

59<sup>TH</sup> FSBPA ANNUAL CONFERENCE

***THE COLLIER COUNTY BEACH (&  
INLET) MANAGEMENT PROGRAM  
OVER TWO DECADES***

***Gary McAlpin, P.E., CZM Director, Collier County, FL***

***Tom Pierro, P.E., D.CE, Director, CBI, Boca Raton, FL***

***Brett Moore, P.E., D.CE, President, H&M Engineers, Naples, FL***





# *Collier County Inlets*

*Wiggins Pass*

*Clam Pass*

*Doctors Pass*

*Gordon Pass*

*Capri Pass*

*Caxambas Pass*

*Collier  
County*

*Naples*

*Gulf of  
Mexico*



*Marco  
Island*

# Wiggins Pass

*Wiggins Pass* →

*Collier  
County*

*Gulf of  
Mexico*



*Naples*

*Clam Pass* →



# Wiggins Pass – Circa 1960





# *Wiggins Pass – 2007*





# *Wiggins Pass*

**2013 Design**

*North Nearshore Disposal Area*

*Ebb Shoal Disposal Area*  
*Dredge Template*

*South Nearshore Disposal Area*

*Gulf of Mexico*

*Barefoot Beach  
Preserve County  
Park*

*Delnor-Wiggins  
State Park*

N





# *Wiggins Pass - August 24, 2016*





# *Clam Pass*



*Wiggins Pass* →

*Collier  
County*

*Gulf of  
Mexico*

*Naples*

*Clam Pass* →



# *Clam Pass – December 29, 1952*





# Clam Pass – NRPA

## Clam Bay Natural Resource Protection Area

— The Benthic Habitat Study Area of the Clam Bay Estuarine Complex. Clam Bay Natural Resource Protection Area (NRPA) Benthic Habitat Assessment, Worley and Schmid 2010.



