

Porpoise Point Shoreline Stabilization Project

Community Meeting
March 31, 2025

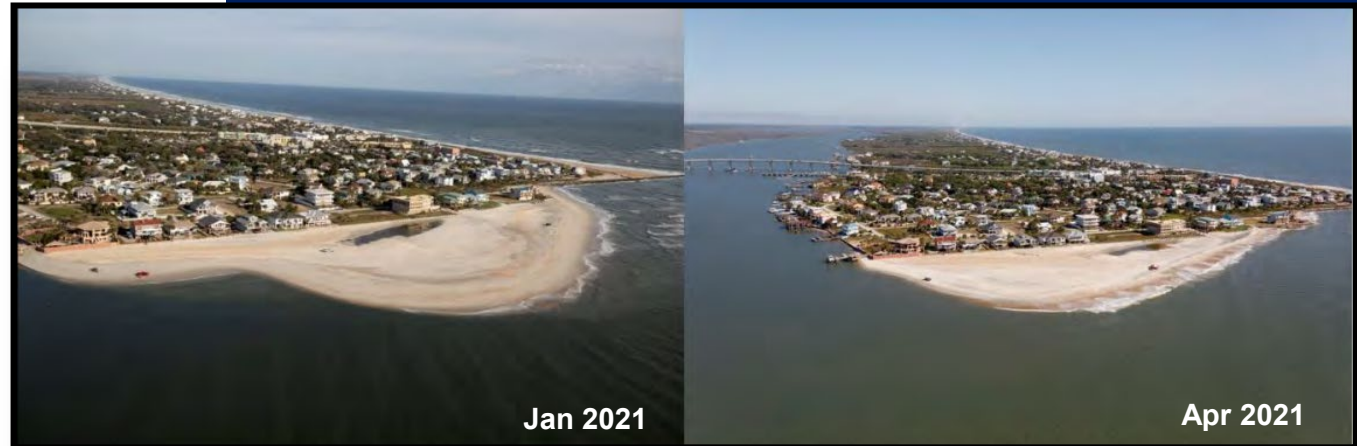


MEETING AGENDA

- **Introductions**
- **Background**
- **USACE Study**
- **FDEM/County Study**
- **Analysis**
- **Design**
- **Questions**

Background

- Porpoise Point is located on the northern shoreline of the St. Augustine Inlet.
- Hurricanes and nor'easters have caused major erosion and damage to homes, utilities, and habitat at Porpoise Point.
- A few notable storms were Matthew (2016) and Irma (2017)
- St. Johns County requested federal help in 2018.





2004

R123



2025

R123

USACE CAP Study

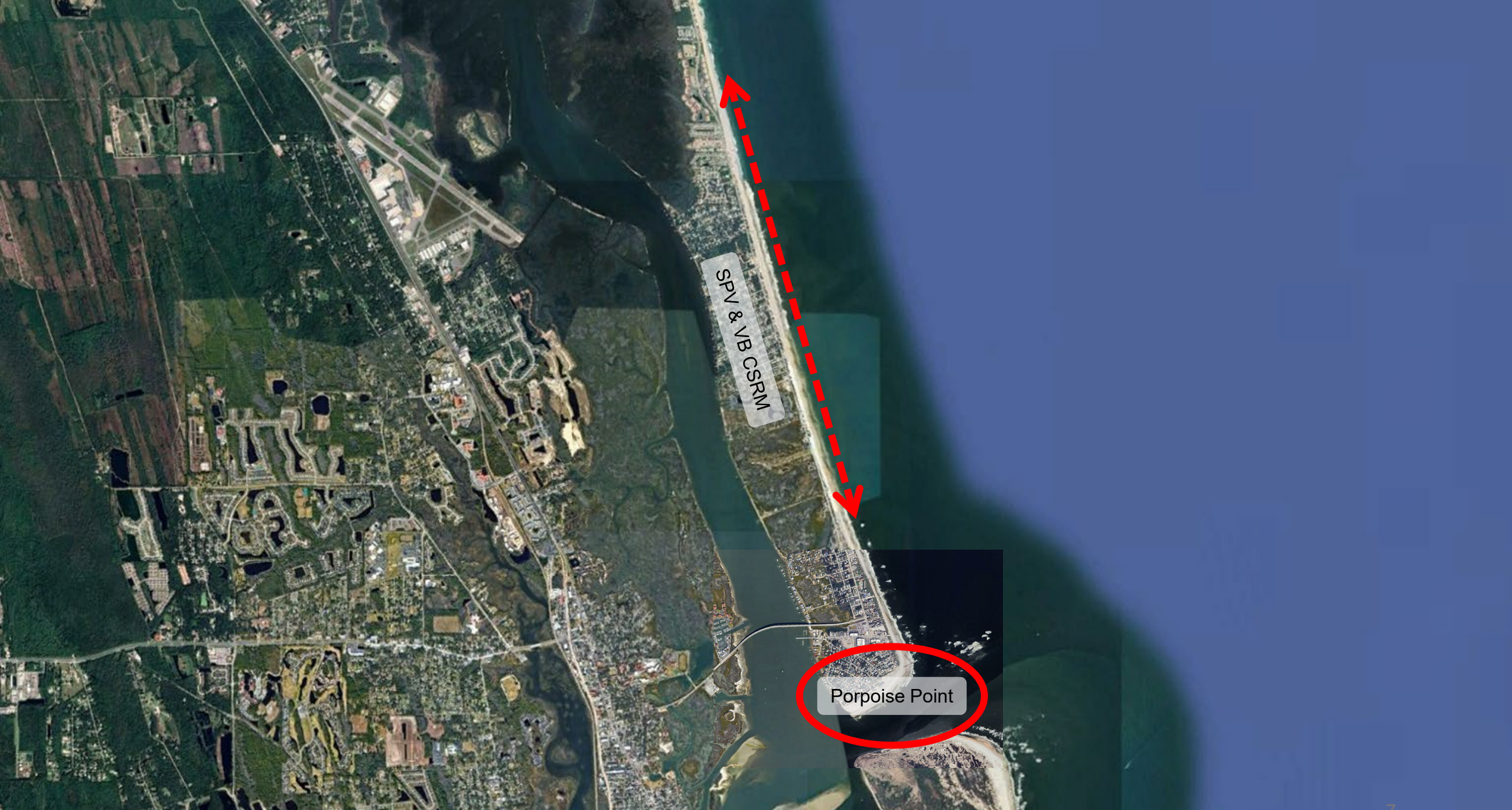
- USACE launched a feasibility study through their Continuing Authority Program “CAP” in 2020 to find long-term solutions to storm damage and erosion of Porpoise Point.
 - Identified 19 management measures and screened 32 alternatives.
 - Developed a final array of 4 alternatives combining groins, breakwaters, dunes, and beach nourishment.
 - The Coastal Barrier Resource Act “CBRA” restrictions prevented construction with federal funds.
-
- All viable options required construction in a CBRA zone. Without an exception, the study was terminated in 2022.



