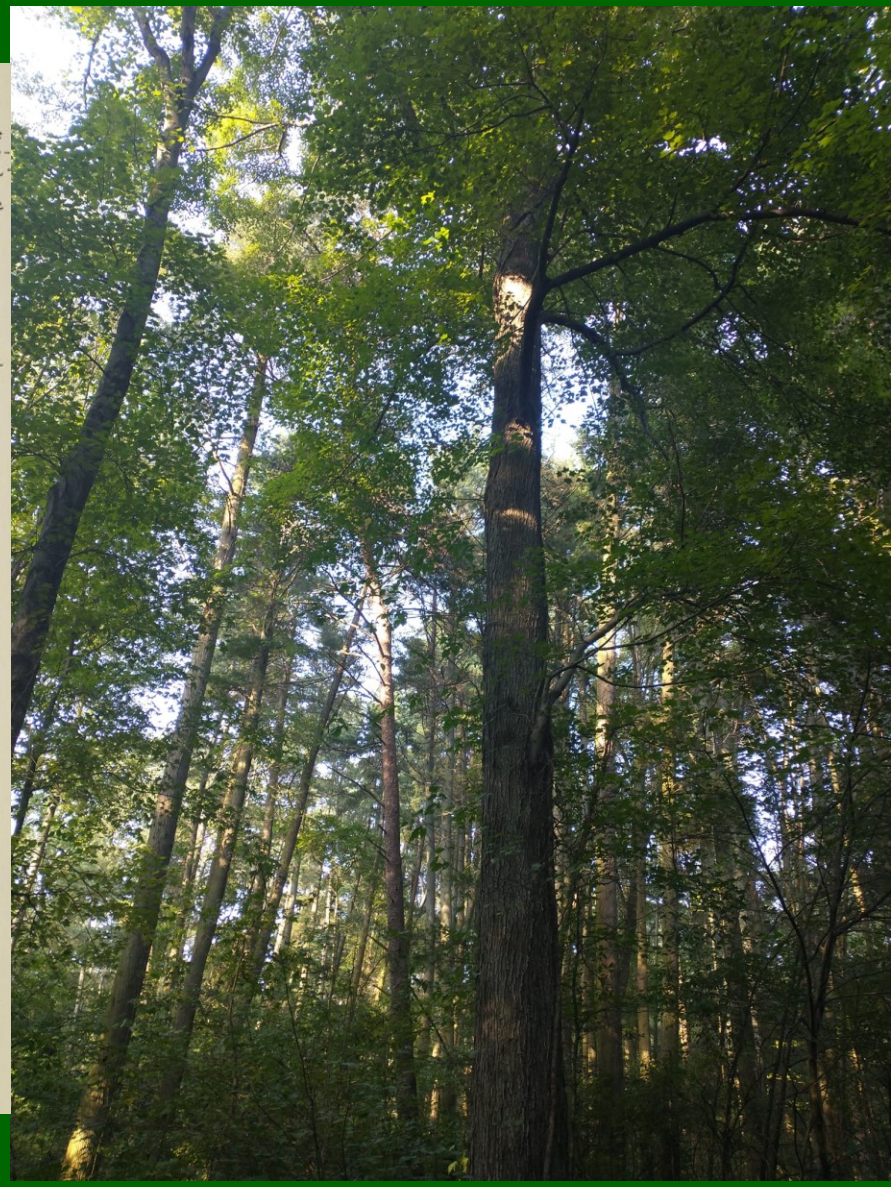
that was not unappreciated by Mother England's shipwrights. Those giants that measured twenty four or more inches in diameter - a foot above the ground - were marked for royal use by the King's broad arrow. Pre-revolutionary colonists had never been overly conscientious in honoring their sovereign's ownership mark. Such trees were cut into planks of less than the tell-tale twenty four inch width.

Ship's timber was best air seasoned. Not so with the spars, however. The great "sticks" were pickled in the brine of nearby tidal creeks. There the resinous woods were kept sound and resilient. At this outsized play-yard, local youngsters skipped about on the floating mammoths like so many chipmunks. And when a "stick" had been selected and dry-docked on wooden supports. The children could scratch one end of the trunk and transmit the sound perfectly to waiting ears at the other end. The conflict of their elders seemed far away.

The hundred or so feet of future mast must be debarked and then hewed square. Knots and other irregularities were thereby removed. The edges of this great four-sided log were next beveled into an octagonal cross section. Each face must be equidistant from the center of the pole - an uncommon skill by any yardstick. The new mast was then rounded and smoothed with draw knives and planes. A rule of thumb called for a mast to be hewed to a length of as many yards as there were inches at the butt. Therefore, thirty-six inches across the base would mean a total length of thirty six yards. For stepping a mainmast to a specific hull, the overall mast should be three times the footage of the beam.

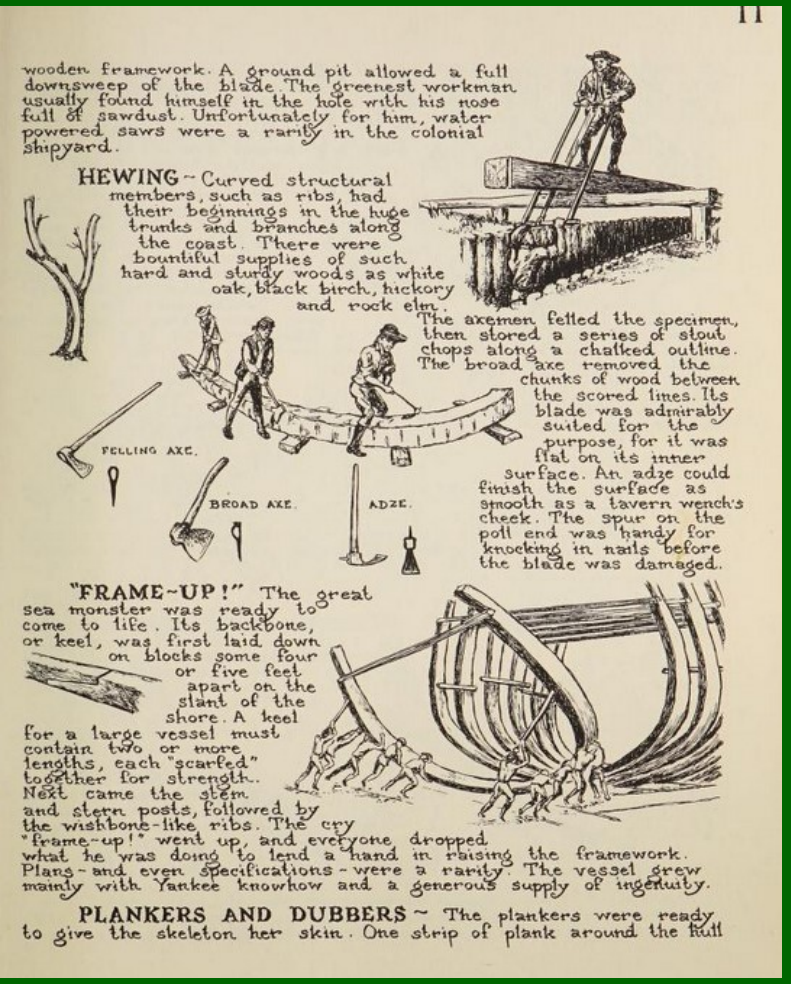
The masts were stepped after launching, and were hoisted in place from the yard dock.

Reference. C. Keith Wilbur. American Privateers



Mixed Maples Tree/Oak Tree/Atlantic White Cedar Forest Canopy

NJ Pine Barrens Maritime Cultural Landscape Forest Ecology – Ship Building



wooden framework. A ground pit allowed a full downsweep of the blade. The greenest workman usually found himself in the hole with his nose full of sawdust. Unfortunately for him, water powered saws were a rarity in the colonial shipyard.

HEWING ~ Curved structural members, such as ribs, had their beginnings in the huge trunks and branches along the coast. There were bountiful supplies of such hard and sturdy woods as white oak, black birch, hickory and rock elm.

The axemen felled the specimen, then stored a series of stout chops along a chalked outline. The broad axe removed the chunks of wood between the scored lines. Its blade was admirably suited for the purpose, for it was flat on its inner surface. An adze could finish the surface as smooth as a tavern wench's cheek. The spur on the poll end was handy for knocking in nails before the blade was damaged.

FELLING AXE. BROAD AXE. ADZE.

"FRAME-UP!" The great sea monster was ready to come to life. Its backbone, or keel, was first laid down on blocks some four or five feet apart on the slant of the shore. A keel for a large vessel must contain two or more lengths, each "scarfed" together for strength. Next came the stern and stern posts, followed by the wishbone-like ribs. The cry "frame-up!" went up, and everyone dropped what he was doing to lend a hand in raising the framework. Plans - and even specifications - were a rarity. The vessel grew mainly with Yankee knowhow and a generous supply of ingenuity.

PLANKERS AND DUBBERS ~ The planks were ready to give the skeleton her skin. One strip of plank around the hull was known as a streak. A good planking gang could make two streaks of plank in a day. But before a plank could fit snugly against the frame, each rib edge must be gently curved. This was the job of the dubber. His adze must be sharp enough to shave the sunburn off a sailor's chin. The streaks were secured to the ribs with hickory or locust tree-nails (trunnels). Holes for the purpose were bored at about one and one eighth inches in diameter with long augers.

Spikes and other iron wear were much too scarce to be used to any extent on privately owned ships.

SPIRAL AUGER.

