

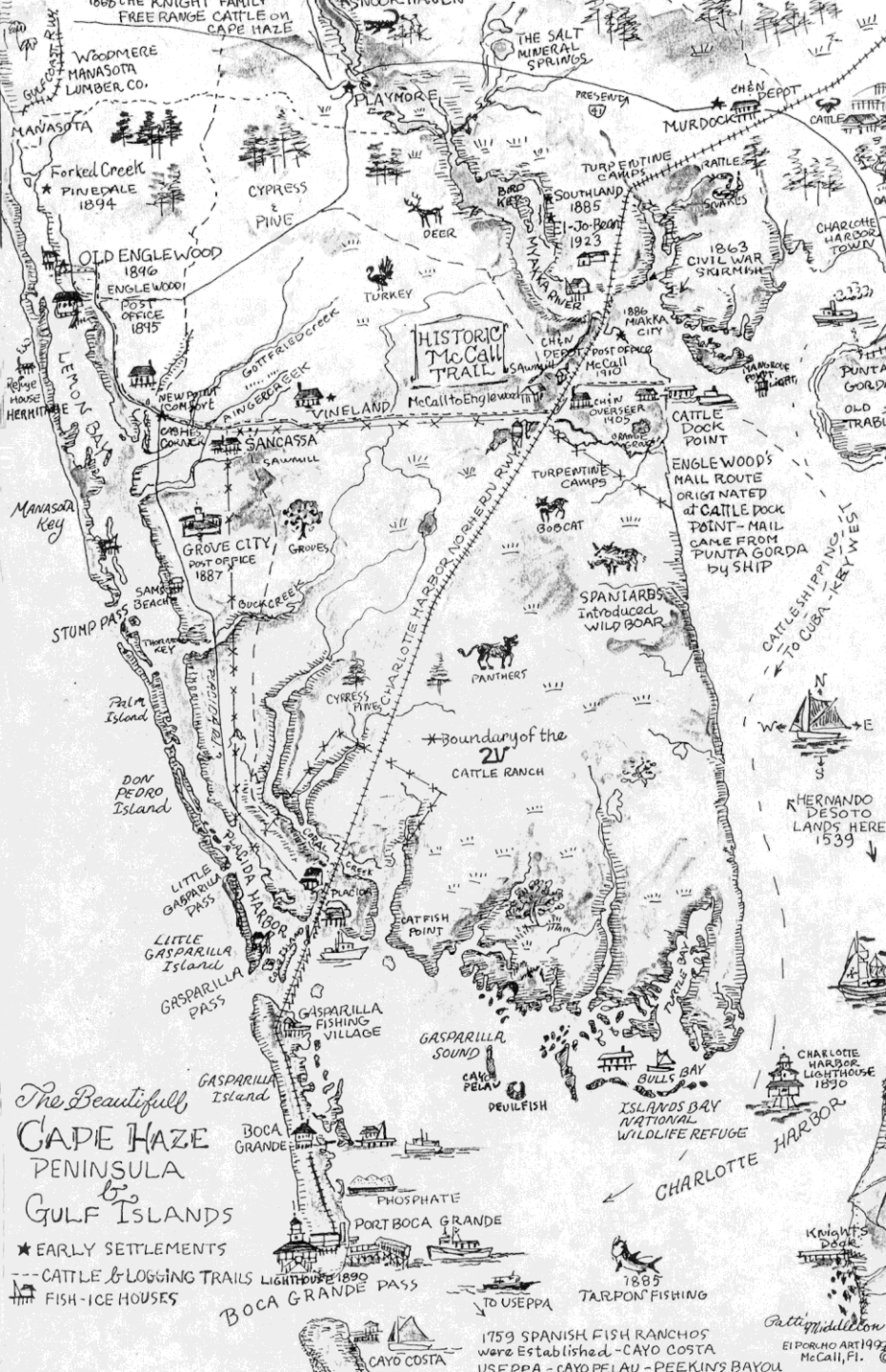
CHARLOTTE COUNTY RAILROAD TRESTLES / FISHING PIERS: HISTORICAL BACKGROUND AND CONDITION UPDATE

PRESENTED TO:
CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS
AT THE
REGULAR DECEMBER 13, 2011 MEETING



BACKGROUND

- The discovery of phosphate rock in the Peace River and tarpon fishing is accredited for the development of the town of Boca Grande in 1885.
- In the beginning, phosphate was mined in the river and transported by small barges to Port Boca Grande. There it was loaded on to schooners and distributed worldwide.
- A Boston company called American Agricultural Chemical Company (AACCo) owned much of the land in the Peace River valley being mined for phosphate.
- By 1904, the company had decided to build a rail line to expedite shipping to Boca Grande.