What's next?

- SJC was looking for a path forward.
- Project area impacted by Hurricane Nicole
- Florida Department of Emergency Management “FDEM” grant application submitted with a focus on the fact that this project not only benefits Porpoise Point but also the South Ponte Vedra and Vilano project area.





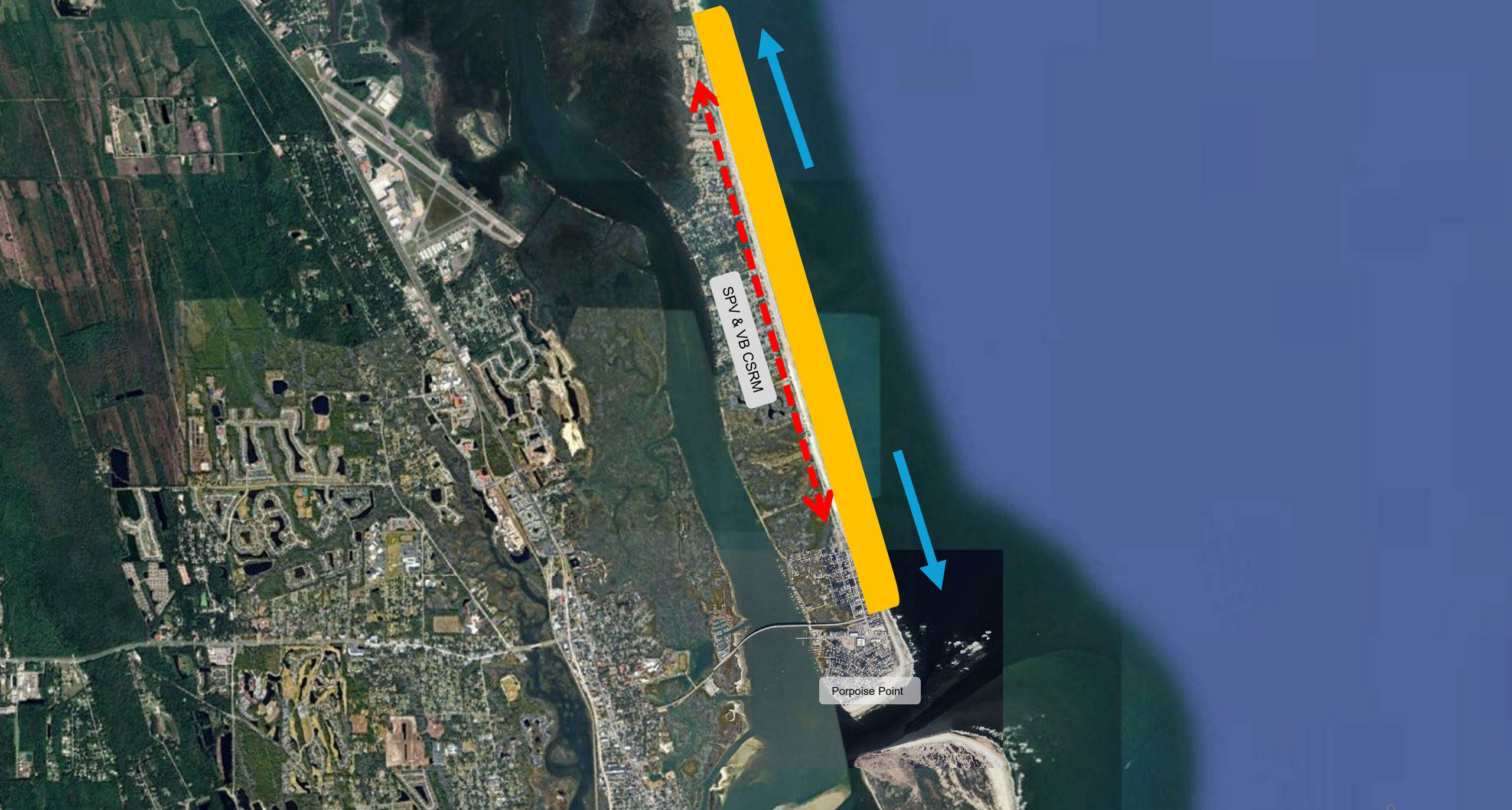
Porpoise Point project area in relation to the recently constructed SPV & VB CSRSM project