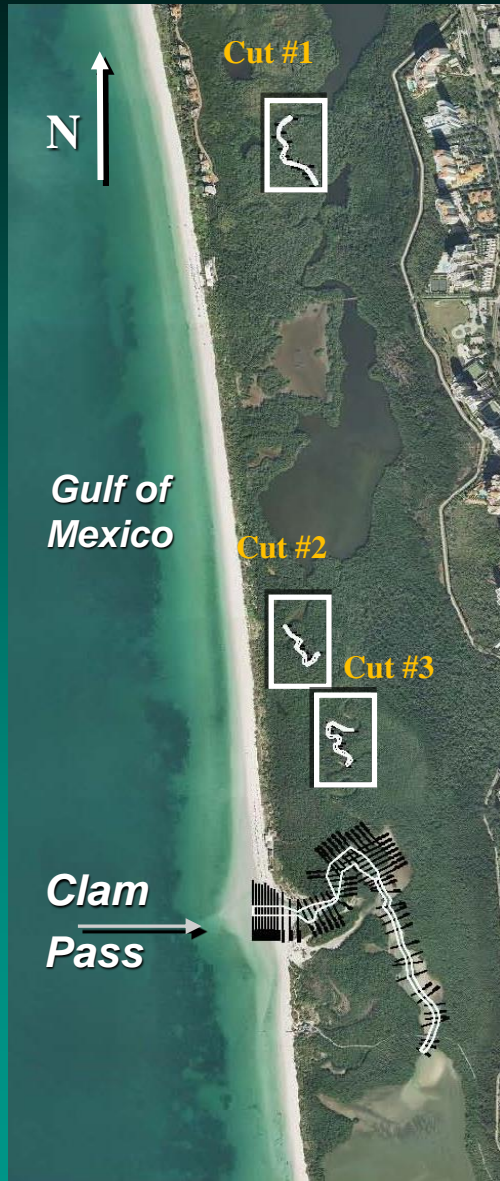


# *Clam Pass – March 2007*





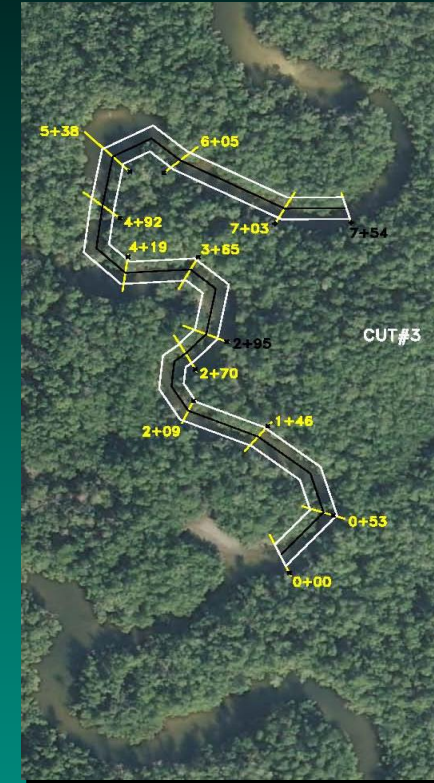
# Clam Pass – 1999 Dredge Plan



Cut #1



Cut #2



Cut #3

## 1998 Clam Bay Management Plan

- Dredge Flood Shoal Region
- Dredge Tributary Cuts



# *Clam Pass – Pre-Dredge 1998*



*Date of Photo August 16, 1998*



# *Clam Pass – Dredging 1999*



*Gulf of  
Mexico*



# *Clam Pass – Post Dredging 2000*



*Gulf of  
Mexico*

*Date of Photo July 11, 2000*



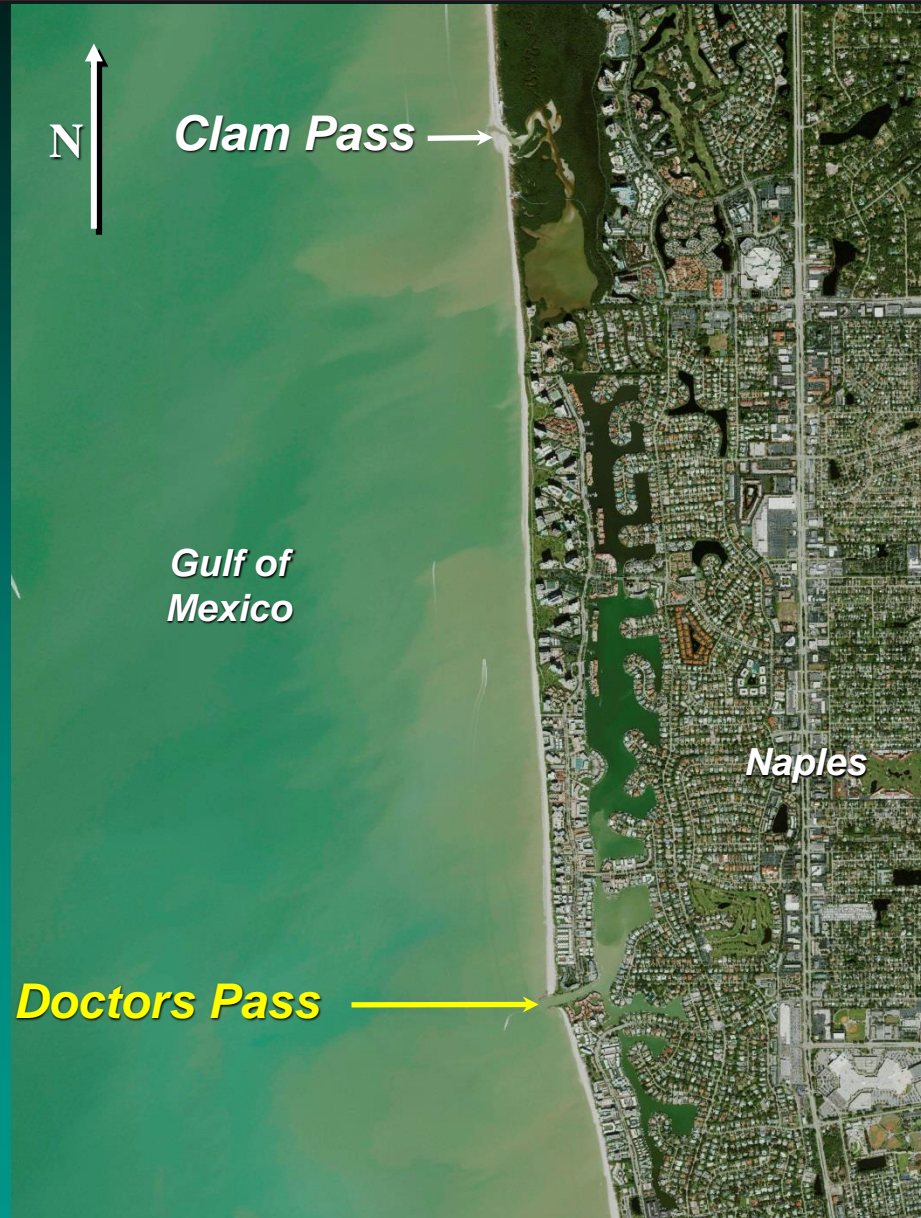
# *Clam Pass – August 2016*



Gulf of  
Mexico



