Manatee River Oyster Habitat Restoration

Presented at OIMMP, May 10-11, 2022

Damon Moore, Restoration Ecologist

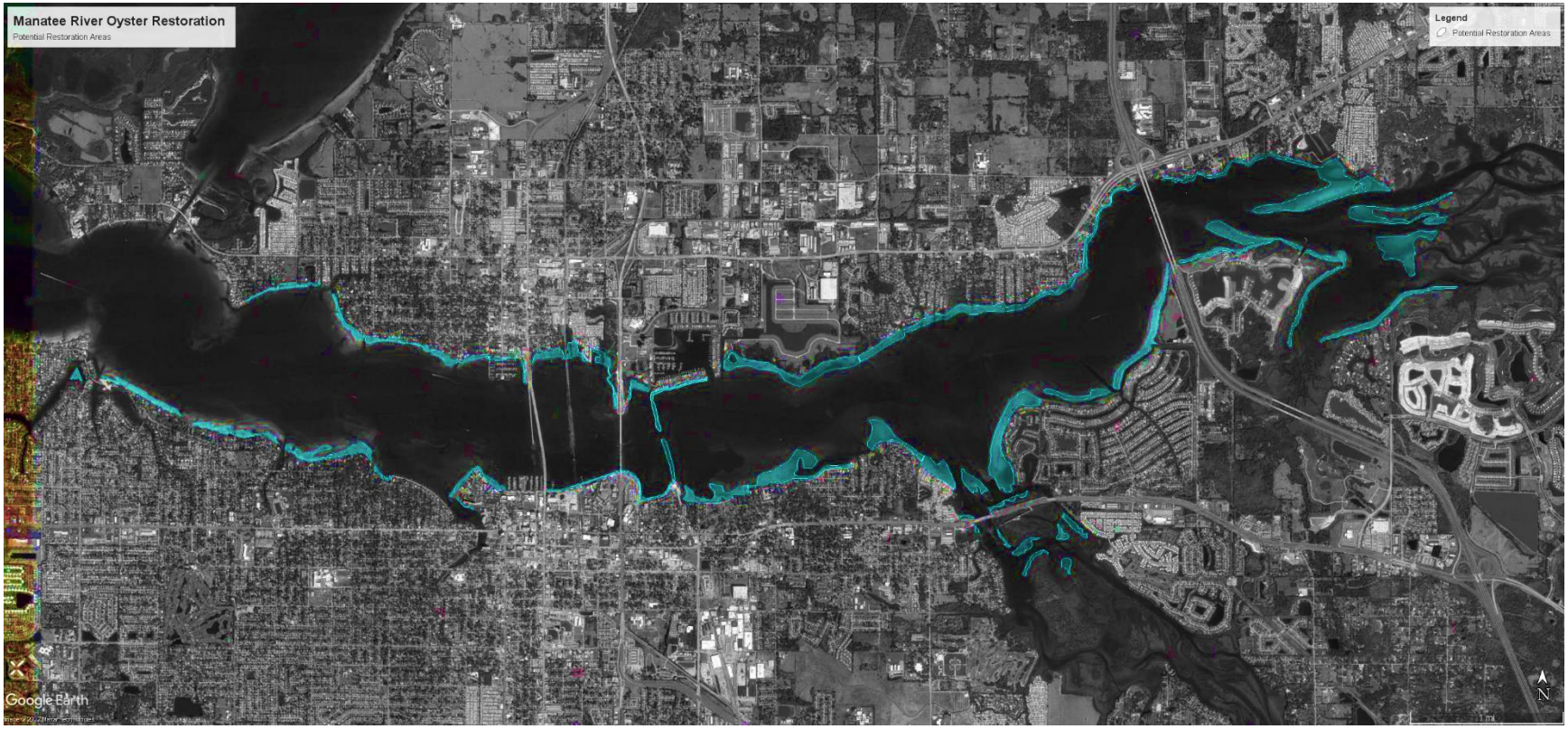
Manatee River Oyster Habitat Restoration Presentation Overview

- Who is doing this?
- What does this project consist of?
- How is this going to happen?
- When is this going to happen?
- Why?