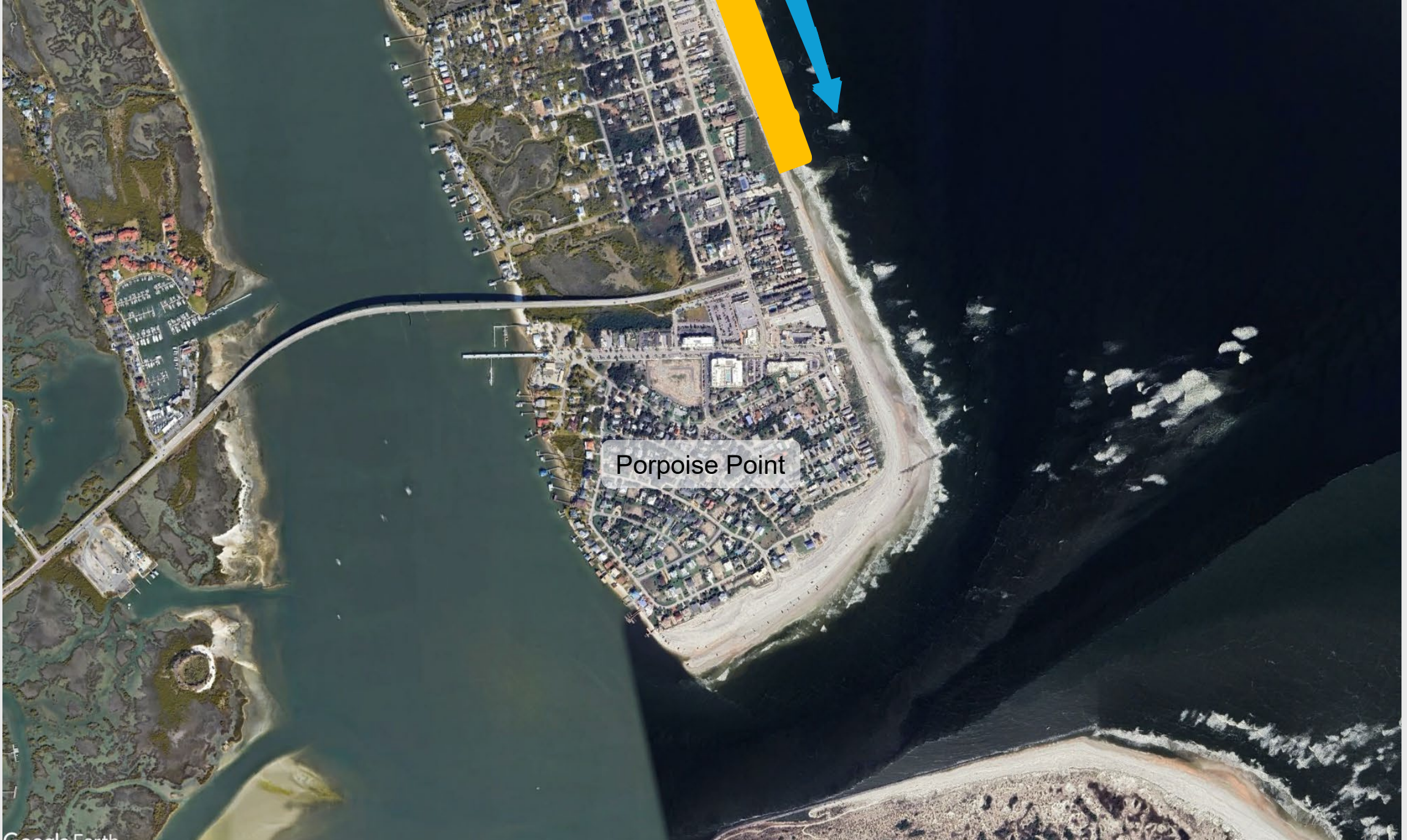
SPV & VB CSRM

Porpoise Point

Recently constructed SPV & VB CSRM



Direction of sediment movement from recently constructed SPV & VB CSRM



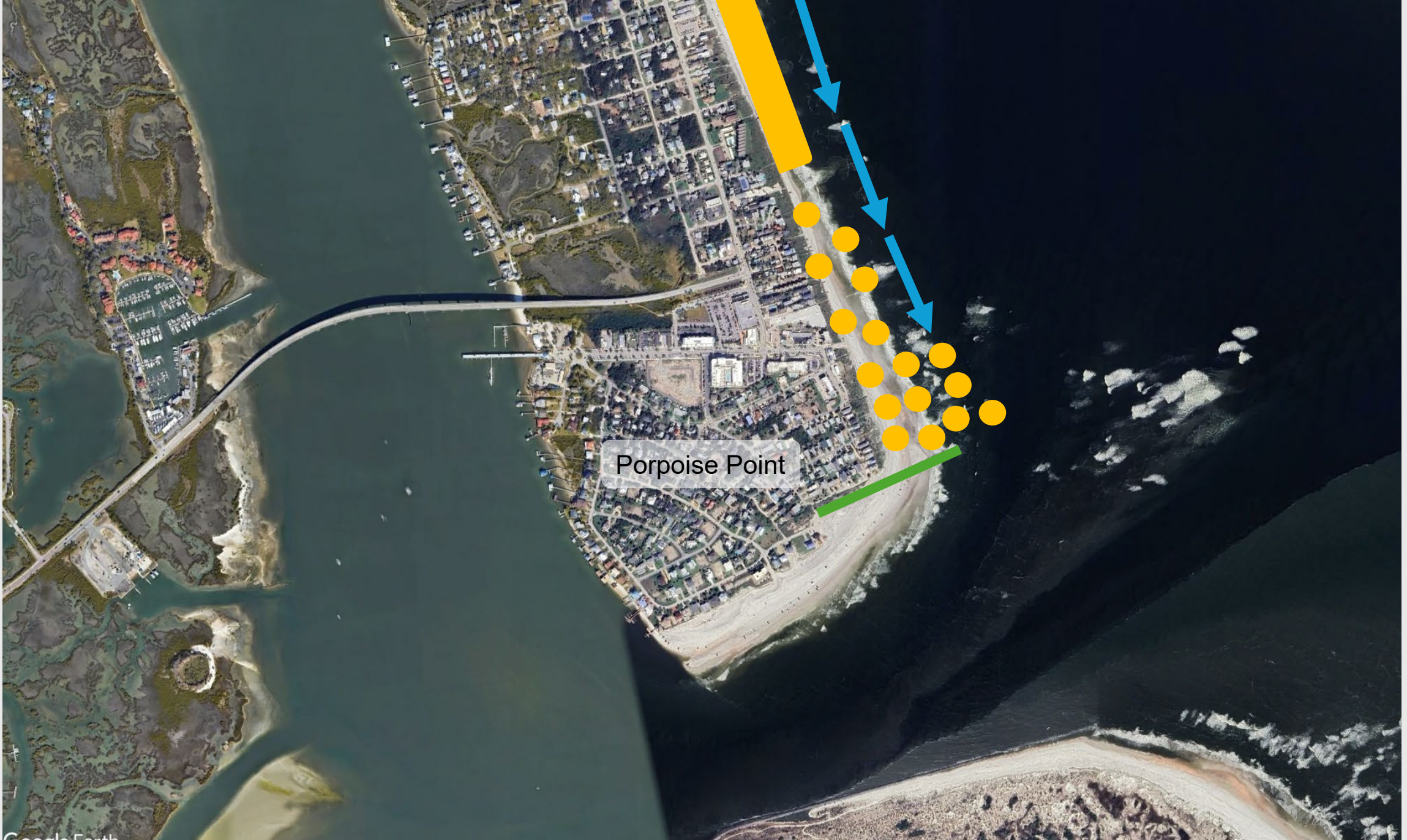
Porpoise Point



Google Earth

Image © 2025 TerraMetrics
Map © 2025 Airbus

Current sediment movement passing through the jetty depositing in the inlet system and onto Porpoise Point