# *Doctors Pass*



# *Doctors Pass – 1958*



*Gulf of  
Mexico*

*Photograph courtesy of Art Ullmann of Naples*



# *Doctors Pass – Circa 1960*

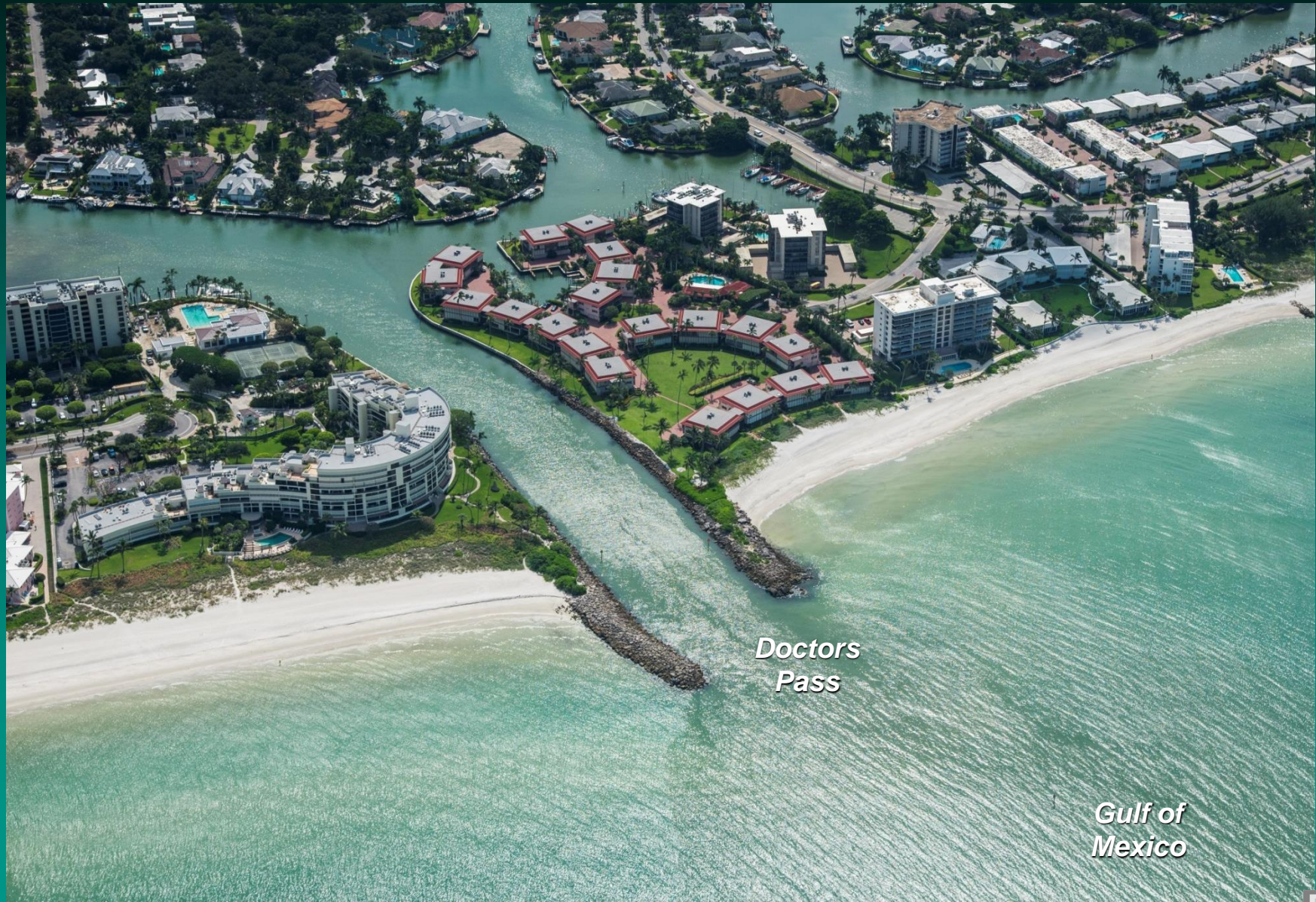


*Doctors  
Pass*

*Photograph courtesy of the Naples News*



# *Doctors Pass – August 2016*

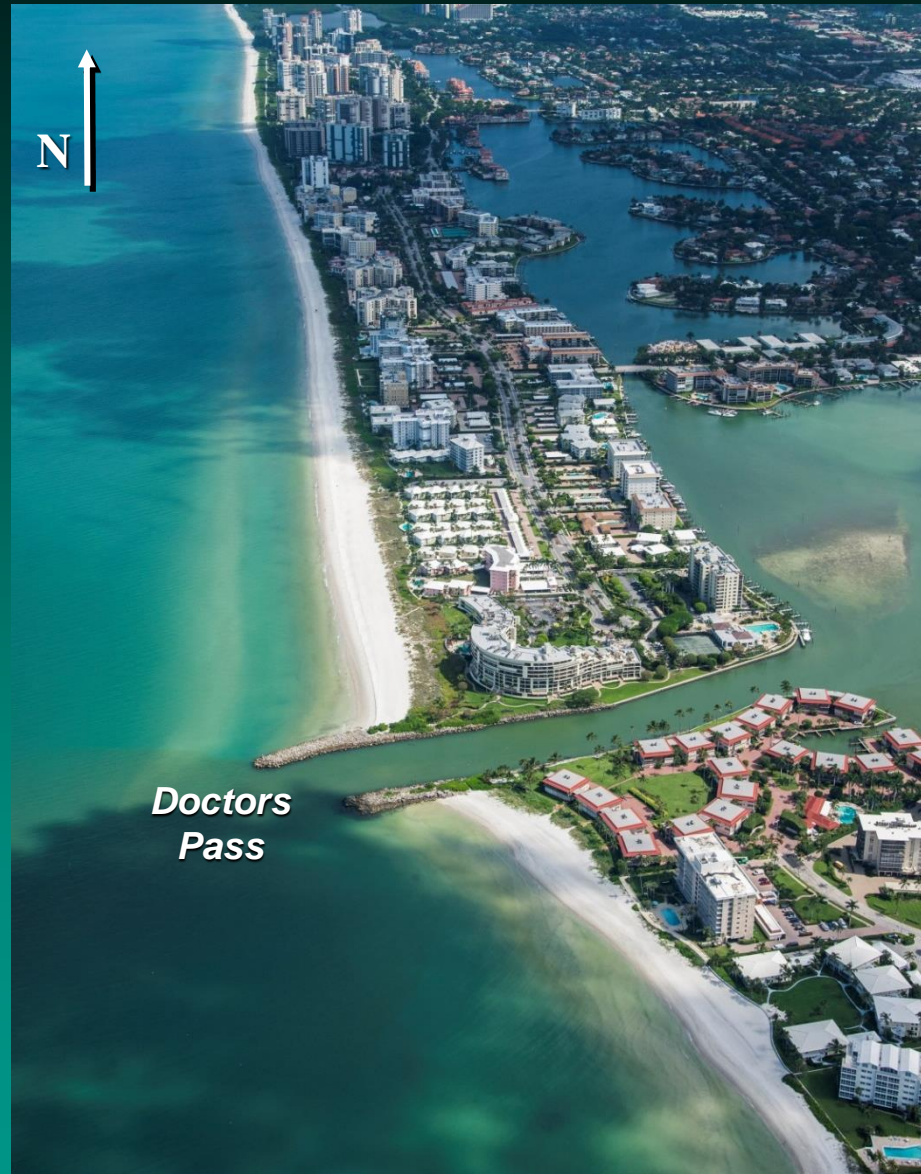


*Doctors  
Pass*

*Gulf of  
Mexico*



# *Doctors Pass – August 2016*



# *Gordon Pass*





# *Gordon Pass – 1950's*

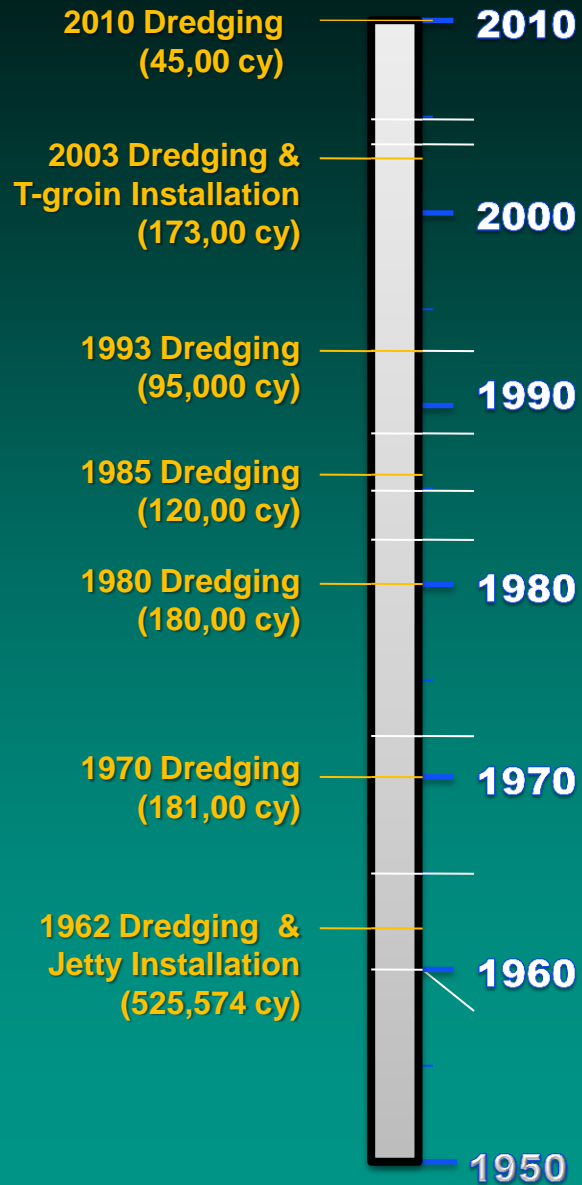


# *Gordon Pass - 1962*





# Gordon Pass Evolution



# *Big Marco/Capri Pass*



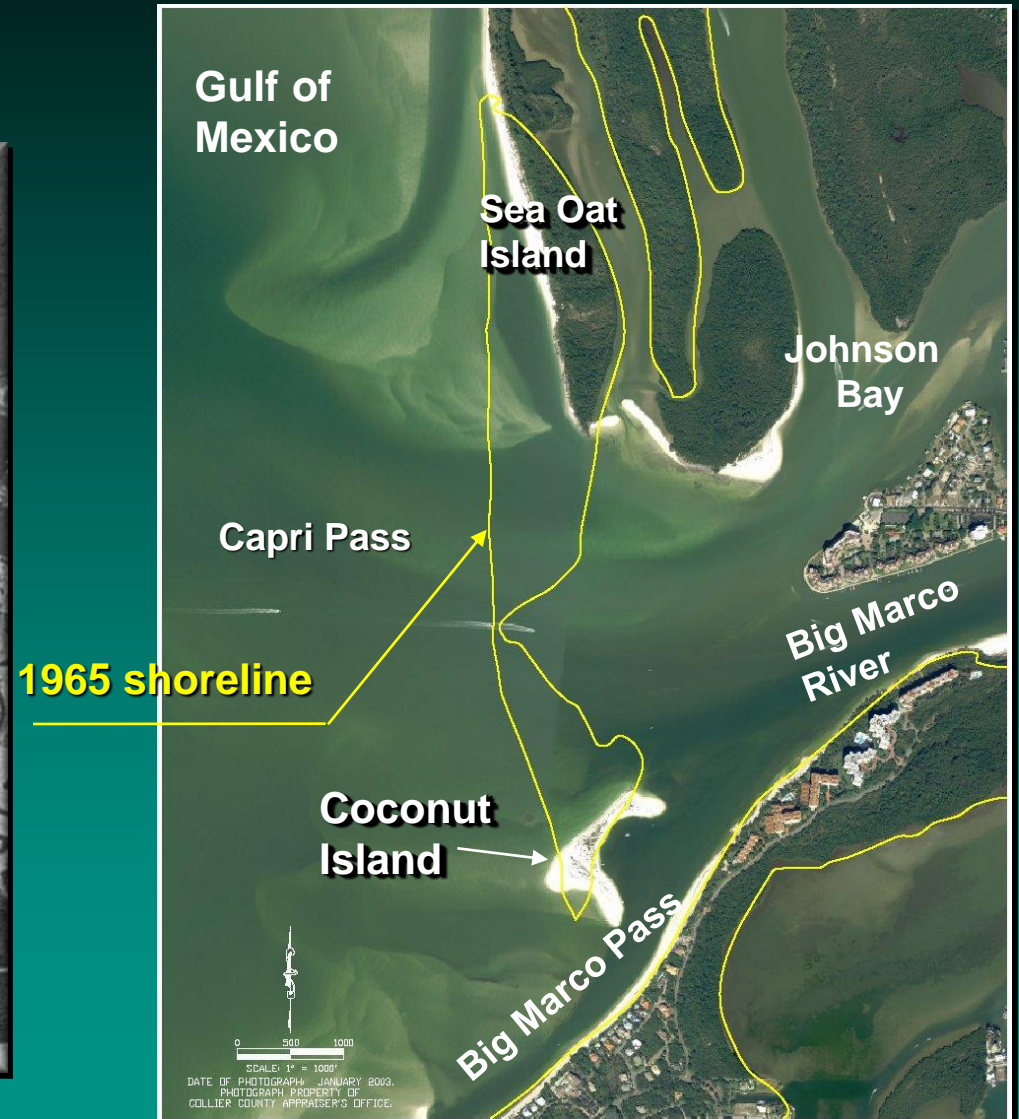