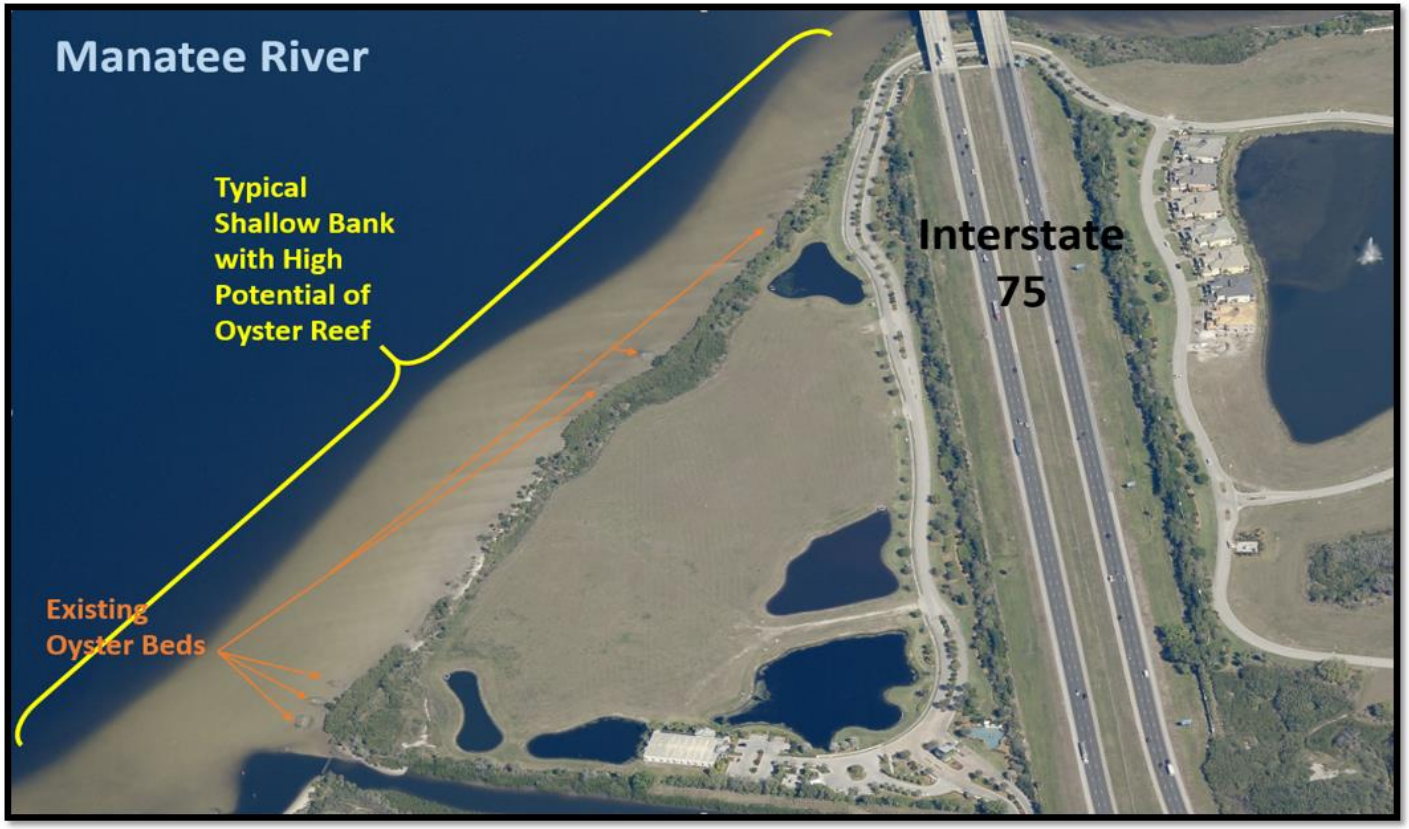
Who – Manatee County

- Manatee County, Board of County Commissioners
  - Parks and Natural Resources Department – Charlie Hunsicker, Director
    - Ecological and Marine Resource Division – Sherri Swanson, Division Manager
  - Funding to date:
    - $1.9 million via RESTORE Act Pot 3, State Expenditure Plan Project 18-1
      - Currently under RESTORE Council Review