Porpoise Point

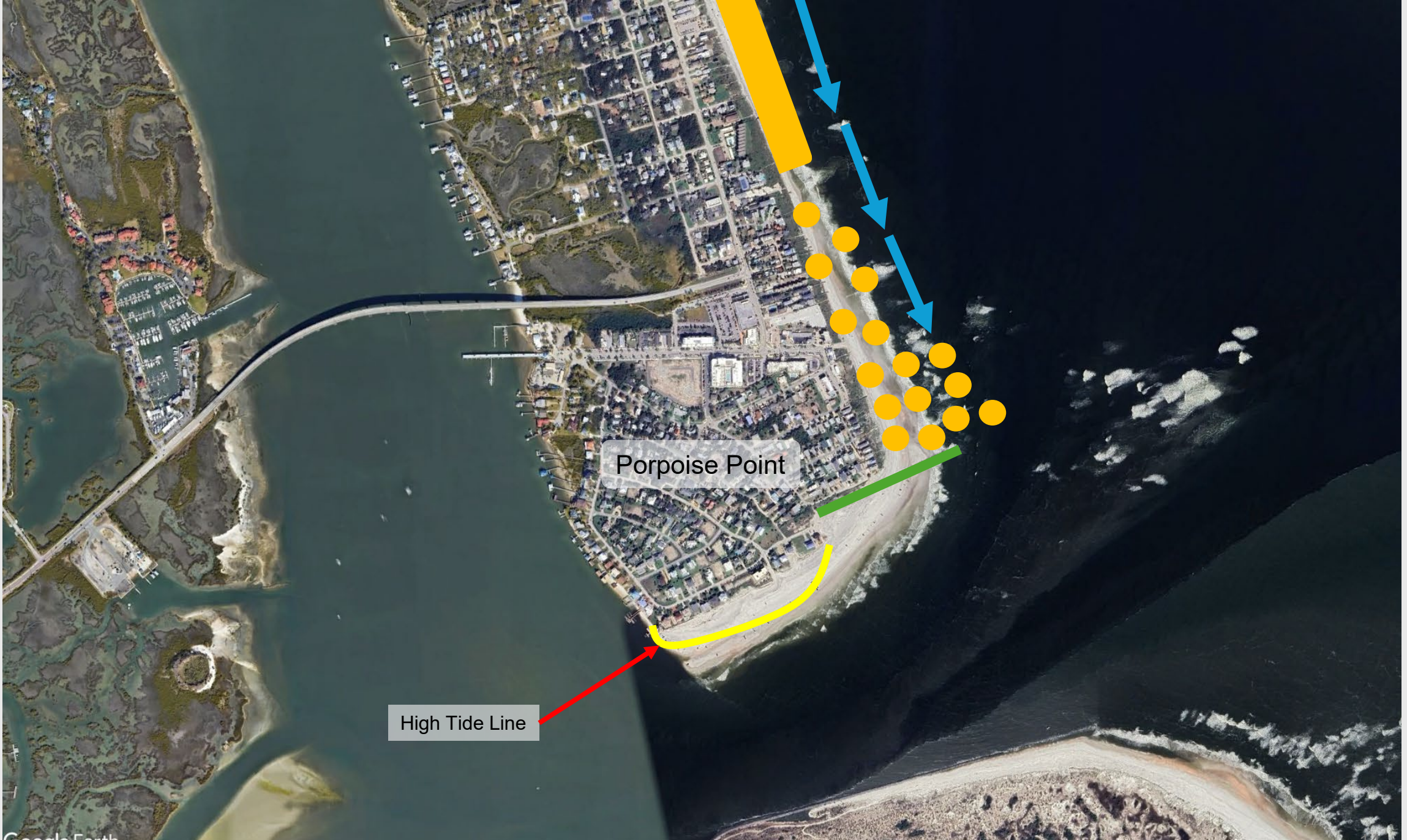
A properly functioning jetty would trap sand to the north building up the beach in Vilano