SPOON BITS OR DOWEL-BITS FROM THE CONTINENTAL GUNBOAT "PHILADELPHIA" - LAKE CHAMPLAIN, 1776.

CAULKING AND SCRAPING ~ Oakum (tarred hemp) and cotton were driven in between the streaks to make the hull waterproof. The sharp ringing sound of the mallet against the hawzing irons was enough to shake a seagull's tailfeathers loose.

CAULKING HAMMER.

HAWSING IRON DROVE THE OAKUM DEEPER.

OAKUM.

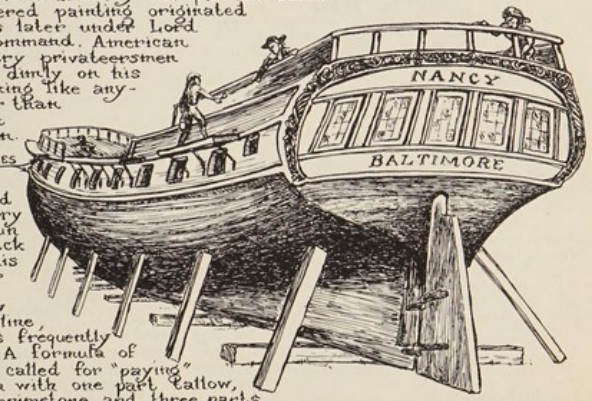
MAKING IRONS STARTED THE CAULKING.

CAULKING COMPLETED - THE HULL WAS PLANED, THEN SCRAPED UNTIL THE SURFACE GLISTENED.

FAVORED COLORS ~ Paint placed a barrier between the newly crafted hull and the destructive sea water. And it did more, for the colors dressed the privateer in a blaze of finery. Earth pigments were abundant in the colonies. Iron oxide had colored land's locked barns their characteristic "barn red" for generations. It was no less a favorite with seafarers. Sienna and yellow ochre also held their own on the ocean. Lamp black was easy to come by, but many of the blues and greens were imported. White paint rarely entered the privateer's color scheme, for it was expensive and dried with an off-yellow tint.

The color scheme was as individualistic as the vessel that wore it. But more usual combinations were yellow or brown hulls with a black stripe, or black hulls with a yellow or white line between the wales. Gun ports were definitely not painted black.

The checkered painting originated some years later under Lord Nelson's command. American Revolutionary privateersmen would look dimly on his vessel looking like anything other than an innocent merchantman.



WALES

Only when he was hard by his quarry would he run out the black snouts of his cannon for action.

Below the water line, tallow was frequently in service. A formula of the times called for "paying" the bottom with one part tallow, one part brimstone, and three parts resin. Copper sheathing was, of course, the last word in underwater surfacing. First used in 1760, it discouraged the hungriest of sea worms. But a privateer had as much chance of sheathing his hull with this scarce metal as he would receiving a commendation from King George III.

STERN FINISH ~ Fancy carvings were a rarity on the privately owned war vessel. A few scrolls and flourishes did find their way to the stern counter. There, the privateer proudly displayed her name. Immediately below was her port of registry.

SPARS

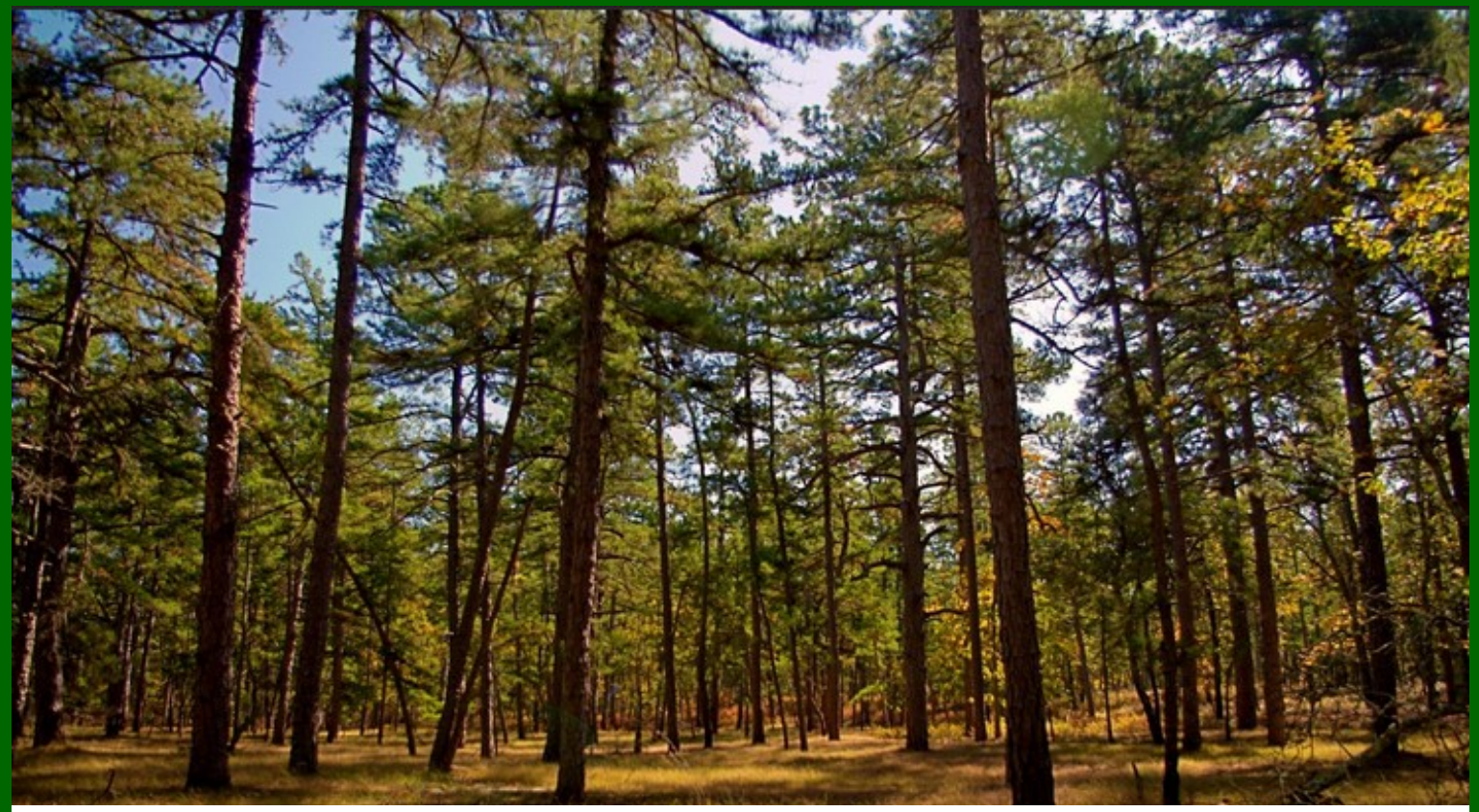
Spars were those great poles that supported the ship's canvas - masts, bowsprit, yards, booms and the like. The resinous pines and spruces grew tall and straight in North America - a bonus

Reference. C. Keith Wilbur. American Privateers

NJ Pine Barrens Timber and Natural Resources Used for Ship-Building

NJ Pine Barrens Maritime Cultural Landscape Forest Ecology – Rancocas Creek Watershed

"A Large Amount of Pine Barrens Cordwood was used during the early era of steam navigation Gordan 1834"



Pitch Pine height to 50-60 feet. Trunk is rugged, rough broken into fissures, that expose plate like scales. Bark is red or deep brown. Timber good for firewood, excellent for charcoal, and can be sawed into timber for rough construction at vessels in shipyards. Considered by some as a beautiful tree.

Pitch / Ponderosa Pine

Timber Used for Shallop Masts - Small Boats - Fire Wood - Forest Products and Naval Stores

Pine Barrens Glass Works

Prominent glass factories were based in Port Elizabeth, Bridgeton, and Millville where there was access to sand, woods, and waterways.

Glass (1800-1875)

Glass was an important rural industry in the Pines. It supported the 19th century population after the decline of the furnaces and forges. The glass houses were worked by long-time rural residents with the help of Germans who immigrated to the region in the 1830's and 1840's. Twenty-eight glass house sites have been located in the area from Cumberland County to the north central region of the Pines. Most of these sites contain archeological remains. Estellville, the best preserved, is unique for its stone construction. A few glass houses were worked until 1920.

Sapphire Sugar Bowl
1840 – South Jersey Glass
Metro Museum of Art

Glass factories are know to have existed in the Pine Barrens, among them were Crowleytown, Bulltown, Hermann City, Green Bank and Batsto. All were in operation in the mid 1800s taking advantage of the Mullica River for the transportation of their glass and the large amount of wood available for fuel. Most collectors of early bottles and glass have heard of the Crowleytown Glass Works which has been credited with producing the first Mason jar patented in 1856

By the nineteenth century, glass manufactories had been established in Pinelands manufacturing towns like Atco, Barnegat, Clementon, Egg Harbor, Estellville, and Green Bank

Pine Barrens Glass Works - Sagacity of Barge Operations

Central Issue is how to get products to market. By Tidewater

Early America Pine Barren roads impassable - Glass works located near or on tidal streams - Ease of market access

Wisterberg Glass, Packed in Salt Hay for Barge Transport

Number of glass works in and or near NJ Pine Barrens (1869)

10 in Millville, 4 in Glassboro, Winslow, Clayton, Salem, Bridgeton, Temperanceville, Batsto, Crowleytown (Crowley Landing, Mullica River), Estelleville. Port Elizabeth.