What – Largescale oyster habitat restoration



What – Largescale oyster habitat restoration



Pictometry of area along south shore of Manatee River west of I-75. This is a typical large area with high potential for oyster restoration. (Manatee County GIS 2016)

What – Largescale oyster habitat restoration

2015 aerial shows the location of the area highlighted (Figure 1 Area) in context of large shallow sand areas with the same aerial signature. (Manatee County GIS 2016)

How – Survey sites and generate plans

How – Get input and approvals

How – Construct

How – Monitor

When – 2022 through 20??

MILESTONE	YEARS FROM SEP APPROVAL															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Preliminary design	■															
Final design & permitting		■	■													
Restoration/barge shelling				■	■	■			■	■						
Success monitoring			■				■	■			■	■		■	■	

Why – If you are here, you know why.

Why – TBEP Habitat Master Plan

Table ES-4
Summary of Recommended 2030 Targets and 2050 Goals

Habitat Type	Current Extent	Total Restoration Opportunity*	2030 Target	2050 Goal	Target Narrative and Restoration and Protection Rationale
Subtidal Habitats					
Hard Bottom	423 acres	N/A	>423 acres	>423 acres	Protect existing hard bottom; continue to identify new hard bottom area using proven mapping techniques
Artificial Reefs	166 acres	N/A	>166 acres	>166 acres	Protect existing artificial reefs; enhance habitat complexity where feasible; expand reef area to promote fish and wildlife benefits
Tidal Flats	16,220 acres	N/A	16,220 acres	16,220 acres	Identify and protect existing persistent tidal flats; assess restoration potential of other non-vegetated subtidal areas
Seagrasses	40,653 acres	14,131 acres	>40,000 acres	>40,000 acres	Protect existing seagrasses; establish new HMPU lower limit of 40,000 acres; assess restoration potential of non-vegetated subtidal areas
Oyster Bars	171 acres	I/D	221 acres	471 acres	2030: Protect existing oysters + restore 50 acres; increase target by 50 acres each out-decade; consider filtration rate to refine long-term goal; an oyster habitat suitability index (HSI) will inform opportunity space
Intertidal Habitats					
Living Shorelines	11.3 miles	LSSM	21.3 miles	56.3 miles	2030: Construct 1 mile of LS each year; includes privately owned seawalls; need better definition of opportunity areas; increase target to 1.5 & 2 miles per year for out decades
Total Intertidal	**20,353 acres**	**3,849 acres**	**21,353 acres**	**23,803 acres**	**2030: Protect existing intertidal mosaic + restore 1,000 acres (based on hydric soils); increase target by 150 acres each out-decade; includes the mosaic of mangrove, salt barren, and salt marsh habitats**
Mangrove Forests	15,300 acres	2,757 acres	>15,300 acres	>15,300 acres	Protect existing mangrove forests; restore opportunistically within the intertidal mosaic
Salt Barrens	496 acres		546 acres	796 acres	2030: Protect existing salt barrens + restore 50 acres; increase target by 50 acres per out decade
Salt Marshes (low salinity *Juncus*)	4,557 acres	1,092 acres	4,807 acres	5,457 acres	2030: Protect existing low salinity salt marshes + restore 250 acres; increase target by 50 acres each out-decade; *significant land acquisition and/or Public Private Partnerships required to achieve this 2030 target and 2050 goal*
Tidal Tributaries	387 miles	I/D	4 miles	18 miles	Inventory mapped tidal tributaries and assess/rank restoration potential; restore ~4 miles (1%) of urban tidal creek habitat where feasible; increase target by 2 miles per out decade

N/A – Not Applicable; I/D – Insufficient Data; LSSM – Living Shoreline Suitability Model; JU – Potential *Juncus* Marsh Opportunity
*Does not account for lands neither currently protected nor currently under consideration for acquisition

Why – History

1793 – Letter from Vicente Folch to “Most Excellent Senor Don Luis De Las Cabas

FOLCH TO LAS CASAS

December 17, 1793 [144]

Proceeding farther up the bay, one finds the river called by the Indians, Tala Chakpu, and by the Spaniards, River of the Oysters on account of the many of these which block its entrance.

