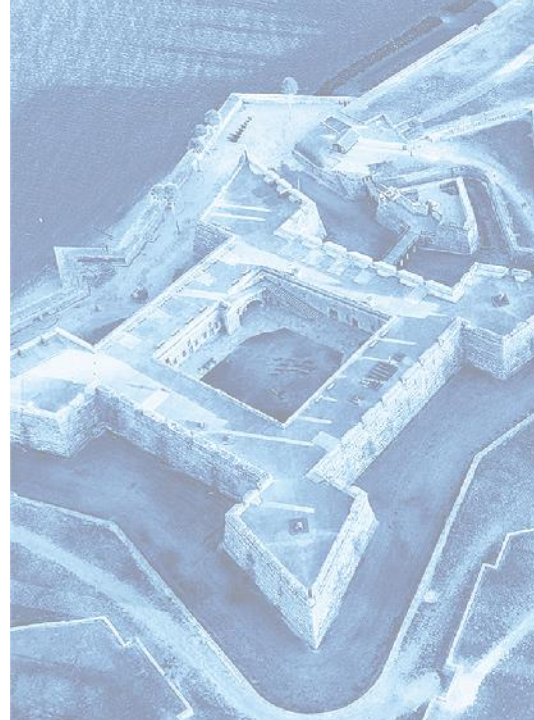




Summer Haven and Matanzas Inlet Area *Listen and Learn Meeting*

April 3, 2025



PRESENTATION AGENDA

Background

Past Sand Placement

USACE Participation

FEMA Participation

Studies

Current Action

Future Direction

1960

Background

- Long history of erosion, wash overs and breaches.
- FDOT began building new A1A before 1960 to replace Old A1A.
- Old A1A right of way deeded to County in 1979.
- Congress designated Coastal Barrier Resource Act (CBRA) zone in 1981.
- Designated critically eroded by FDEP in 1999.
- Beach breached or overwashed into River by TS Fay (2008), H Matthew (2016), H Irma (2017), H Dorian (2019), Nor'easter (2020), Nor'easter (2021), H. Nicole (2022)
- River partially dredged in 2016/2017, 2019, 2020/2021