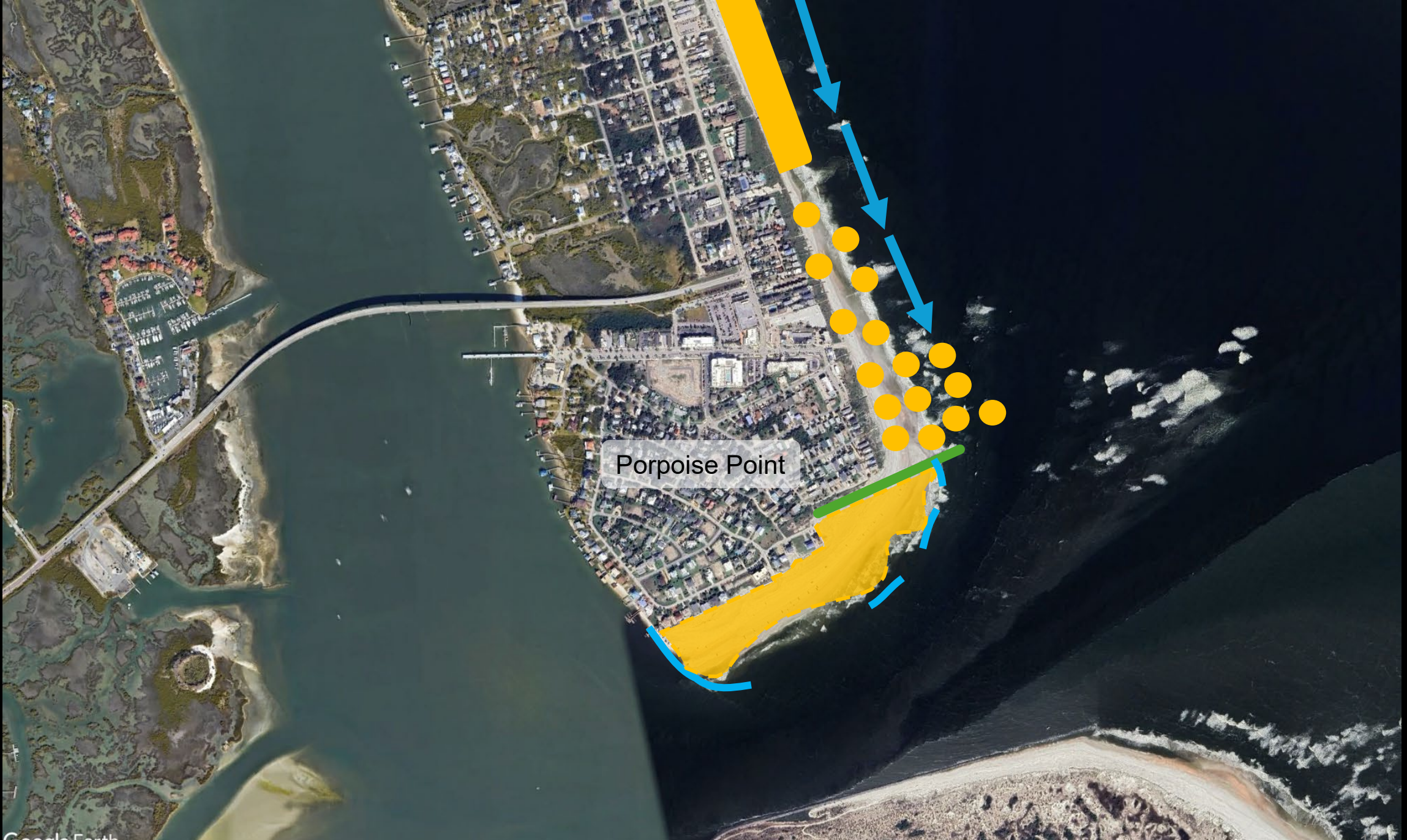
Google Earth

Image © 2025 TerraMetrics
Map © 2025 Airbus

A properly functioning jetty would trap sand to the north building up the beach in Vilano



Trapping sand to the north would build up the beach in Vilano but starve Porpoise Point of sand



Porpoise Point

FDEM Funded Study

- In 2024, the County secured a \$2 million grant from the Florida Department of Emergency Management.
- St. Johns County hired Intera-GEC through the RFQ process to complete the permitting, engineering, and design work.
- We are wrapping up the permit application package and are seeking public input on the project



Porpoise Point Shoreline Stabilization Project

St. John's County Public Meeting



Date of Photo: 2024

Porpoise Point Shoreline Evolution

- *Highly dynamic shoreline*
- *Continuously changing its shape*



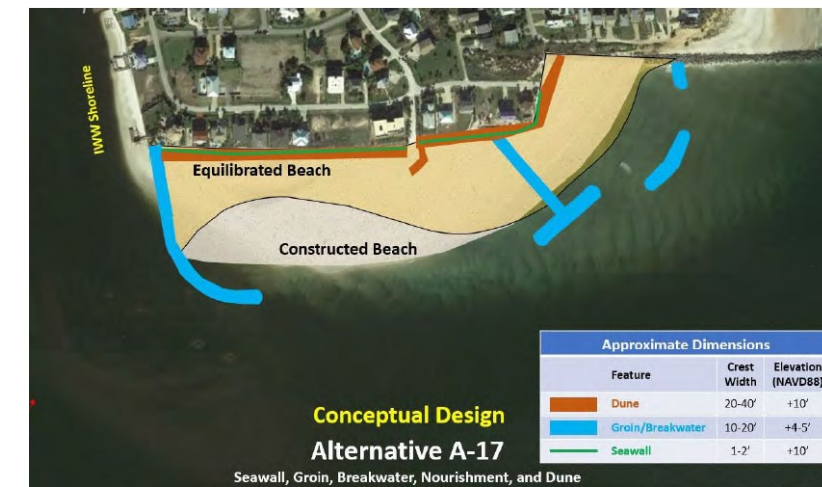
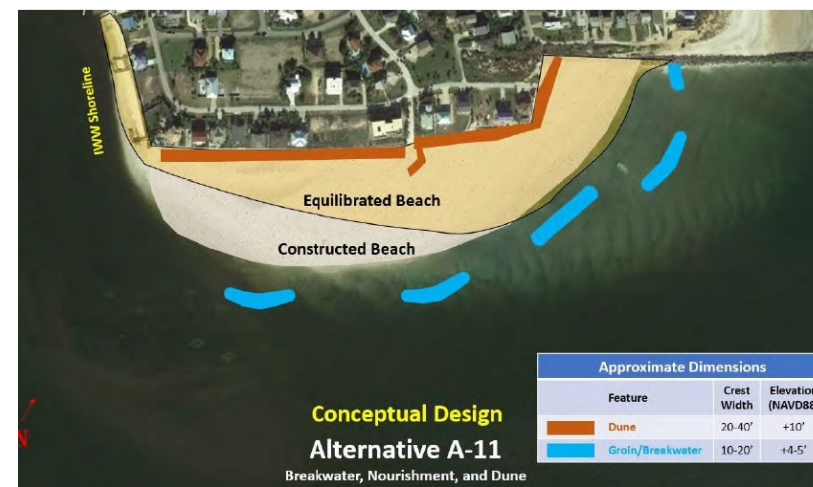
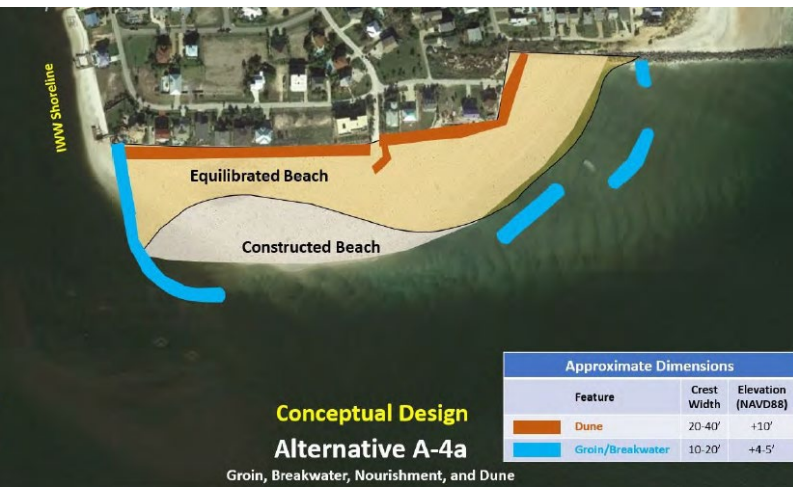
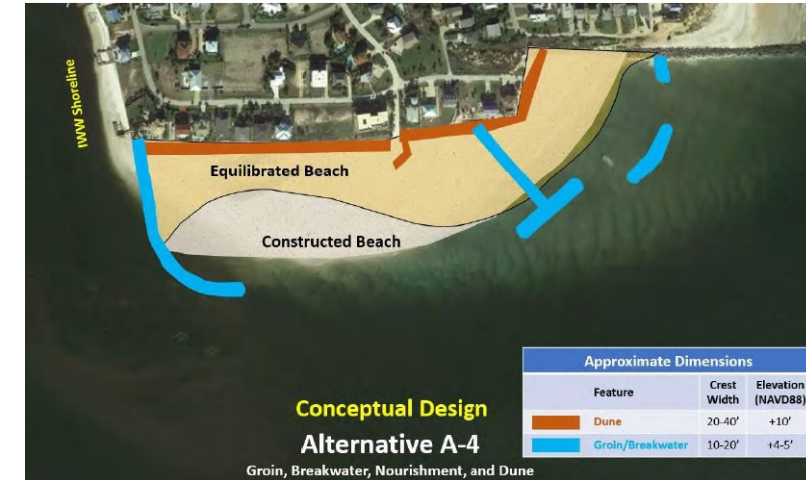
Porpoise Point Shoreline Range