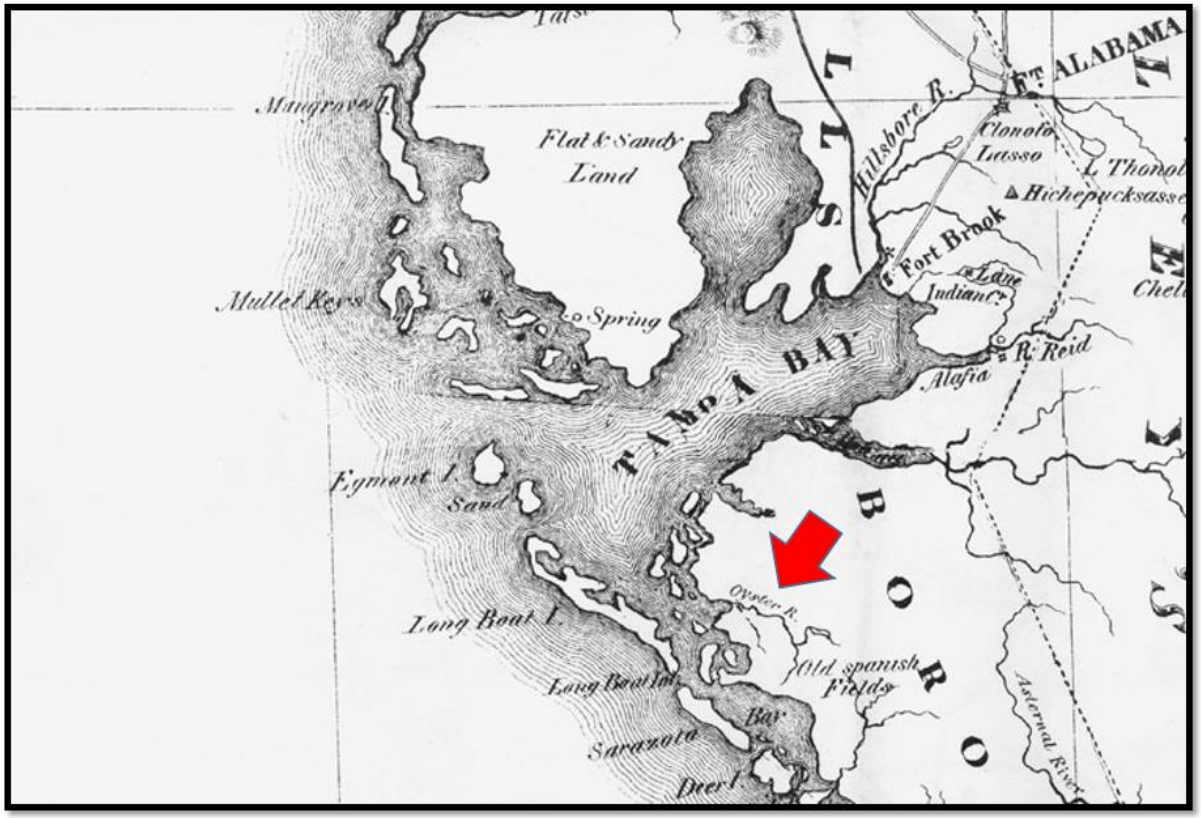
Here it has five feet of water, and one-half league from its mouth is a small stream which flows into the river.

Entering it for about fifty *varas*, one finds a spring of delicious water, which issues from a rock through an orifice eighteen to twenty inches in diameter.

This is the only place I have found of all that I have seen, suitable for a settlement.

Why – History

1837 – J.L. Williams Map



Cut from J.L. William 1837 Map. Note Manatee River is referred to as "Oyster R."