Reference: VanRensselaer 1945

1817

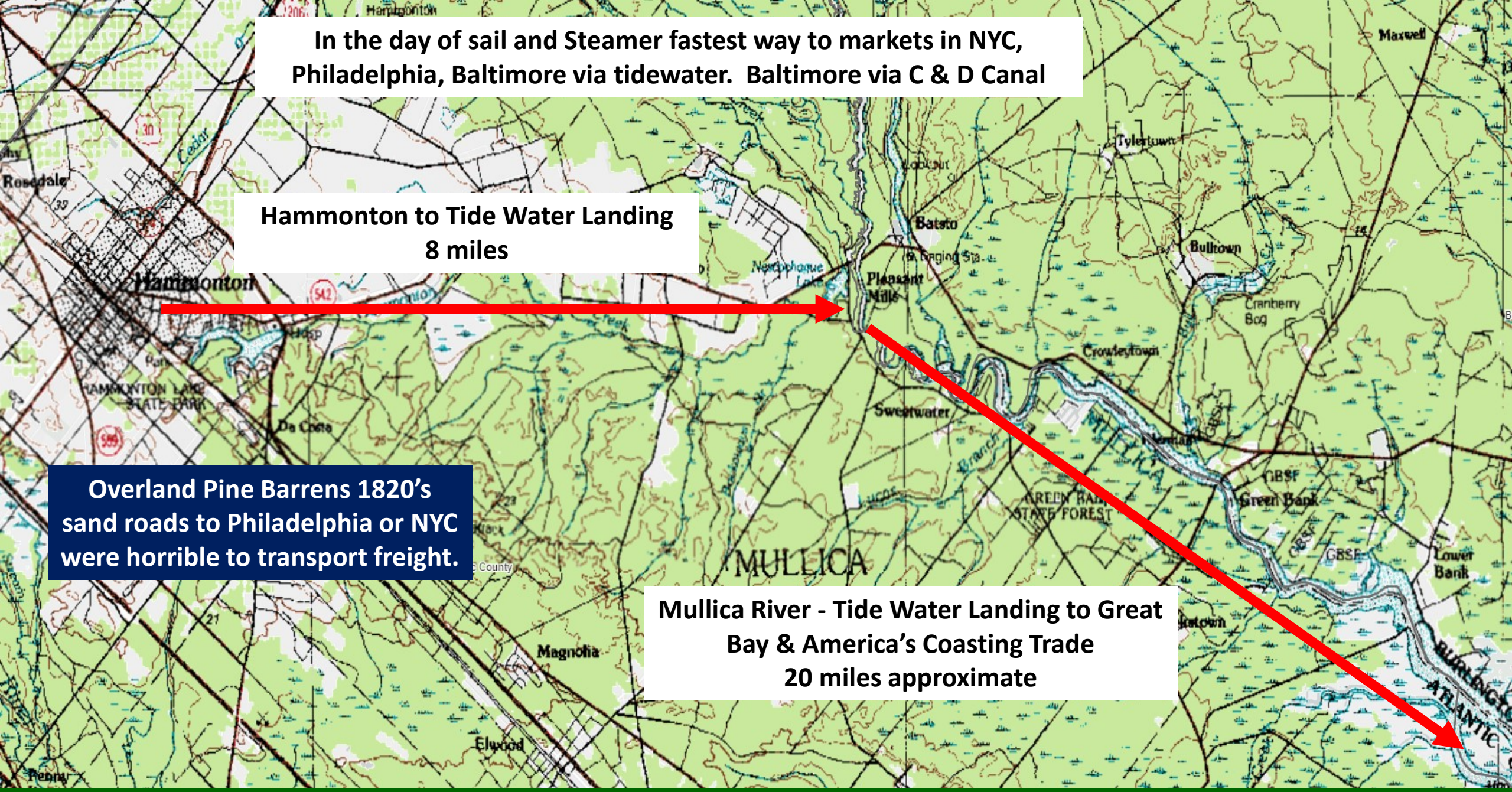
Hammonton's Coffin's Glass Factory

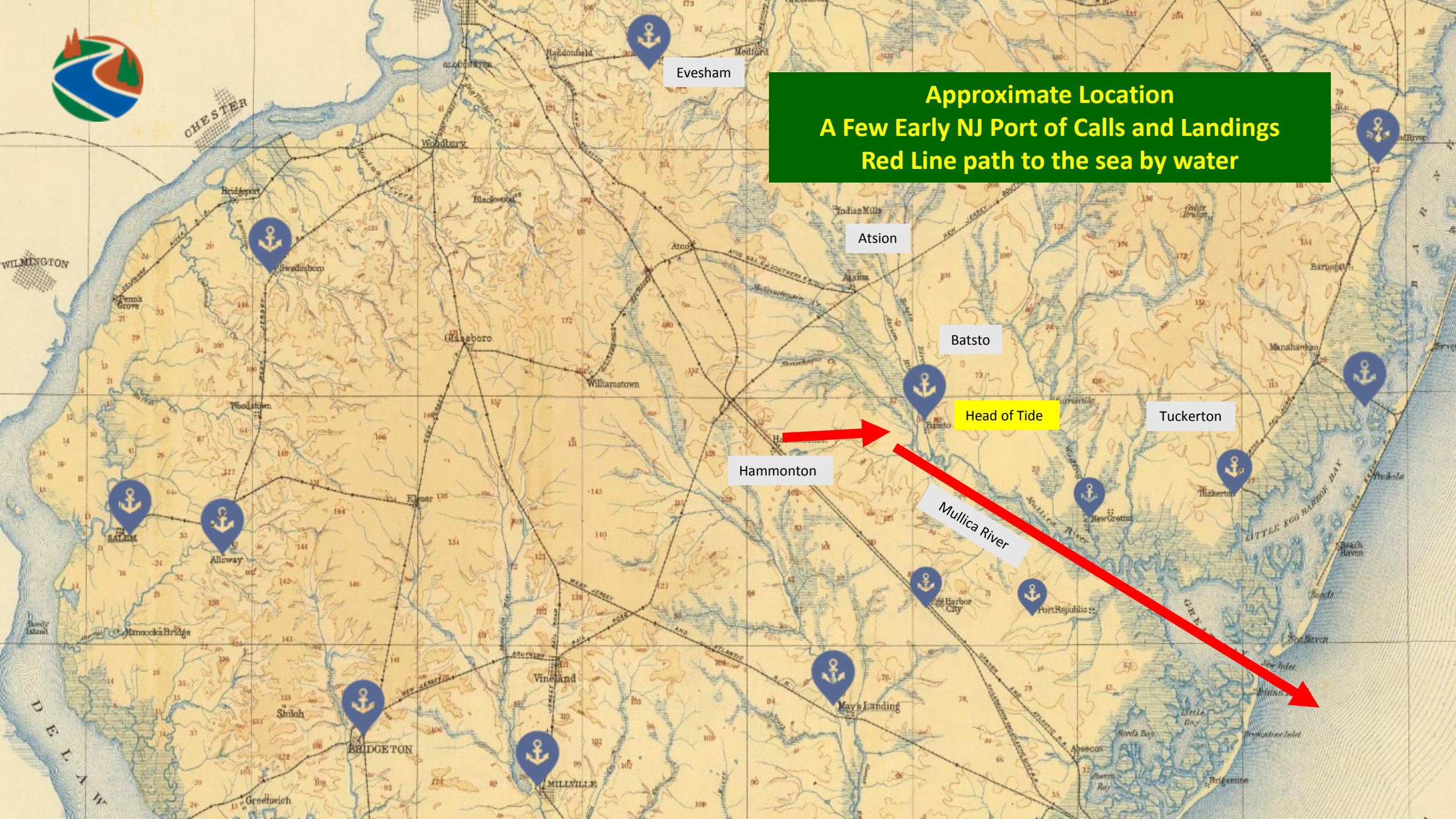
Availability of cheap timber, sand, water power and bog iron

Coffin's glass wares and products packed in salt hay, transported to end use markets via the Mullica River and East Coast USA Coasting Trade

P. Lorillard Cohansey Amber Glass Snuff Jar 1871 >>>

(See Lorillard Pine Barrens Stock Farm/Rancocas Phosphorous Match Works Cuban Filibusters, Ship building)


In the day of sail and Steamer fastest way to markets in NYC, Philadelphia, Baltimore via tidewater. Baltimore via C & D Canal
Hammonton to Tide Water Landing
8 miles
Overland Pine Barrens 1820's sand roads to Philadelphia or NYC were horrible to transport freight.
Mullica River - Tide Water Landing to Great Bay & America's Coasting Trade
20 miles approximate
Hammonton
Pleasant Mills
Batsto
Tylertown
Bulltown
Cranberry Bog
Crowleytown
Sweetwater
MULLICA
Green Bank
Lower Bank
Magnolia
Elwood
ATLANTIC

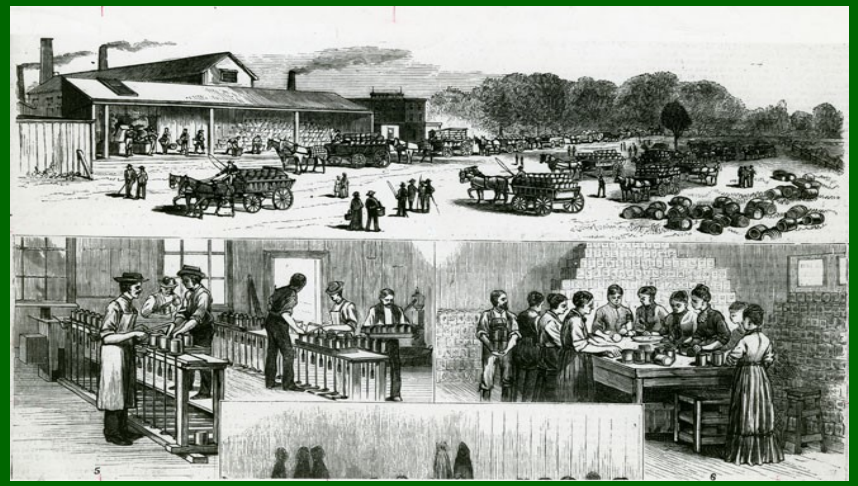

Approximate Location
A Few Early NJ Port of Calls and Landings
Red Line path to the sea by water
Evesham
Atsion
Batsto
Head of Tuckerton
Tuckerton
Hammonton
Mullica River

Photos Reference: Henry Ford Foundation

Salem River

Pine Barrens Agriculture MCL

One example - Port of Salem, New Jersey – Sailboats and Barges Constructed w NJ Pine Barren Timber
Local agriculture produce, cranberry, blueberry, poultry, grain, rye, wheats...etc...all its presumed moved to market via Pine Barren land's and waters. To what extent is area of future research.