- *The blue area represents the most seaward and the most landward the shoreline has existed since 1985.*

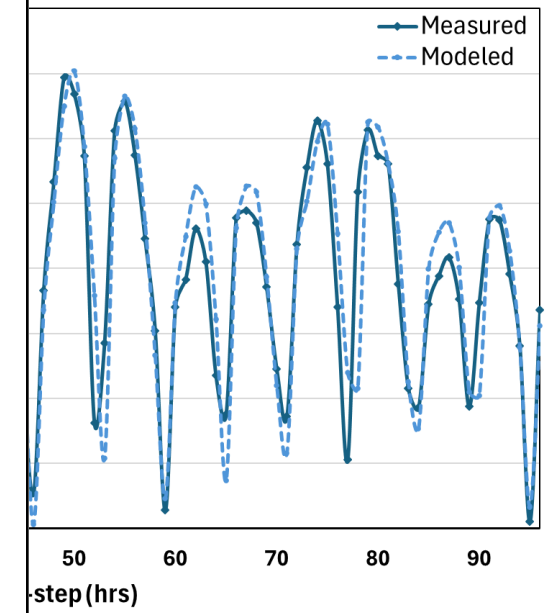


Porpoise Point Continuing Authorities Program (CAP) Termination Report (2022)

- **Purpose was to identify long-term structural and non-structural measures to reduce coastal storm damage risk.**
- **32 alternatives proposed**
Narrowed down to 4 final alternatives + No Action Plan



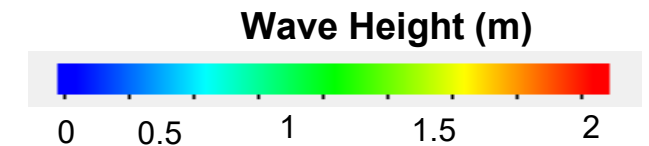
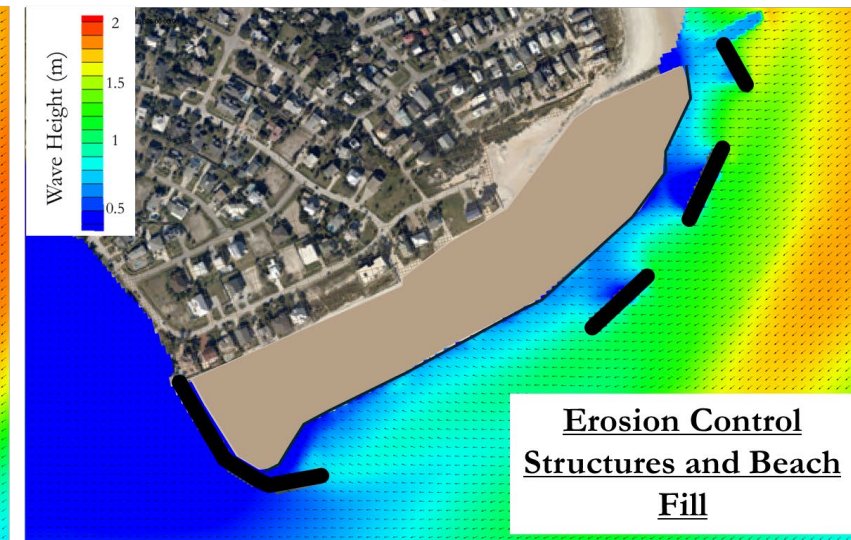
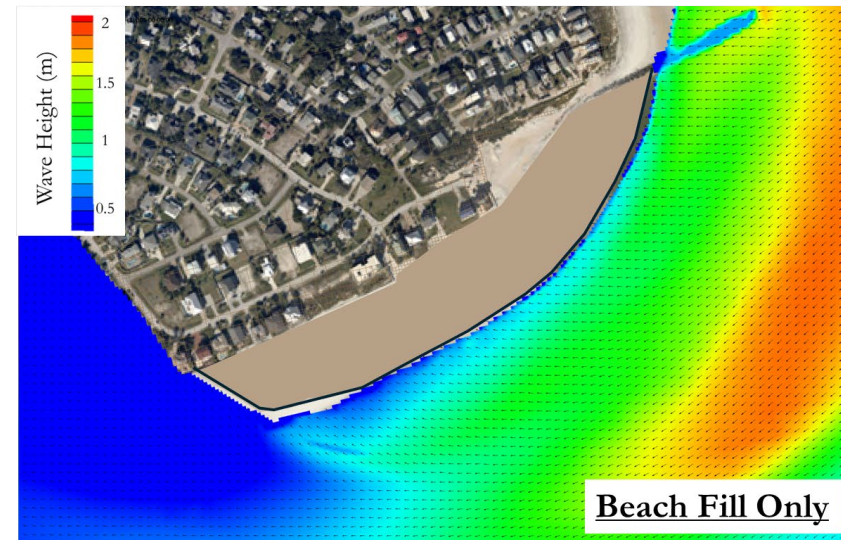
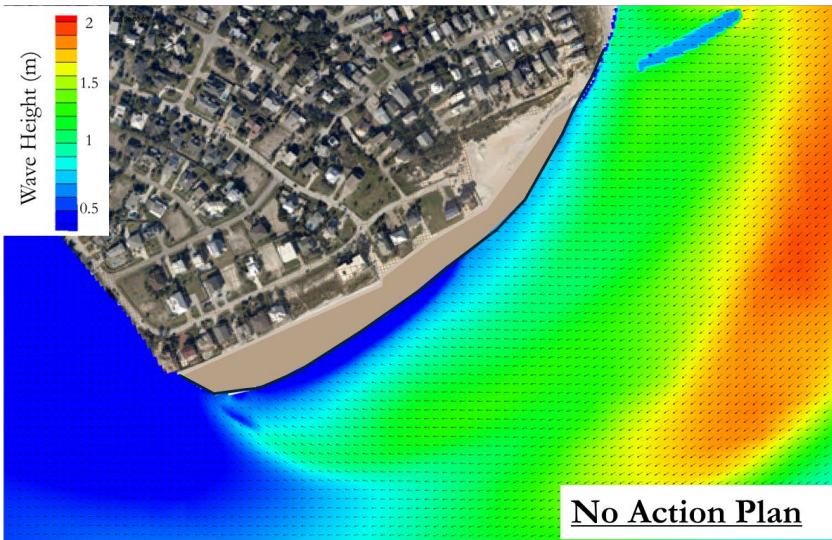
MS Model Validation