Why – History

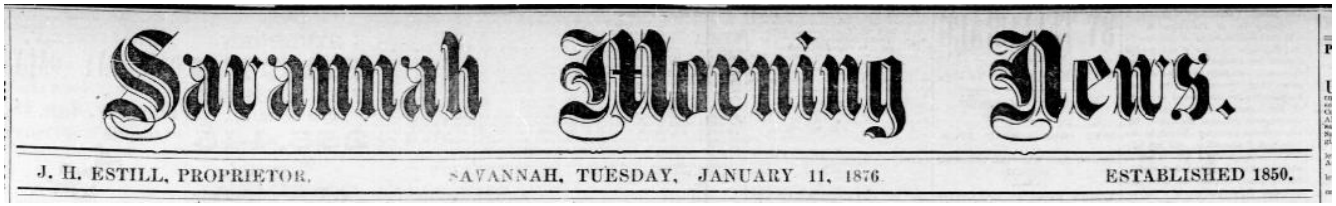
1876 to 1897 – A. Smeltz, oysters everywhere to oysters depleted

Bulletin of the United States Fish Commission. "The Oyster-Bars of the West Coast of Florida: Their depletion and restoration. By: A Smeltz. Vol. XVII. 1897. Washington, D. C. U.S.G.P.O. 1898

"In 1876 I came to the west coast of Florida from one of the largest oyster growing sections in the world, Chesapeake Bay. I landed at Cedar Keys and at once became interested in the oyster beds of Florida. After spending three weeks at Cedar Keys, I cruised southward, examining the most prominent oyster beds, such as Crystal River Bay, the bars of the Cootie region, Clearwater Harbor, Point Pinellas, Hillsboro Bay, Old Tampa Bay, and on to a hamlet I found at the mouth of the Hillsboro River known as Tampa; thence I continued southward to the Alafia River, Big and Little Manatee, Sarasota, Boca Grande oyster bars and 100 miles farther south, and on every hand I found the same condition - oysters, oysters everywhere. How little did I then think that in less than twenty five years every one of these bars would be partially or totally depleted.

Why – History

1876 – Savannah Morning News, Oyster trade with semi-weekly shipments out of Manatee



Savannah Morning News.

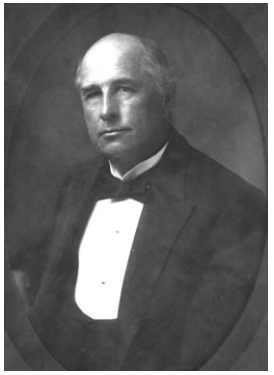
J. H. ESTILL, PROPRIETOR. SAVANNAH, TUESDAY, JANUARY 11, 1876 ESTABLISHED 1850.

CEDAR KEYS AND SURROUNDING COUNTRY.

A weekly line of steamships to New Orleans and Havana, and a semi-weekly line of steamers to Tampa, Manatee and Key West, with the oyster and fish trade, combine to make Cedar Keys a lively place during the winter season. The distance to Fernandina, on the Atlantic coast, is 155 miles, which is traversed by the A., G. & W. I. T. Company's Railroad. Levy county, of which Cedar Keys is the most important town (having a population of about eight hundred), contains some of the best hammock lands in Florida. That it is desirably situated is seen in the fact that it is nearly surrounded by Hernando, Marion and Alachua, three of the finest counties in the State. LaFayette county, on the opposite side of the Suwan-

Why – History

1897 – John Ruge, Great folly, Florida destroying natural wealth in every direction.



THE OYSTERS AND OYSTER-BEDS OF FLORIDA.

By JOHN G. RUGE.