1870s-1880s. Scenes at the H. K. and F. B. Thurber Cannery in Moorestown, NJ

1939-Beverly Dusting peas. Todays Pennington Park

Irrigation of strawberries at Granville Leeds Farm in Rancocas, NJ. Note Creek in background

Grading Rancocas Creek Cantaloupe - SJ Farm

Reference: NJ State Museum Online Archives

W. B. Pennington of Delanco examines Whip Marcross sweet corn

Pine Barrens Rail Roads

New Jersey Southern Railroad (NJS) began life as the Raritan and Delaware Bay Railroad Company (R&DB), in March 1854. The R&DB was chartered to construct a railroad from the Raritan Bay to Cape Island (Cape May), near the outlet of the Delaware Bay. It was to form Part of a rail and water route from the New York City area to the Norfolk, Virginia.

Five Whistles

"Cuba's Great Struggle for Freedom", written in 1895 there is a specific chapter among its 685 pages on "Men and Arms for Cuba".

Steamers "Horsa" and "Atlantic City" were chartered to transport large groups of "swarthy" individuals from Philadelphia across the Delaware River to Camden, here the Pennslvannia rail-road ran folks across South Jersey pine barrens to Tuckahoe and other communities

These and other steamers sailed down the Delaware river, rounded Cape May and proceeded north up the Jersey coast to about Tuckahoe, Ocean City and Barnegat where men and the cargo's loaded boxes of rifles, munitions and cannons. This route avoided Spanish spies and American authority

"Horsa" was caught.Detailed trial transcripts allude to NYC owners of the vsl. Attornery General for the US down in Washington DC took time to notify the court that there is nothing illegal about what was taking place. That if Spain is interested in stopping illegal arms from the USA to Cuba then Spain can close its Cuban ports. Captain and crew found guilty. On appeal all released and all charges dropped

The steamer "Atlantic City" took the Cuban patriots out to the famous "Bermuda", which at 6 o'clock sharp gave five shrill whistles announcing she was awaiting them just off the Great Egg Harbor Bar. The party consisted of General Garcia and 62 compatriots who joined him in some mysterious way.

The tug lead the Spanish spies on a merry chase around the Delaware Bay, and then under the cover of the fog slipped back up the Delaware reached Khaigns Point, Camden. Here the special train from the Reading line swiftly borne Cuban Patriots to Tuckahoe.

NJ Pine Barrens Free Cuba Filibusters

Cuban Filibusters in Cuba

1870's/1890's/Pre Spanish American War

Cuban Freedom Fighters in Philadelphia would take a ferry across the Delaware to catch a rail road to the Jersey Shore. In doing they dodged Spanish spies and American maritime enforcement on the Delaware. It is illegal in the United States to promote foreign wars. W Cuba is was individuals fighting Spanish Cuban Overlords. Once on the railroad filibusters headed out across the Pine Barrens by rail, w locked boxcars and "banana strippers" (machetes) strapped to their backs. Down to Tuckerton and Tuckahoe. Welcomed by locals w the prevalent "throw Spain of Cuba" attitudes. Loaded into sailing schooners for transfer and loading off-shore of costal NJ into larger vessels. Head South and invade and Free Cuba. Filibusters.

Bog Iron - Forges and Furnaces

Early in the 19th century, a booming iron industry began. The New Jersey Pine Barrens were rich with "bog iron," natural deposits of iron-rich material. Clam and oyster shells from the shoreline were harvested to provide lime required for smelting, and the vast forestlands provided the fuel. However, the production of bog iron ended by the 1860s, because higher grade iron and coal deposits discovered in Pennsylvania and elsewhere were much more efficient to exploit. (ref: usgs)

Iron (1765-1865)

The iron industry accounted for the century-long population boom in the forest areas of the Pinelands. Iron production required charcoal, which consumed enormous amounts of pine wood and thus helped to create the modern landscape. About 30 furnaces and forges existed here during the 100-year history of this industry. Although most of the associated buildings have disappeared, many of the sites contain significant archaeological resources. One of the more famous ruins, Martha, was investigated by an archaeologist but was covered over again to prevent further vandalism. The furnace at Batsto, originally built in 1766, rebuilt in 1786 and again in 1829, continued to cast iron until 1848. As with many furnaces, a village grew up around it. Batsto village included a lime kiln, charcoal house, stamping mill, sawmill, gristmill, store, and workers' cottages sufficient to house over 500 people. The site has been restored by the state and it attracts thousands of visitors.

Hanover, Mount Holly, Vincentown, Weymouth, Eatna, Medford, Weymouth, Others

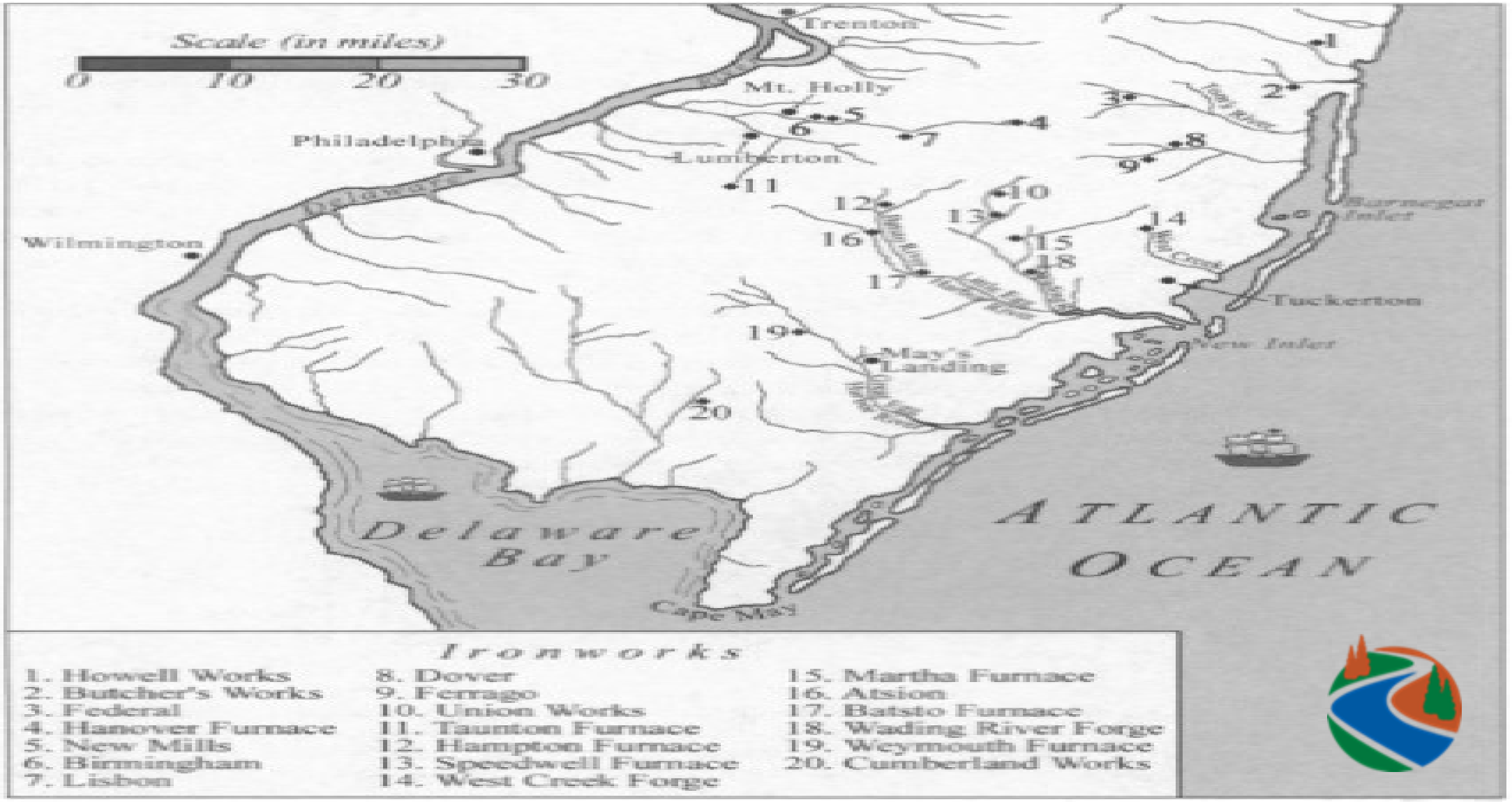


FIGURE I

Early ironworks in Southern New Jersey, circa 1810. Based on Charles S. Boyer, *Early Forges and Furnaces in New Jersey* (Philadelphia, 1931). Map drawn by Rebecca Wrenn.