- In February of 1905, an AACCo official, an engineer from the US Army Corps and dozens of laborers landed on the island and began surveying and construction of the railroad.
- The Charlotte Harbor & Northern (CH&N) Railway, a subsidiary of AACCo, was completed on June 30, 1907.
- The CH&N not only brought phosphate and supplies to Gasparilla Island; it also brought wealthy people from the north.

- By 1910 Boca Grande Pass was already famous for its unequalled fishing.
- AACCo saw the potential Gasparilla Island beyond the port and began to develop the village of Boca Grande.
- By 1911, AACCo had completed the construction of the 1,000-foot long phosphate dock at the south end of the island.



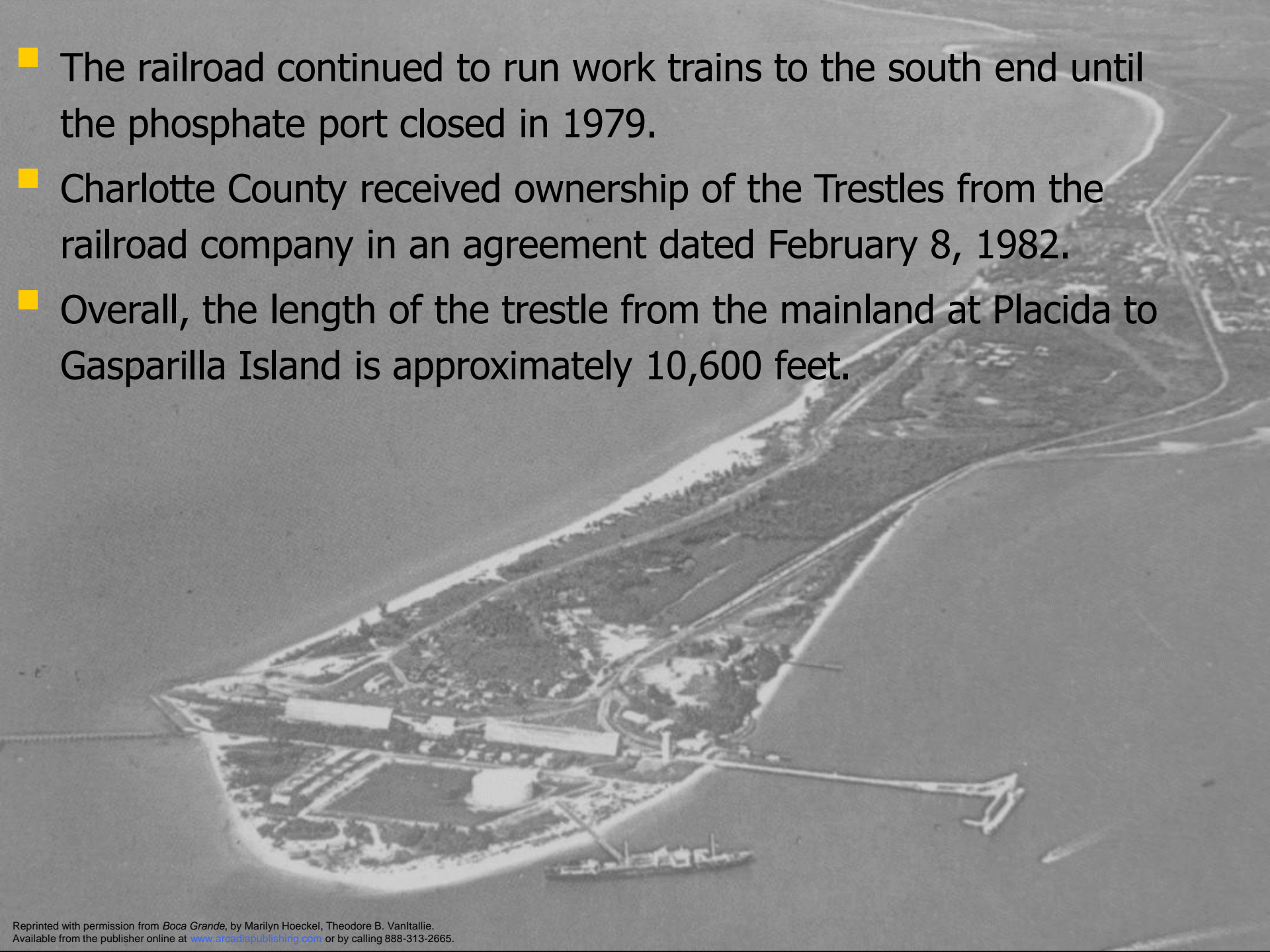
- In 1928 the Seaboard Railroad acquired the CH&N and leased the railroad for 999 years.
- During World War II tons of ammunition and supplies were transported on the railways and loaded onto British and Allied ships.
- Underwater mines were assembled in Placida, loaded onto ships at the port and used to defend against German U-boats patrolling the Gulf of Mexico.
- Commercial activities at the port peaked in the 1960's and early 1970's.
- In 1969, the port was ranked fourth in the state for the tonnage of materials handled.