# *Big Marco/Capri Pass Background*

## Capri Pass Evolution



**Date of Aerial 1969**



**Date of Aerial 2003**



# Big Marco/Capri Pass Dredging

(a) 1991 Marco Beach  
Restoration Project

(b) Hideaway Beach  
Restoration 2005

(c) Hideaway Beach  
Restoration 2010

(d) Hideaway Beach and  
Central Marco 2016

Big Marco Pass  
CWA

Capri Pass

Hideaway Beach Project



Date of Photo  
2016

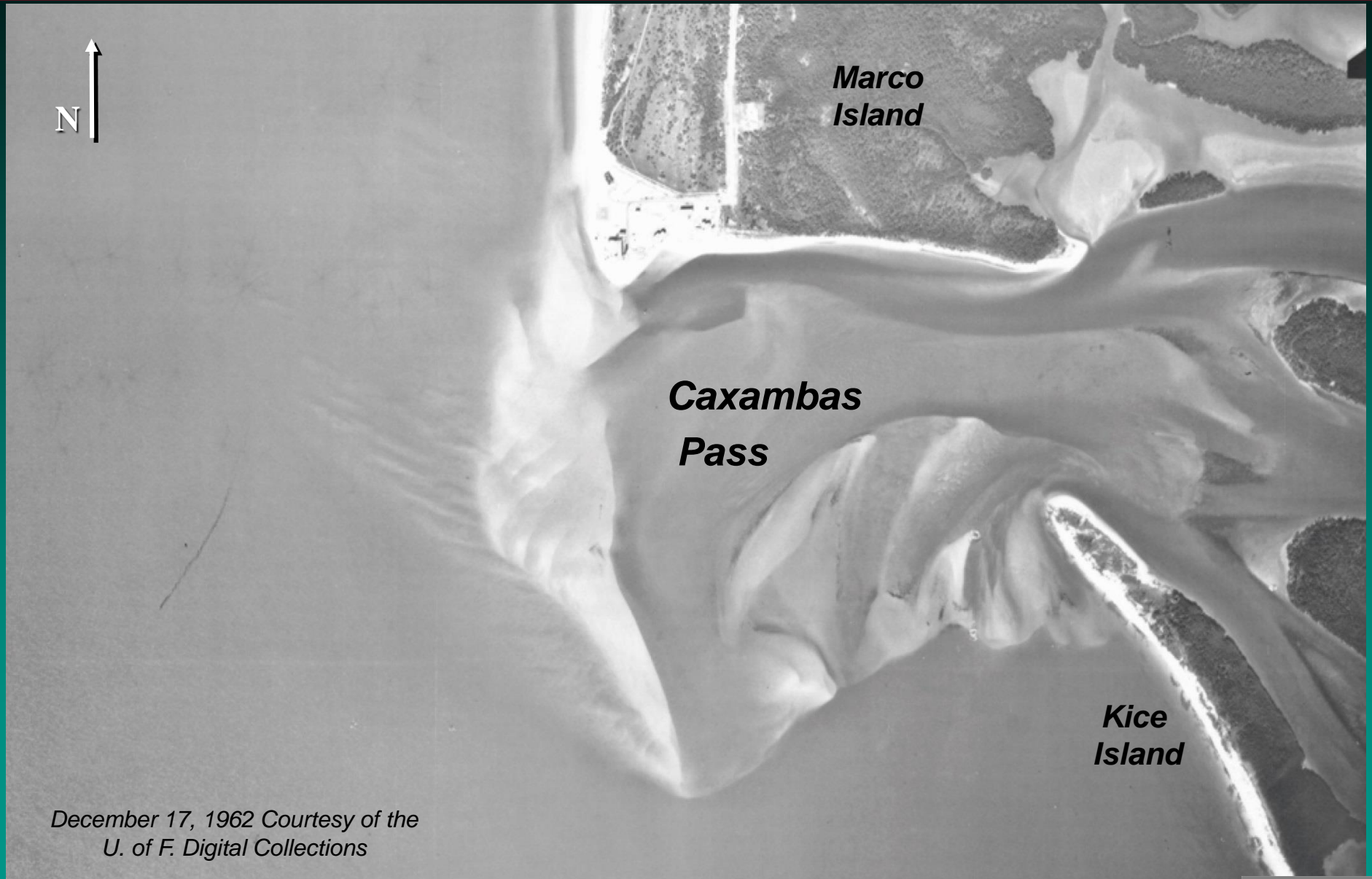




# *Caxambas Pass*



# ***Caxambas Pass - 1962***





# *Caxambas Pass – September 6, 1992*



**1990 Marco Island Beach  
Restoration Project**