Ore Boats and Canals

From several old account books of the Weymouth Furnace in possession of Thomas C. Stewart of Mays Landing, New Jersey, a grandson of Robert Stewart who was for many years manager of the Batsto estate, we learn that there was considerable trading between Weymouth, Hanover, Gloucester, Atsion, and Cumberland Furnaces and a very close contact between Etna and Weymouth Furnaces. The furnace store also played an important part in the community life. The daily entries in these books show that conditions here were very similar to those at Martha Furnace. Mention of training days, drunkenness, and the workings of the furnace and forges are frequently made. Many odd and interesting items are scattered through the daily notes. Among them are the following:

Feb.	25, 1818	A Beef Pedlar here today
March	9, "	Mr. Wheaton began to repair Boats this morning
March	13, "	Launched the ore boat this Evening
"	25, "	Aetna furnace Teams past here this evening with loads of goods from Martha Furnace
April	10, "	Began to boat ore down the Cannal
June	3, "	Training at Mays Landing. Nearly all came home Sober.
Oct.	31, "	This day is called "Holly Eve" [Hallowe'en]
Jan.	2, 1819	Jacob Hoffman hung himself Twice but did not hang Long enough
"	6, "	Seven waggons here with Pork, etc.
"	12, "	Pork and corn came to-day
Feb.	22, "	Thompson agreed to Coal by the hundred @ 12/6
May	10, "	Training at Mays Landing. Several faught Wentling got hurt
"	15, "	No molasses, coffee nor Sugar to-day for people
Oct.	22, "	Tin Pedler here

RUINS OF HANOVER FURNACE

Reference: Boyer

Pine Barrens Charcoal Was Wagoned to Texas

Charcoal Was an Early Product of the Pine Barrens

By J.G Wilson
Batsto Citizens Gazette, 1987

Anyone who has traveled in the Barrens during or just after a light snowfall couldn't help but notice perfect circles 20 to 30 feet in diameter etched in the snow. They are mementoes of charcoal kilns of years ago. These kilns once abounded in the Batsto, Pleasant Mills, Weymouth area.

At one time it was possible to spot three of these circles on the road from Dutchtown, a local name for an old cranberry settlement in Hammonton near Atsion, and Batsto. There was once evidence of kilns near Constable Bridge, New Pond and this writer recalls as a youngster seeing a kiln in operation on the Quaker Bridge Road where the old "mail road" branched off to provide a shortcut to Batsto.

Three things were needed to produce iron in the old furnaces in the Pine Barrens: the ore, found in sheets in boggy areas, hence the term bog ore; flux, usually limestone or oyster shells needed to cause the iron to separate from the dross or portion of the ore to be discarded; and charcoal, used for fuel.

The ore was gathered and brought to the furnace site in wagons or flat-bottomed boats; the flux was also brought in by wagon or boat. The shells from the shore, the limestone from North Jersey. But the charcoal had to be made near the furnace site by charcoal burners or colliers.

First, exactly what is charcoal? Charcoal is simply wood that has been charred or partly burned. The process drives out all moisture and wood fibers and the resulting product is a light, easily handled fuel, almost pure carbon, which burns with little flame but gives off intense heat.

The key man in making charcoal was the burner or collier. His was a lonely life since most of the pits were located outside and often some distance from the settlements. Mostly he worked alone living in a crude shelter hardby his kiln. Sometimes, especially when there was more than one kiln to be tended, there was an assistant.

In the beginning, setting up a pit was work for many hands. In the first place the term "pit" was a misnomer. The charcoal burning operation was done entirely above ground on a piece of cleared, packed level ground. It was essential that the kiln be set level for proper burning.

The actual burning was done in late spring, summer and fall months. Wind, the bane of the collier, was always a lurking danger and colder months is the time when strong wind will suddenly spring up. A kiln left untended for even a short while under those conditions was quickly turned into an all-consuming bonfire.

The operation began with the cutting of the wood. This was done by several

from place to place. The splint was attached with the free end pointing downward, which was lighted. As rapidly as these torches were burned down they were replaced by fresh ones. Two or three burning sticks lighted a room for ordinary purposes, but they produced much black smoke."* The spearing of fish at night was facilitated by the use of pitch-pine torches. Charcoal was manufactured also from the inferior grades of pine logs and it was used in blacksmith shops and iron forges quite extensively. Lamp-black was made from pitch-pine.

The cedar swamps yielded and still furnish a fine lumber obtained from the white-cedar tree (Fig. 1). The durable qualities of white-cedar, especially in contact with the soil, were early appreciated. Although the wood is soft and rather weak, yet on account of its non-resinous character and its straight grain, it is an ideal material for boat-building, for cooperage (vats, tanks, churns, piggins, firkins, tubs) and various kinds of woodenware. Gottlieb Mittelberger, a German wagon-builder, considered the white-cedar as one of the finest materials for the construction of church organ pipes. Shingles made of white-cedar last many years. There is a specimen of a split shingle in the wood collection at the University of Pennsylvania, taken by the writer from the side of a house on Long Island built probably for at least two hundred years. The wood has been used satisfactorily for interior finish (floors, doors

Pitch pines were used to make charcoal. Trees would be cut and piled into teepee shaped structures and then covered by a combination of soil, sod and plant material that acted as an oven. A fire would be set under the covering and the intake of air would be regulated to prevent the fire from consuming the wood completely. Colliers would manage the fire for days until the result was charcoal, a product that was about 1/10th the volume of firewood and capable of reaching temperatures of nearly 3500 degrees Fahrenheit. Before the widespread availability of cheap anthracite coal from Pennsylvania and elsewhere, charcoal was the major source of industrial energy, especially for the smelting of bog iron for a variety of uses including the making of cannons and cannon balls. Pine Barrens charcoal was also used during the American Revolution to heat homes in Loyalist occupied New York. Well into the 19th century, Pine Barrens charcoal was shipped to the Caribbean to be used to produce salt from ocean water

Charcoal

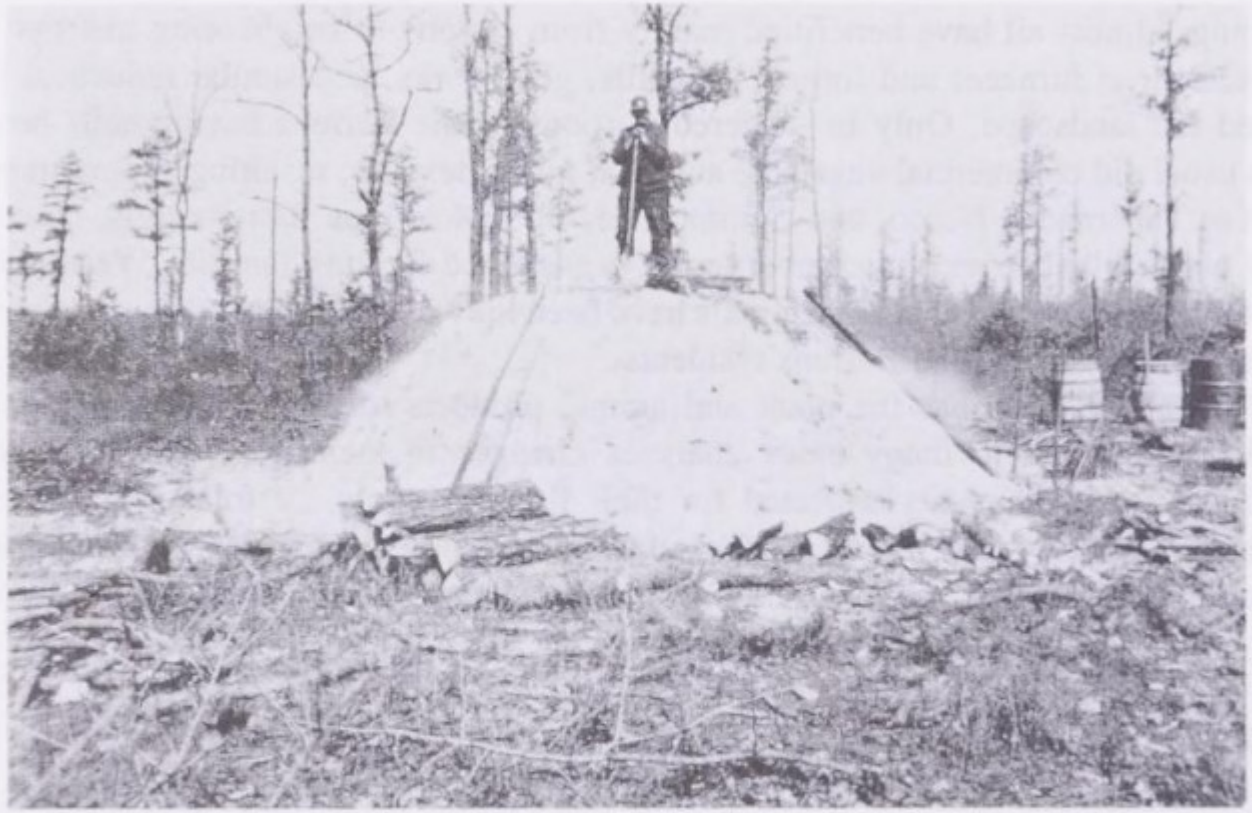


Fig. 1. Charcoal-making about 1926. Charcoal "pits" were not pits, but circular piles of wood about 4 m in diameter. Wood was stacked to a 2-m height, and then the pile was sloped toward a center stake. The surface of the piles was covered with "turf," blocks of shrub roots, and the soil was laid with the soil side up. The pile was fired by pulling out the center stake and dropping burning kindling into the hole. The rate of burning was controlled by closing that hole and any others to produce the proper amount of draft.