Wave Model Simulation

- Wave conditions for the three project alternatives

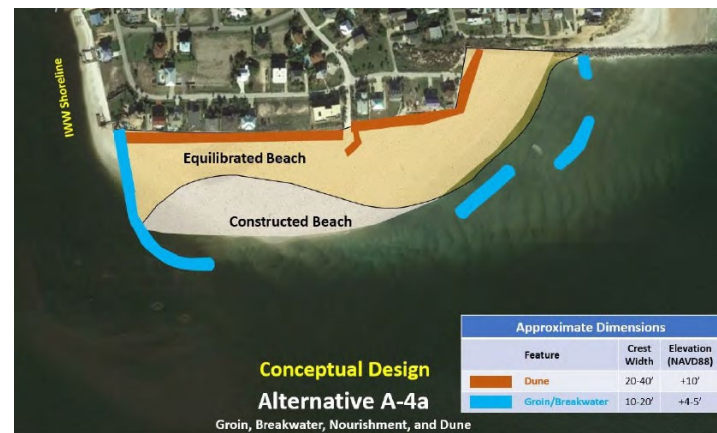
Wave Energy Reduction

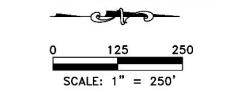




Porpoise Point Shoreline Stabilization Project

Suggested Approach





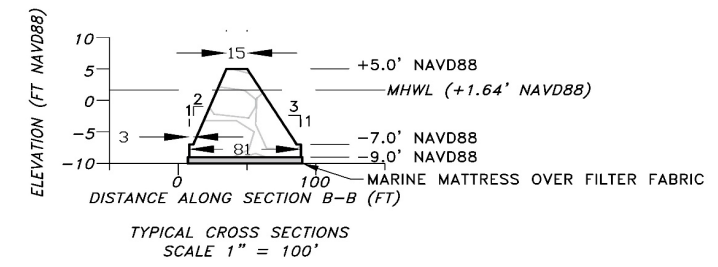
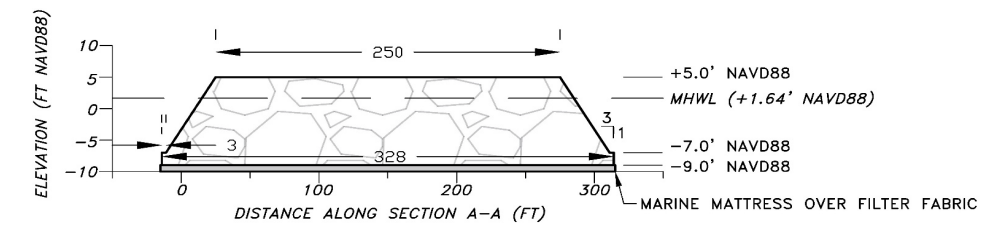
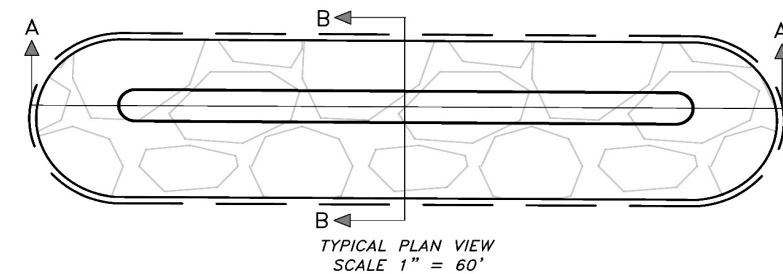
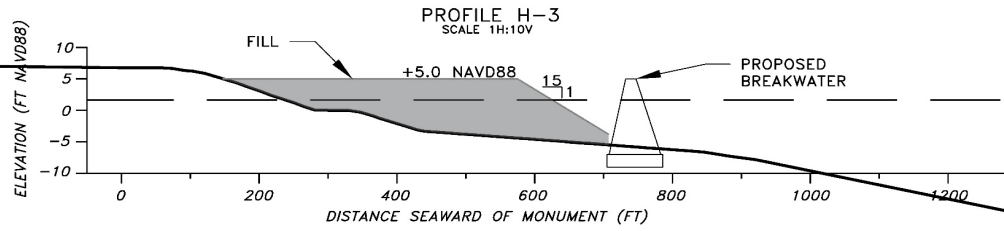
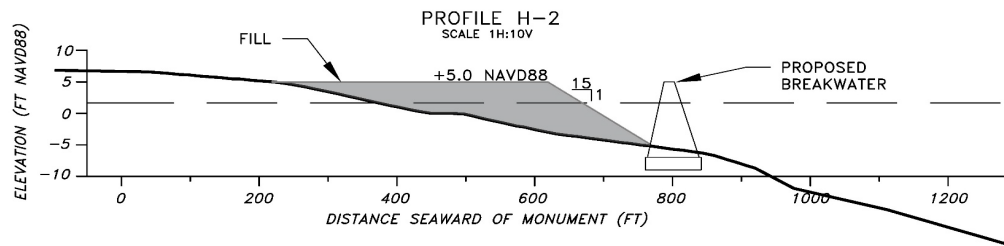
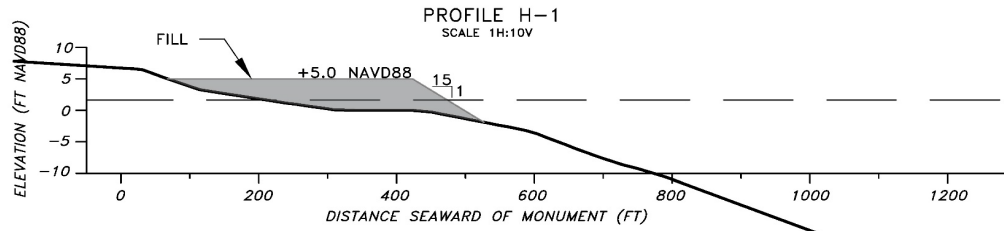
PHOTOGRAPH 2023 FROM FDOT APLUS IMAGERY.
PERMIT PLANS, NOT FOR CONSTRUCTION.