**575,000 cy along South  
Marco Island Segment**

**September 6, 1992 Courtesy of the  
University of Florida Digital Collections**

# *Caxambas Pass South Marco – May 2016*





# Caxambas Pass





# *Caxambas Pass – May 24, 2016*





# Marco Island Monitoring and Sand Placement

## Permitted Sand Placement and Monitoring

 Collier Creek Dredging Sand Placement Area

 Hideaway Beach Renourishment Project

 Marco Island Beach Regrade Project

 South Marco Renourishment Project

 Monitoring Area by City of Marco and Collier County

Hideaway Beach Renourishment Project

Collier Creek Dredging

Marco Island Beach Regrade Project

South Marco Renourishment Project

Caxambas Pass

Kice Island




# *Annualized Inlet Dredging Wiggins to Gordon Pass*

1. Wiggins Pass (2000 – 2005)	23,000 cy/yr
2. Clam Pass (1999 – 2016)	4,000 cy/yr
3. Doctors Pass (2005 – 2013)	10,000 cy/yr
4. Gordon Pass (2003 – 2016)	16,000 cy/yr
<b>Total: North Collier – Naples:</b>	<b>53,000 cy/yr</b>
	<b>530,000 cy/10 yrs</b>



# Collier County Monitoring and Sand Placement

## Permitted Sand Placement and Monitoring

 **Collier Beach  
Renourishment Project  
(Vanderbilt, Pelican  
Bay, Park Shore, and  
Naples Beaches).**

 **Monitoring Area**

Vanderbilt

Pelican Bay

Park Shore




Naples Beach





# Collier County Beach & Inlet Program Management

## Permitted Sand Placement and Monitoring

-  **Wiggins Pass Dredging**  
**Clam Pass Dredging**  
**Doctors Pass Dredging**
-  **Collier Beach Renourishment Project**  
**(Vanderbilt, Pelican Bay, Park Shore, and Naples Beaches).**
-  **Monitoring Area**

Wiggins Pass

Vanderbilt

Pelican Bay

Clam Pass

Park Shore

Doctors Pass

Naples Beach

Gordon Pass