Charcoal from old growth, 2nd and 3rd growth pine barrens forests. Repeating cutting of immature woodlands.

Located near water transportation

Exported for cooking fuel to New York and Philadelphia

Used by the wagon load at the Rancocas Creek Texas plant site.

1850's 50 schooner's made regular runs from Mullica River to NCY.

1870's Captain J.R. Crowley stood on Green Bank Bridge, counted 57 masts on the Mullica River loaded w charcoal, timber and glass for New York

US Mint, Philadelphia used Pine Barrens charcoal

Charcoal Landings - Mays Landing - Wading River

HE ABBOTT PLACE IN MAYS LANDING

Abbott is the oldest resident of May's Landing and has about the best memory of anyone we know. Although he has never looked up a record, he can tell you the date and history of every old building in town. This information came from his grandfather, who was born in 1804. In his younger days Abbott was well known as a poet, song writer and commentator on political news at the turn of the century. Much of his work appeared in the Atlantic City Press about 1912.

CHARCOAL LANDINGS

At the foot of the hill the old charcoal landings stood in the early days, and about a hundreds yards downstream were the yards where three masted schooners were built. Abbott loves to tell of his barefoot days when he would watch the parade of coal wagons roll in from the piney woods piled high with a hundred bushels on each. Launching day at the shipyard always found little Harry on deck right up at the prow to wish her a life of adventure that only a little boy can dream of. The last three master built at Mays Landing was the Rebecca C. Tauline. Abbott never forgets a middle initial. Might as well leave out the ridge pole on a house or the main mast of a schooner. The Rebecca stuck on the ways but was soon released with the aid of a block and fall hitched to an anchor which was dropped across the river.

According to legend the British had a supply dump buried in Sugar Hill during the hectic days under what is now the east wing of the house, and hence the name. Perhaps they had a sweet tooth.

All signs of charcoal and schooners have disappeared but the old homestead still sits on the prettiest spot in town and Abbott, try as he will cannot find a knot or rot in the whole structure.

1922

Ghost Island, Haunted by Shade of Outlaw Leader, Found Habitat of Turtle, Site of Crumbling Ruin

HEADLESS PHANTOM OF 'JOE' MULLINER SPURS OLD LEGENDS

Buttonwood Near Charcoal Landings on Mullica Called Gallows

RAIN BALKS EXPLORERS

Deluge Halts Explorers Who Turn to Tracking Bandit's Ghost

Photos by Jack Beerr, Courier-Post Staff

Down the Mullica river, when thunderstorms send fishermen and boat builders to cover, tall stories of forgotten days and natives along the cedar water shore are heard. This time, as they were being told, the photographer took an unannounced picture and the view at the upper left, with the torrents sweeping down outside, is the result. At the right top is shown the ruin of the lonely hermitage on Ghost Island, haunted by the wraith of "Joe" Mulliner, hanged Refugee. Below, marked by a stake and lily pads, is the submerged rock pile where a ship was sunk to foil the Red Coats in Revolutionary days. At the lower right, Katherine Thurston, daughter of Harry Thurston, Hammonton well driller and boat builder, is shown holding a 136-year-old ax, plucked from the mud near the wrecked ship.

BOARDWALK BAR BAN KEPT ON BY POLICE

Authorities Say Writ Obtained by Richards is for Only One Place

1932

List of Plants Collected on Ship's Ballast Port of Philadelphia -1867

BY ISAAC BURK.

Since 1867, when Aubrey H. Smith, Esq., published his "Notes on some Colonies of Plants," in the Proceedings of the Academy, there have been large additions made to the number, and, as some of them are likely to become permanent colonists, and others are interesting, either from their rarity or the place of their nativity, I propose to give a list of such as have been collected since that time as far as I have been able to ascertain them.

The extensive improvements made in the lower portion of the city by the Pennsylvania Railroad and the American Steamship Company, and the consequent increase in the number of vessels required to carry away merchandise and produce, have been the means of introducing a great variety of plants, many of which exist but a single season and then disappear, whilst others maintain a foothold for a longer period.

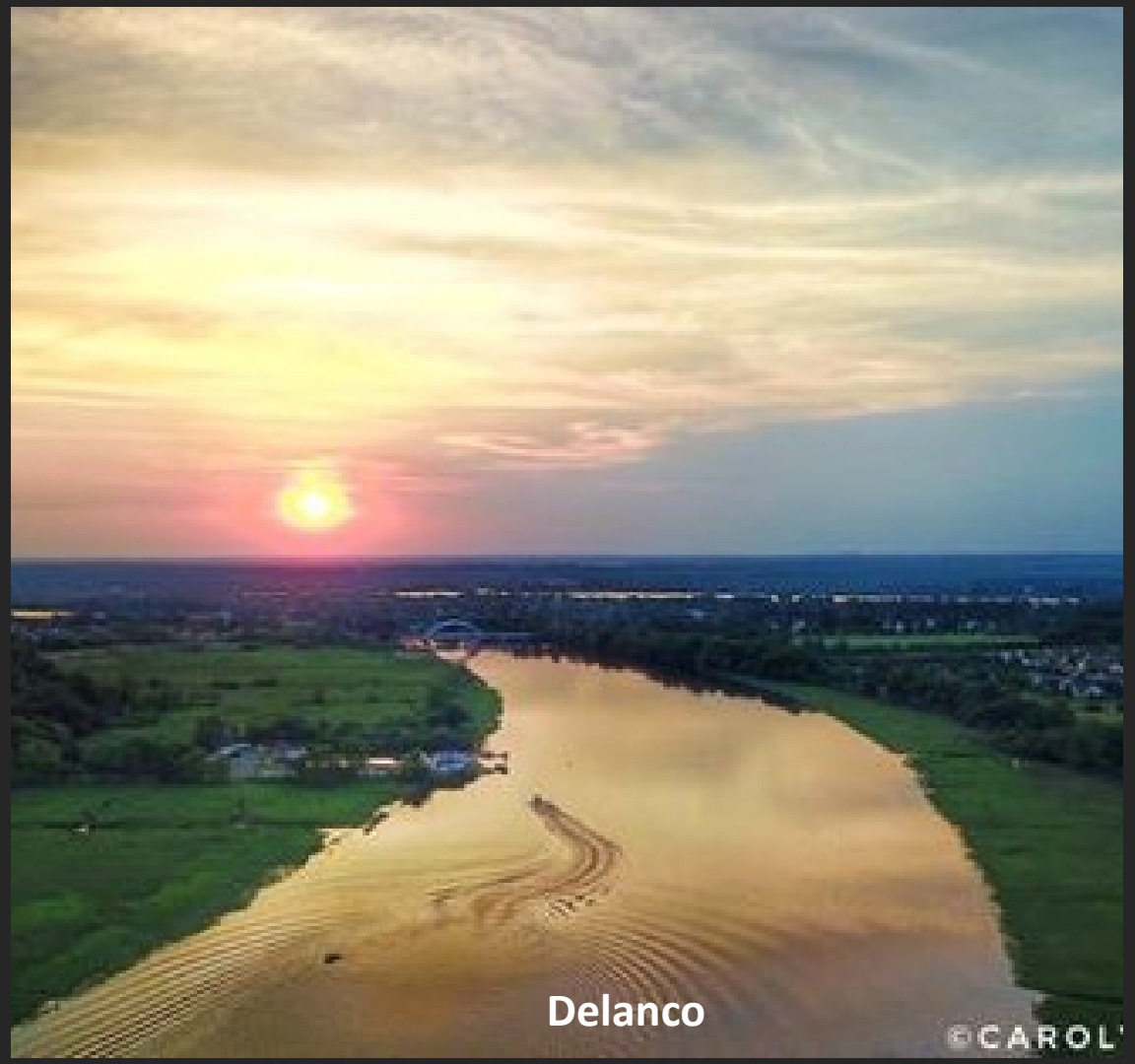
Some which do not flower the first year were given the protection of a cool greenhouse, and in this way I have become acquainted with some very interesting plants.

Much of the land on which these improvements have been made was low marsh, which was covered with the mud dredged from the docks, and when this had attained sufficient consistency covered with any kind of ballast which could be obtained, much of it being chalk or oolite, showing that it came from British ports, and producing plants common in such localities.