F. C. B. 1897—19

290 BULLETIN OF THE UNITED STATES FISH COMMISSION.

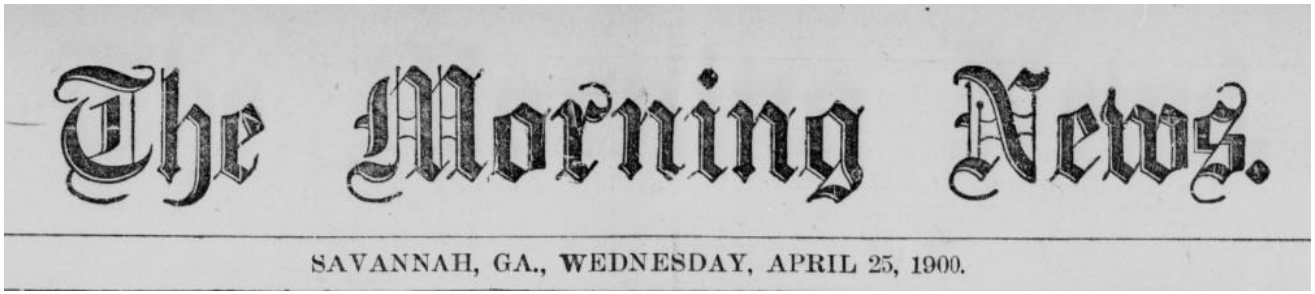
Such are the avarice and cupidity of man that through all these thousands of years he has not learned that it is the greatest folly to attempt to live on Nature's bank account without providing some return for the drafts made. All America, and Florida especially, with all the experience of the past to profit by, is destroying her natural wealth in every direction.

294 BULLETIN OF THE UNITED STATES FISH COMMISSION.

time started other canning plants. Other canneries were built at Apalachicola, but not continued. A small plant was built at St. Andrews Bay, but never operated. Recently a plant started on Manatee River at Gulf City, and there are two at or near Fernandina. Canned oysters are not only found in the Tropics, but explorers have

Why – History

1900– Savannah Morning News, Manatee County gets called out.



The Morning News.

SAVANNAH, GA., WEDNESDAY, APRIL 25, 1900.

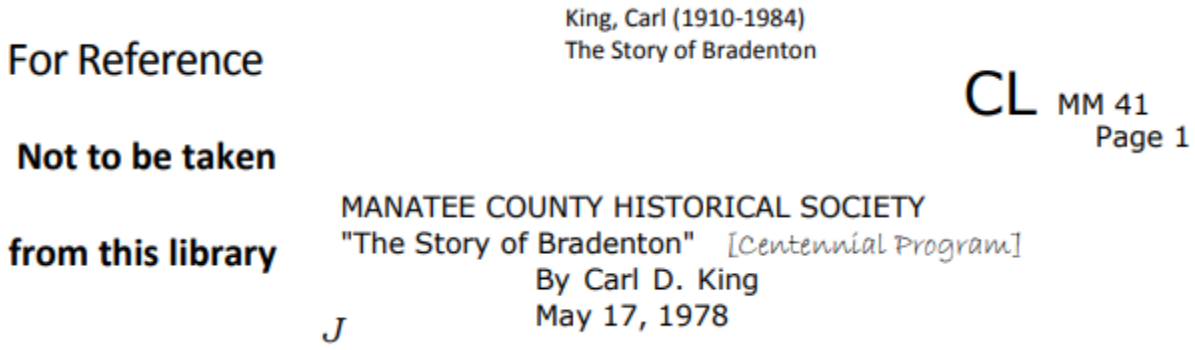
will in all probability be the Democratic nominee for Governor. Others who have hornets in their hats had just as well stand aside and let the Beggs procession pass.

Manatee Journal: Oyster culture should receive large attention by property owners on the waters of Manatee county. The natural beds have been destroyed, and for several years the supply must be very limited.

News comes from Cleveland, Tenn., of the death of Mr. E. H. Cheney, for years a resident of Orlando, but who sold his home in the eastern portion of that town and removed to Cleveland about a month ago. Mr. Cheney was quite well known at Orlando. He was a prominent G. A. R. man.