- Construction of the Boca Grande Causeway took place from 1952-1958 to replace a car and pedestrian ferry service.
- The railroad continued to bring winter visitors to the island until completion of the road causeway in 1958.
- Rail passenger service to Boca Grande ended on April 12, 1959.

- The railroad continued to run work trains to the south end until the phosphate port closed in 1979.
- Charlotte County received ownership of the Trestles from the railroad company in an agreement dated February 8, 1982.
- Overall, the length of the trestle from the mainland at Placida to Gasparilla Island is approximately 10,600 feet.



Placida Fishing Pier

650 feet long



Fishing Piers were constructed on top of trestles by County in 1982

Boca Grande Fishing Pier

400 feet long



- The Intracoastal Waterway channel crosses the trestle near the end of the Placida Pier.
- The concrete bridge-tender's watchtower is still intact; however the steel bascule span was removed in the mid-1980's and sold.





- The remaining steel swing bridge span near the center of the sound is permanently open to allow boaters access through Gasparilla Pass.



OBSERVATIONS

- A site visit to the Boca Grande Causeway railroad trestle was conducted on Friday October 14th by WCIND's Chuck Listowski, Charlotte County Parks and Natural Resources Manager, Andy Stevens, and Mark Kincaid from Coastal Engineering Consultants.
- The causeway was accessed by boat and its overall condition was examined from the north end at the Placida Fishing Pier to the Boca Grande Fishing Pier to the south.
- The purpose of this trip was to develop a plan for addressing the deteriorated conditions of the trestle structures in regards to public safety, historical preservation, public fishing access and environmental concerns.



- From this cursory inspection, it was apparent the structure was in disrepair.
- Public safety being the primary concern, not because of the structure's inability to carry the pedestrian loads on the fishing piers, but because of the severely deteriorated timber components found missing or about to break free from the structure.



- Below water, marine borers have severely infested any accessible exposed timber.
- The timber piles were, at some point, repaired with concrete jackets.
- Piles with concrete jackets intact may have service life remaining.

- The concrete jackets prevented the borers from causing further damage; however, over 50 percent of the jackets have failed and exposed the timber, resulting in severe loss of section and/or failure.



- A significant number of piles were observed to be missing.

- Other piles were observed consumed by borers, severed in the tidal zone and precariously suspended from the pile cap beams.



- The next storm event may cause the deteriorated piles to break free and be set adrift.





- Above water the timbers were in fair condition for the structure's age.
- Weathering and fungal decay were common deficiencies found throughout the superstructure.
- Steel fasteners connecting the members were heavily corroded.



- Collapse of a 100-foot long section of the trestle is imminent. This section is located between the Gasparilla Channel and the south spoil island.





One hundred percent of the piles have failed and the longitudinal stringers and rail ties were unsupported and severely sagging in this section.





Unprotected piles have been completely consumed by marine borers in the tidal zone

Piles and cap beam broken away from the trestle and found resting on bottom in a seagrass bed



- Timber bulkheads constructed to contain the spoil and prevent erosion were in poor condition and/or missing.
- Deterioration of the bulkhead was more advanced than the trestle and much of the timber elements have been washed away.





Significant erosion of the soil protecting the trestle along the causeway's spoil island was observed.

Deterioration of the bulkhead was more advanced than the trestle and much of the timber elements have been washed away.

Section of bulkhead with vertical timbers remaining



Section of bulkhead missing vertical timbers





The trestle was designed to carry live loads from railroad cars filled to capacity with phosphate. Pedestrian loads on the structures in the current use as fishing piers may be satisfied, even in its state of advanced deterioration.



RECOMMENDATIONS

- The 100-foot long collapsing section of trestle should be condemned as soon as practical. All materials including pile stubs should be removed from the sound.
- Remove all significantly deteriorated piles and timber members no longer contributing to the stability of the trestle structure.
- Inspect the remaining piles and concrete jackets supporting the fishing piers. Ensure that there are adequate piles (minimum of two) properly spaced to support each pile bent.
- Repair all pile/jacket deficiencies found during inspection to prevent future marine borer infestation. To reduce costs, repairs could concentrate on the minimum number of piles at each bent. For example, each pile bent consists of six piles, but only the two outboard piles are needed for support. The other four piles would not necessarily need to be repaired.

RECOMMENDATIONS

- Consider historical value of trestle and potential future maintenance costs. Evaluate removing additional sections of the trestle to reduce future liability and maintenance costs.
- Investigate potential salvage value of steel swing bridge structure as a potential way to offset demolition and future maintenance expenses.
- Investigate potential salvage value of creosote treated timber pile caps, stringers and rail ties as a potential way to offset demolition and future maintenance expenses.