15. Reseda lutea var. maritima. Greenwich Point.
16. Reseda alba, L. Greenwich Point.
17. Reseda odorata, L. Greenwich Point.
18. Gynandropsis pentaphylla, D. C. Girard Point. Nat. of S. America.
19. Cleome pungens, Willd. Very abundant at Greenwich Point along with Polygonum Orientale on mud freshly dredged from the bottom of the river. S. America.
20. Silene inflata, Smith. Greenwich Point.
21. Silene noctiflora, L. Greenwich Point.
22. Lychnis vespertina, Sibth. Greenwich Point.
23. Lychnis diurna, Sibth. Greenwich Point.
24. Vaccaria vulgaris, Host. Greenwich Point.
25. Corregiola littoralis, L. Kaighn's Point. Very rare.
26. Frankenia pulverulenta, L. Kaighn's Point. A single specimen.
27. Tribulus terrestris, L. Greenwich and Kaighn's Points.
28. Malva parviflora, L. Greenwich and Kaighn's Points.
29. Sphæralcea miniata, Spach. Kaighn's Point. Nat. of South America.
30. Geraneum dissectum, L. Greenwich Point.
31. Geraneum molle, L. Kaighn's Point.
32. Oxalis corniulata, L. Greenwich Point. Bentham seems to think this has been introduced into England from America, but it appears to be much more common there than here, and Linnæus gives Italy, Sicily, and Germany as its native habitat.
33. Medicago sativa, L. Kaighn's and Greenwich. Of a weak prostrate habit. Specimens at the Centennial Exhibition, grown in Kansas, were much stouter and rigidly erect.
34. Trigonella Monspeliaca, L.
35. Trigonella ornithopodoides, L. A single specimen.
36. Lotus corniculatus, L. Kaighn's Point.
37. Trifolium hybridum, L. This appears likely to take permanent possession of the sandy soil of New Jersey, and will probably make a valuable forage plant.
38. Lathyrus aphaca, L. Kaighn's Point. A single plant.
39. Psoralea bituminosa, L. Kaighn's Point. Native of S. Europe.
40. Potentilla reptans, L. Kaighn's Point.

Rancocas Creek North Branch

26 Miles from Hanover Furnace to the Tidal Delaware River Navigation Channel



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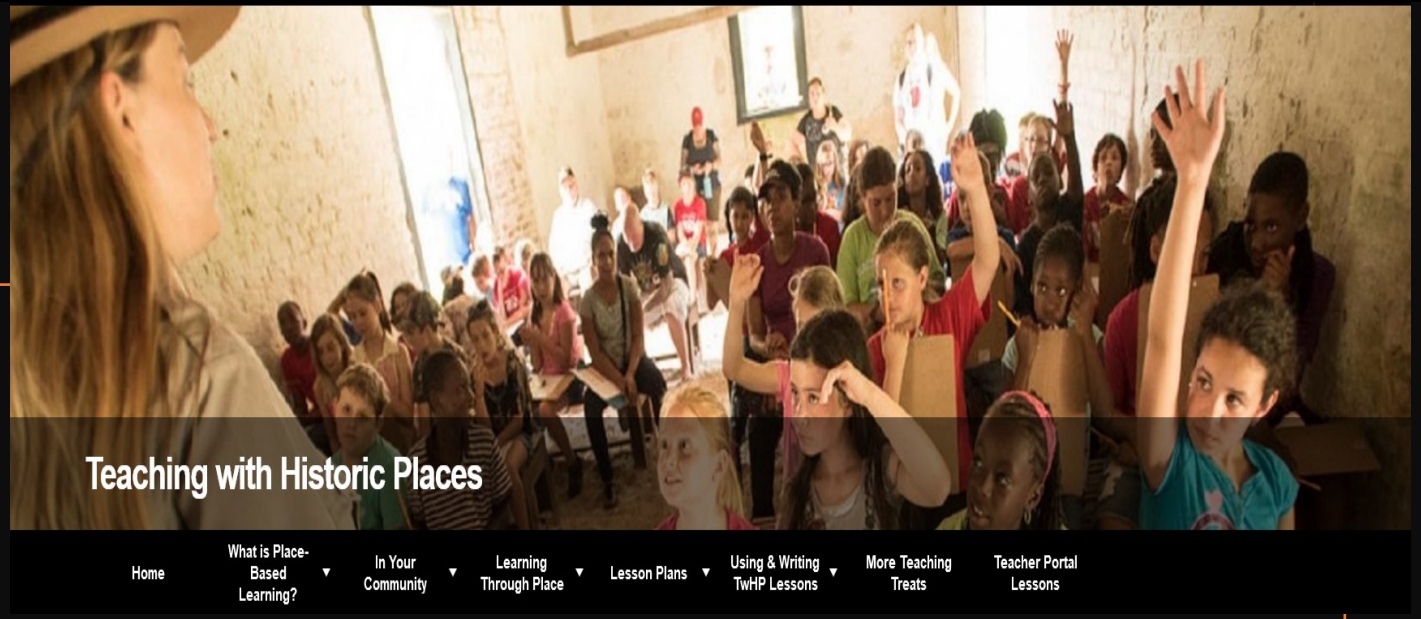
Activity for Kids & Maritime Related Lessons Plans

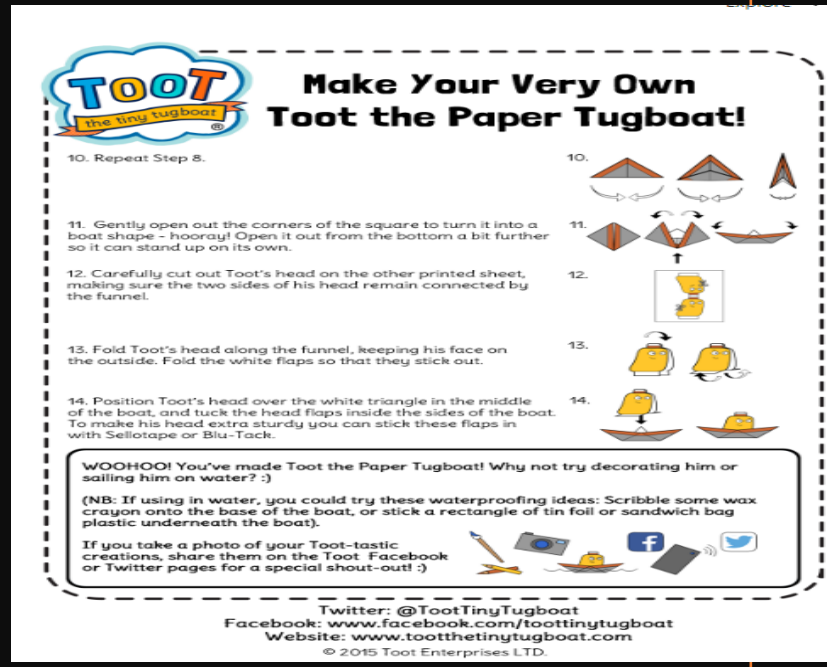
https://www.nps.gov/subjects/teachingwithhistoricplaces/index.htm

Individuals of all ages enrich their understanding of American history and heritage through the narratives of New Jersey's Pinelands National Reserve Maritime Cultural Landscapes.

These maritime related lesson plans as put together by the National Park Service Maritime Heritage Program easily adapt to the Rancocas Creek and other Pine barrens MCL. The Power of Place uses historic properties to enliven history, social studies, geography, civics, and other subjects. These resources bring history and heritage alive.



In Our Community, Power of Place



References and Sources

S Branch Rancocas Used w Permission

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Sources, excellent illustrations and references were curated from internet databases like Hathi Trust, the Library of Congress, the National Archives, the State of NJ online archives, and the NJ State Library. These and other resources were used in a complimentary manner w online newspaper databases. Of these the NY Times online archives and Newspaper.com were often consulted. Internet archives online library was also used both as a primary and secondary resource. One area plumbed are local library's, historical society's, Division of Tourism resources. An avenue that provided a lot of initial material to search for further specific information was reviewing the period advertisements of different waters. The material for the Pine Barrens MCL is commonly available. What the atlas does is present the Pine Barrens MCL's in one place and location. Central to that theme are reviewing the designation of Pine Barrens communities as a National Historic Site/Town.

Numerous e-mails were exchanged w both subject matter experts and local historians to gain better insight into a reference or theme. As a matter of scholarship a very small number of historians specifically refused to allow any of "their material" to be used in the Atlas. Such requests are appreciated and "their material" has not been included. Though it is interesting to note such claims petered away when one finds "their material" readily available from an archives, newspaper article or internet database.

The host of separate resources and far flung items gathered over the last few years forge this atlas connection to citizens and communities alike. A valuable resource for material are Facebook, Twitter and other social media platforms. Delaware River Shipping, NJ Pine Barrens, South Jersey History and local community sites always enhanced background, provided leads to investigate and engaged in robust public discussions.

Anatomy of research: Lucky Pine barrens MCL nomenclature is unique. Thus it becomes easy enough to search single words. All prefaced with a key term: maritime, privateers, Chapelle, Rancocas, Cohansey, Mullica, Great Egg, Port Norris, Tuckahoe, etc.… when entered into a online search engines. One can dial even more by entering a key word followed by the word maritime. Ie: Rancocas maritime; Mullica maritime, etc.… Collaborative grass-root research methodology is enhanced when a subject mater expert, local historian or community stakeholder engages into such conversations. One then spends time researching discussed topics which is facilitated by the prior conducted research. A number of sites were enhanced when local residents highlighted local stories. So called amateur historians more often then not directed research down pathways of mutual beneficial alliances.

Knitting together historical threads opened pathways for research and knowledge that is now openly shared for the greater good.

Suggested Books...Suggesting books is a mine-field, these are valid desktop keepers. There are other on desk top books, that are the most excellent books written and published by local authors, written by residents of communities who know and feel local heritage. And there is nothing wrong w immersing one's self in a book.