NOTES:
CONTOURS BASED ON MAY 2023 FLOOD SHOAL SURVEY BY USACE HYDROGRAPHIC SURVEYING AND JULY 2023 UPLAND SURVEY BY DEGROVE SURVEYORS INC.



PORPOISE POINT SHORELINE STABILIZATION PROJECT		
PERMIT PLANS - SITE PLAN		
FOR: ST. JOHNS COUNTY		
DATE: 03/24/25	FILE: PLAN	SCALE: SHOWN
JOB: 34-023	DATUM: SHOWN	SHEET: SP-2

5679 STRAND COURT
NAPLES, FL 34110
FAX: (239) 594-2025
PHONE: (239) 594-2021
www.humistonandmoore.com



- NOTES:**
- ROCK:
 - A. ARMOR STONE
 - DENSITY: 145 - 165 LBS./CU. FT. OR GREATER.
 - SIZE: 50% GREATER THAN 3 TONS.
 - MINIMUM SIZE: 2 TONS.
 - MAXIMUM SIZE: 5 TONS.
 - ARMOR STONE SLOPE TO BE 1V:3H FOR ROCK DENSITY < 160 LBS./CU. FT., OR 1V:2.5H FOR ROCK DENSITY > 160 LBS./CU. FT.
 - ARMOR STONE VERTICAL AND HORIZONTAL PLACEMENT ±12" TOLERANCE.
 - BASELOK MARINE MATTRESS MUX300 OR EQUIVALENT, TO BE PLACED ABOVE FILTER CLOTH AND BENEATH ARMOR STONE.
 - MARINE MATTRESS TO EXTEND AS SHOWN WITH A MINIMUM OF 24" AND A MAXIMUM OF 36" EXTENDED BEYOND THE ARMOR STONE.
 - PROFILE BASED ON MAY 2023 FLOOD SHOAL SURVEY BY USACE HYDROGRAPHIC SURVEYING AND JULY 2023 UPLAND SURVEY BY DEGROVE SURVEYORS INC.
 - ALL ELEVATIONS AS SHOWN ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM (NAVD'88).
 - DIMENSIONS SHOWN ARE IN FEET.
 - STATE PLANE COORDINATES BASED ON (NAD83) FLORIDA WEST.

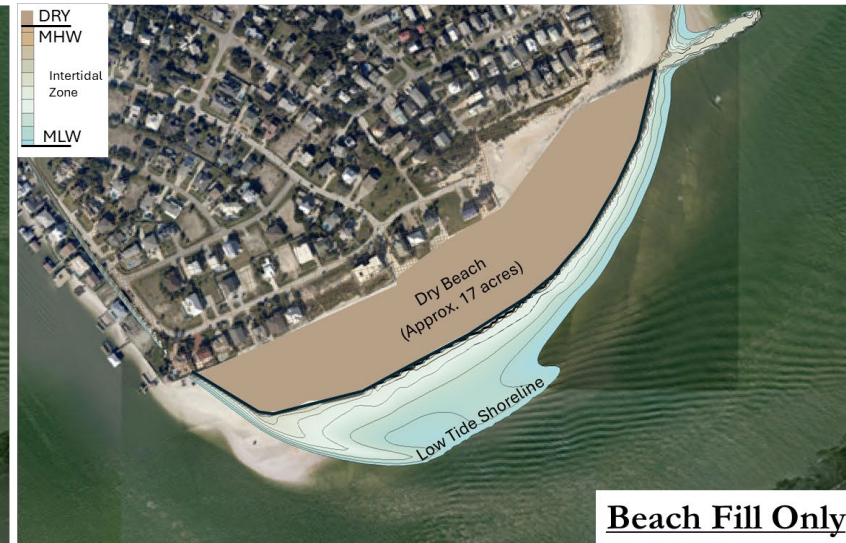


	HUMISTON & MOORE ENGINEERS <small>COASTAL ENGINEERING DESIGN AND PERMITTING</small>	PORPOISE POINT SHORELINE STABILIZATION PROJECT PERMIT PLANS - CROSS SECTION		
		FOR: ST. JOHNS COUNTY		
DATE: 03/24/25		FILE: PLAN	SCALE: SHOWN	
JOB: 34-023		DATUM: SHOWN	SHEET: XS-2	

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Shoreline Morphology Simulation

- *The shoreline response after one year of local coastal processes for the three alternatives.*
- *The contour lines represent the sand within the intertidal zone, the light blue area is the shoreline at low tide, the white and beige is the high tide shoreline, and the brown area is the dry beach.*
 - *The dry beach is the area of the beach that waves will not reach under typical conditions.*



Next Steps

- Community input
- DEP and USACE permits
- Secure Construction funding – We do not currently have any construction dollars.

Schedule

- Submit Permit Application (April 2025)
- Execute Permits (Late Summer 2026)
- Construction (TBD Pending Funding)



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Thank You!
Coastal Management, St. Johns County
E: coastalprojects@sjcfl.us P: 904-209-0260