Why – History

Early 1900s– John Glazier, Manatee Avenue paved with live oysters…most odiferous street in the whole United States



For Reference

Not to be taken

from this library

King, Carl (1910-1984)
The Story of Bradenton

CL MM 41
Page 1

MANATEE COUNTY HISTORICAL SOCIETY
"The Story of Bradenton" [Centennial Program]
By Carl D. King
May 17, 1978

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John Glazier remembered that Manatee Avenue was originally a sandy road which was eventually paved with live oyster shells which were taken from the river. Fie said that for several months after this paving the oyster meat rotted and Manatee Avenue was the most odiferous street in the whole United States.

Why – History

Early 1931-1962 – Bradenton Dredging and Shell Company removes 650,000 cubic yards of shell from Manatee River.

TABLE 6. KNOWN PRODUCTION HISTORY OF LONG INACTIVE SHELL LEASE COMPANIES

LESSEE	LEASE NO.	INCLUSIVE DATES OF LEASE	REPLACED BY	ROYALTY RATE	YEAR	REPORTED PRODUCTION (cu yd)	ROYALTY PAID
Bradenton Dredging & Shell Company	36	Oct. 23, 1931 to Sept. 30, 1936	144	5¢/cu yd	1931	unknown	unknown
					1932	unknown	$ 147.25[1]
					1933	unknown	182.00[1]
					1934	unknown	297.50[1]
					1935	unknown	127.70[1]
					1936	0	0[2]
					Totals	unknown	$ 754.45
	144	Sept. 30, 1936 to Sept. 30, 1939	61	5¢/cu yd	1936	7,757	387.85[2]
					1937	16,903	845.15
					1938	17,930	896.48
					1939	5,788	289.40
					Totals	48,378	$ 2,418.88
	61	Sept. 30, 1939 to Sept. 30, 1940, extended to Sept. 30, 1961	1585 applied for	7.5¢/cu yd	1939	4,856	364.20
					1940	6,280	497.10
					1941	1,600	120.00
					1942	1,467	110.00[3]
					1943	unknown	110.00[3]
					1944	unknown	110.00[3]
				10¢/cu yd	1945	2,260	226.00
					1946	13,370	1,337.00
					1947	22,600	2,260.00
					1948	9,320	932.00
					1949	4,032	403.00
					1950	9,406	940.60
					1951	7,970	797.00
					1952	8,990	899.00
					1953	17,623	1,762.30
					1954	35,521	3,552.10
					1955	40,592	4,059.22
					1956	36,165	3,616.50
					1957	28,992	2,899.20
					1958	268,974	25,671.90
					1959	30,887.1	3,088.71
					1960	24,821.8	2,482.18
					1961	11,978.6	1,197.06
					Totals	587,705.5	$57,215.27
	1585 Not issued	———	———	15¢/cu yd	1961	11,783	1,767.45
					1962	3,387	508.05
					Totals	15,170	$ 2,275.50
					Grand Totals	651,253.5	$62,664.10

Lease number 1585 was applied for on July 12, 1961. The application was assigned number 1585 and the lease was approved by the Trustees on January 9, 1962. The lease was never issued and the application was withdrawn on March 10, 1962, by the company. Bradenton Dredging and Shell Company abandoned shell dredging after over 30 years operating in the Manatee River, Manatee County.

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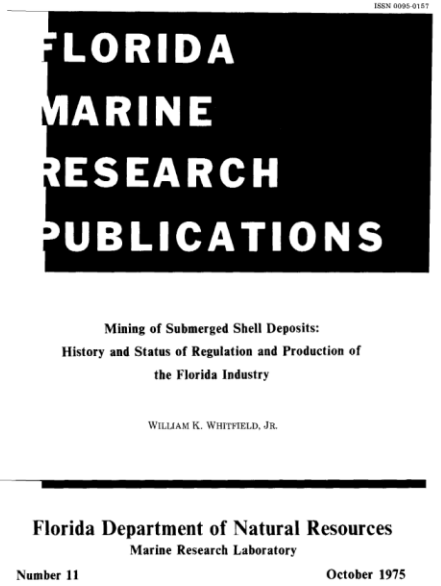

Looking forward to big things in the next decade!

Thanks for listening.

Damon Moore
Restoration Ecologist
dmoore@esassoc.com
941.567.8738