David Cecelski	"A Historians Coast, Adventures into the Tidewater Past". 2002.
George DeCou	"The Historic Rancocas, Sketches of Towns and Pioneer Settles in Rancocas Valley" 1949.
Howard Boyd	"Field Guide to the NJ Pine Barrens"
Erastus Benedict	"The American Admiralty", Jurisdiction and Practices w Practical Forms and Direction 1850.
Arthur Jensen	"The Maritime Commerce of Colonial Philadelphia". 1963.
Capt. Stephen Nagiewicz	"The Hidden History of Maritime New Jersey 2016.
William Baker	" Sloops and Shallops" 1966.
C.A. Weslager	"Dutch Explorers, Traders, Settlers in the Delaware Valley 1609-1664 1961.
Roland, etal.	"The Way of the Ship, America's Maritime History Revisoned 1600-2000.
Crawley	"Little Rivers of New Jersey" Third Printing, 1993.
Fowlers	"Hand Book of Natural History" 1968.
Wilbur Siebert	"The Underground Railroad, From Freedom Slavery to Freedom, a Comprehensive History 2006.
Cle Lesger	" The Rise of Amersterdam Market and Information Exchange 1550-1630. 2006.
Howard .Chapelle	"American Small Sailing Craft" (and other excellent works)
Dorthey Cross	NJ Archeology Native Americans - Works Progress Administration

Some of these books adapt well to all ages. Likewise the Atlas. Lots of activities abound to engage different ages in Pine Barrens maritime cultural landscapes.

The best resources are local historical clubs and associations. Local maritime museums abound along the Pine Barrens fringe tidal landings and communities. This atlas is an invitation to explore, to wander off the beaten path, to escape the maelstrom of today, to step back and enjoy NJ Pine Barrens National Reserve maritime cultural landscapes. But beware of New Jersey history and heritage political charlatans and de Jersey Devil.

Melpine Landing
Rancocas Creek Water Trail

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Appendix

Pages 443- 450

National Water Trail, Catalyst for a Healthy Community

General George Washington Papers Ancocas (Rancocas) Creek

A Healthy Community, a garden to grow.

In 1985, the Center for Disease Control along with State health departments, local health departments and community groups developed PATCH, a widely recognized, effective model for planning, conducting and evaluating community health programs, as part of a healthy community.

“Water trails enhance public access and promote awareness of healthy lifestyles are a fundamental cornerstone of a healthy community” Sec of Interior Secretary Salazar

Planned Approach to Community Health (PATCH)

- The Planned Approach to Community Health (PATCH) is a model for grass-root planning, conducting, and evaluating community health promotion and disease prevention programs. The benefits of using PATCH include:

- **Community involvement**: PATCH encourages community members to participate in the planning and implementation of health promotion programs, which can help increase the effectiveness of these programs.

- **Tailored interventions**: PATCH emphasizes the importance of tailoring community based health promotion interventions to the specific needs and characteristics of the community.

- **Evidence-based strategies**: PATCH promotes the use of evidence-based strategies for enhanced public access, health promotion and disease prevention, which have been shown to be effective in improving health outcomes.

- **Collaboration**: PATCH encourages collaboration among individuals, community organizations, health care providers, and other stakeholders to improve the coordination and delivery of health promotion programs.

- **Evaluation**: PATCH emphasizes the importance of evaluating community programs to determine their effectiveness and identify areas for improvement.

National Water Trails, Fusion for a Healthy Community

The National Water Trails System is a network of waterways that increase public access to water-based outdoor recreation, encourage community involvement in clean waterways and conservation and promote tourism to these places. The rivers and other waterway trails designated National Water Trails become the newest addition to the class of national recreational trails under the National Trails System Act of 1968.

Chattahoochee River in Georgia is the first National Water Trail. Sec of Interior Kenneth Salazar said. “It’s a wonderful example of what we can do with our rivers when a community embraces them, and looks to them for all of the benefits that brings to conservation, as well as the economics of the local community and the health of the community.” Water Trails increase access to water-based outdoor recreation, encourage community stewardship of local waterways, and promote tourism that fuels local economies across America. National Water Trails spotlight community-driven conservation and stewardship.

“Rivers, lakes, and other waterways are the lifeblood of our communities, connecting us to our environment, our culture, our economy, and our way of life,” Salazar said. National Water Trail designation brings signage, technical assistance and resources is provided to build on and promote the development of quality water trails. Water trails become catalysts for restoring the health of local waterways throughout the community. National Water Trails may be designated by the Secretary of the Interior and the Secretary of Agriculture.

George Washington Papers

10th December 1776

HEAD QUARTERS TRENTON FALLS
10th December 1776

Sir,

Yours of last evening reached me at 4 o'clock this morning. I immediately sent Orders to Commodore Seymour to despatch one of his Gallies down to Dunk's Ferry, and I shall dispose of the Remainder in such manner, and at such places as will be most likely, not only to annoy the Enemy in their Passage, but to give the earliest Information of any attempt of that kind.

Parties of the Enemy have been reconnoitering both up and down River, and I imagine that it has been one of those parties that have appeared near Burlington, for as they have not found the least opposition from the People of Jersey, they venture very far from their main Body, which for the best Information still lays about Trenton and above it.

I have desired Colo Humpton, who is the bearer of this, to apply for a party of men, to go up Cooper's and Ancocus Creeks, and bring down all the Craft he may find there, for it is in vain to cut down Bridges, if the Boats are left. They cannot be trusted to the care of the owners, for if an Enemy was to appear, such is their Fear, that they would deliver them up upon the first demand.

I think that the Fort began at Billingsport should be attended to, if there is not a party already there, one should be sent under a good Officer, who would not too readily take the Alarm and come off, for you may depend that only small Bodies will be sent to that Distance. But I have always found that the intelligence brought by people not used to see Men in Arms, has always magnified numbers exceedingly, and on this Head the Officer should be guarded, not to trust to Report, but be well satisfied himself, before he gives up his Post.

Having sent down Major General Putnam to throw up necessary Works for the Defence of your City, I hope you will co-operate with him, and give him every Assistance in your power to expedite so necessary an Operation.

I have the Honour to be Sir
Your most obl Servt
Go Washington

To Honble Thomas Wharton junr Esqr.

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February 1778

To be sold
By Publick Vendue, at Burlington, on Thursday the 12th instant, (February)

THE schooner LITTLE HOPE, now lying in Ancocas[1] near Wallace's Ferry, burden about 45 tons, with her tackle, apparel, furniture and cargo, consisting of a number of blankets, several pieces of baiz of divers colours, tea, pepper, claret, port wine, London porter, corks, &c. &c. Also a vessel known by the name of LEWIS'S MILL BOAT, now lying in Ancocas aforesaid, near the Ferry aforesaid, burden about 30 tons, with her tackle, apparel, and furniture. The Vendue to begin at ten o'clock on said day, and attendance given by

ISAAC KAY, *Marshal.*

N. B. The cash to be paid on the delivery of the goods.

[1] Rancocas river.

British vessels and cargo sold under Admiralty

Ancocas (Rancocas) Creek Anchorage

Insert from “A complete plan and map of part of the province of Pennsylvania East and West Jersey shewing the transactions of the royal army under the command of their excellencies Sr. Wm. Howe and Sr. Hy. Clinton. of the most Honorable Order of the Bath in marching from Elk River 1777 to the embarkation at Navesink 1778”. British Army Headquarters

Orders to All Vessels on the Delaware River [1]

Ordered by the subscriber commanding in Philadelphia, September 23, 1777.

I. That every decked vessel in the river Delaware, between Market-street wharf and Burlington, be, by the next tide of flood, taken up to Burlington, and put under the care of the naval officer commanding there. All such as are below Market-street wharf and fort Mifflin, to be taken down the river, and put under the care of the naval commanding officer there. All such as are found on the river after the above mentioned times, will be burned by boats and guards sent for that purpose. But all shallops, sloops, and flats employed in removing goods public or private from this city, or in supplying it with wood, are excepted in the above order.

II. All sloops, shallops and flats, not immediately employed, must remain in the stream, opposite Chestnut-street wharf, ready to proceed up or down the river, as the tide will permit, on any emergency.

III. Every boat, batteau, skew or other undecked vessel of every denomination between fort Mifflin and Burlington, the old and new ferries in Philadelphia excepted, must be immediately removed into the following creeks, Timber creek, Anncocus, and Burlington creeks, in the Jersies. All that are found afloat, or on shore, on the Pennsylvania side of the river, twenty-four hours after the publishing these orders, will be destroyed.

IV. All merchandize and provisions, brought into this city since Friday the nineteenth instant, must be immediately removed to some place of safety, and none brought in beyond what is immediately necessary for the use of the inhabitants; all others to be removed if time will permit, or destroyed; the expence of removing and rewarding such as give notice thereof, to be charged to the account of the owners.

V. All riots and unlawful assemblies are strictly prohibited. Such as offend will be immediately confined as enemies to the states.

Lewis Nicola, col. invalids.

1. *Pennsylvania Evening Post*, September 23, 1777.

Spirit and determination are reveled in words and deeds.

President Ronald Reagan

12 March 1982

Reference: Naval documents of the American Revolution / editor, William Bell Clark ; with a foreword by President President Ronald Reagan and an introd. by Ernest McNeill Eller. v.9

NJ Pine Barrens Maritime Cultural Landscape

Mount Holly - Head of Tide - North Branch Rancocas Creek

Rancocas Creek Water Trail - 146 Nautical Miles from the Delaware Capes

Where the Tides Join the Pine Barrens Western Outflow