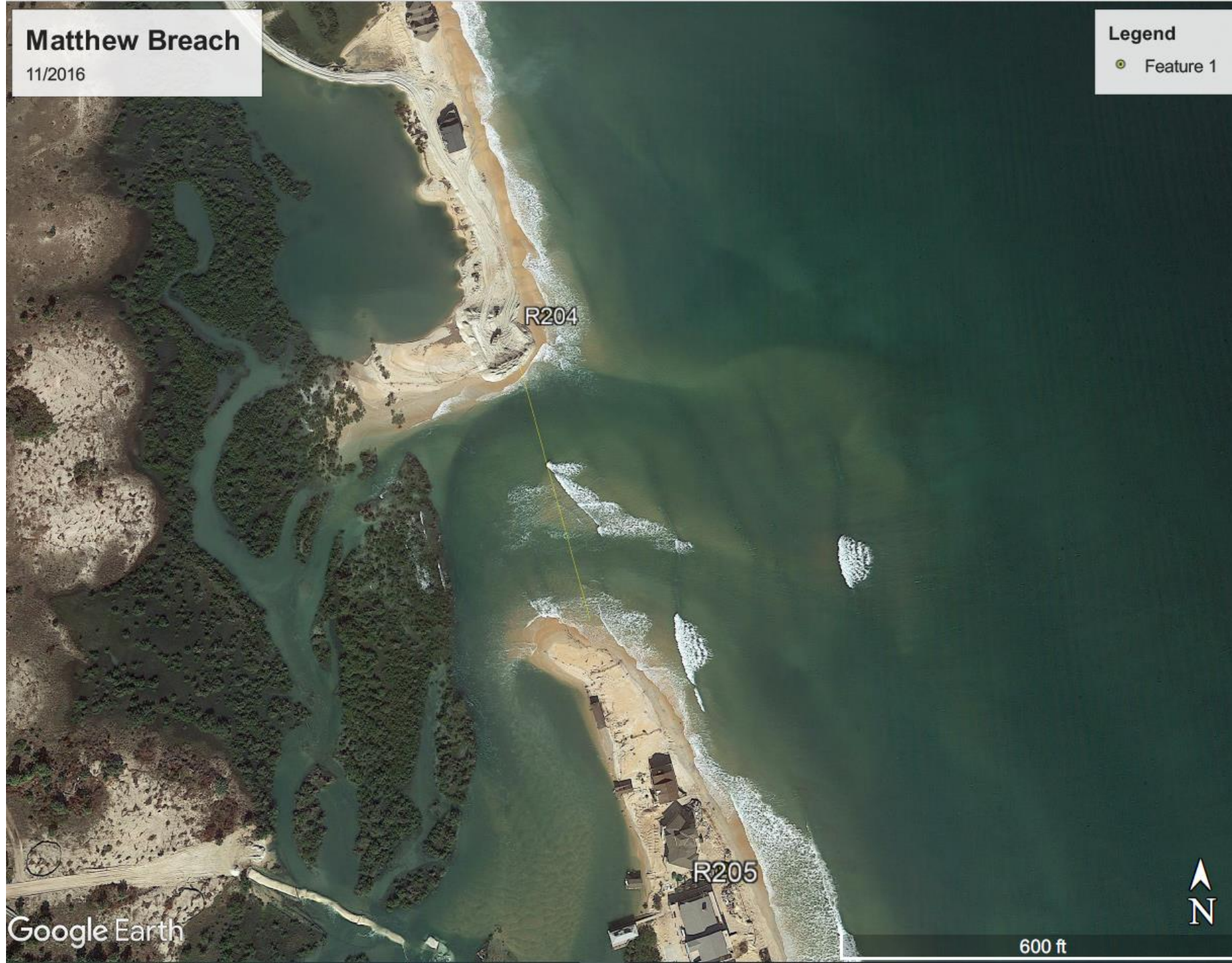


Matthew Breach

11/2016

Legend

● Feature 1



Google Earth



Past Sand Placement

Date	Location	Volume, cy	Source	Agency
1992	R200-R208	191,502	ICWW	FIND-USACE
1994		197,370	ICWW	FIND-USACE
1999	R200-R208	211,615	ICWW	FIND-USACE
1999	R198-R209	844,311	SJ-1	FIND
2001	R200-R208	218,000	ICWW	FIND-USACE
2002	R203-R208	21,300	Upland	FEMA+SJC
2003	R200-R208	29,300	Upland	FEMA+SJC
2004	R200-R208	286,529	ICWW	FIND-USACE
2007	R200-R208	187,862	ICWW	FIND-USACE
2011	R200-R208	33,000	SJ-1	FEMA
2011	R205-R208	250,000	ICWW	USACE
2017	R204-R208	430,000	ICWW	FIND-USACE
2017	R200-R205	390,000	Summerhaven River	SAPWBD
2019	R200-R203.5	47,100	Summerhaven River	SAPWBD
2019	R200-R208	394,028	ICWW	FIND-USACE
2019	R204-R205	12,700	Summerhaven River	SJC
2021	R202-R208	103,000	Summerhaven River	FEMA+SJC

Total: 3,847,617

Summer Haven FEMA Dune in place 10/7/2021:



2022-11-11 00:52:12
-01.21340 -00.33603

Summer Haven Post-Hurricane Nicole November 11, 2022





Oct 25, 2023



Nov 8th, 2023



DEC 1st, 2023



Dec 18th, 2023



Jan 25th, 2024



Mar 11th, 2024

USACE placed 517,000 CY dredge material in 2023/2024, bringing the total known sand placement to 4,364,617 CY.

Approximately one month post USACE construction:



Past Studies

- 1971_USACE_StJohns_MatanzasInlet_Sect107_Reconn.pdf
- 1972_UF_StJohns_MatanzasInlet_Sediment_Study.pdf
- 1977_UF_Matanzas Inlet.pdf
- 1977_UF_Mon Perf Study Matanzas Closure.pdf
- 1982_USACE_StJohns_SummerHaven_Section14_Erosion Control.pdf
- 1991_Taylor_Dredge Material Disposal Plan in Summer Haven.pdf
- 2000_FDEP_ImpactHurricaneFloydHurricaneIreneFloridaEastCoast1999.pdf
- 2004_FDEP_HurricaneFrancesHurricaneJeanne.pdf
- 2007_PBSJ_Summer Haven Erosion Alternatives.pdf
- 2009_Taylor_StJohns_Matanzas_Inlet_Sedimentation_Study.pdf
- 2011_Taylor_FEMA Berms_Final_engineer_report_for_FDEP.PDF
- 2012_FSBPA_Tech_Conferenece_Trudnak_Ames_Summer Haven.pdf
- 2013_NPS_nrtr-2013-703 (1).pdf
- 2017_USACE_StJohns_FeasibilityStudy_EA_Final_MainReport_20170315_508.pdf
- 2018_FDEP_H_IRMA_Post-Storm_Report_1.pdf
- 2018_FDEP-NOAA funded_Steward,Dix,Noel_Effects os Summer Haven River.pdf
- 2018_Srinivas_report on replacement volumes and costs 032218 wo appendices RD.PDF
- 2018_USACE_Matanzas ICWW_Geotech.pdf
- 2021_ATM_High-level beach assessment_Summer Haven South_Tech Memo.pdf
- 2021_NPS_Shoreline Change 2019-2020.pdf
- 2022_NPS_Coastal Hazard and SLR.pdf
- 2022_NPS_Shoreline Change 2020-2021.pdf
- 2022_Summer Haven Staff Report.pdf
- 2023 FDEP Feasibility Study Summer Haven Final Report_withAppendix_20230626.pdf
- 2023_INTERA-GEC Summer Haven Final Report with Appendices.pdf
- 2023_INTERA-GEC Summerhouse FINAL Report with Appendices.pdf



Recent Studies



BCC directed staff to procure a study of feasible alternatives to restore and maintain the Summer Haven River and address erosion at Summerhouse.

FINAL REPORT

Study of Summer Haven River and Surrounding Areas

St. Johns County, Florida

Prepared for: St. Johns County Board of County Commissioners

St. Johns County, Florida
500 San Sebastian View
St. Augustine, Florida 32084

Prepared by: **INTERA - GEC**
A joint venture of INTERA and G.E.C.

INTERA-GEC
446 3rd Street, Suite 7
Neptune Beach, Florida 32266

NOVEMBER 22, 2023

FINAL REPORT

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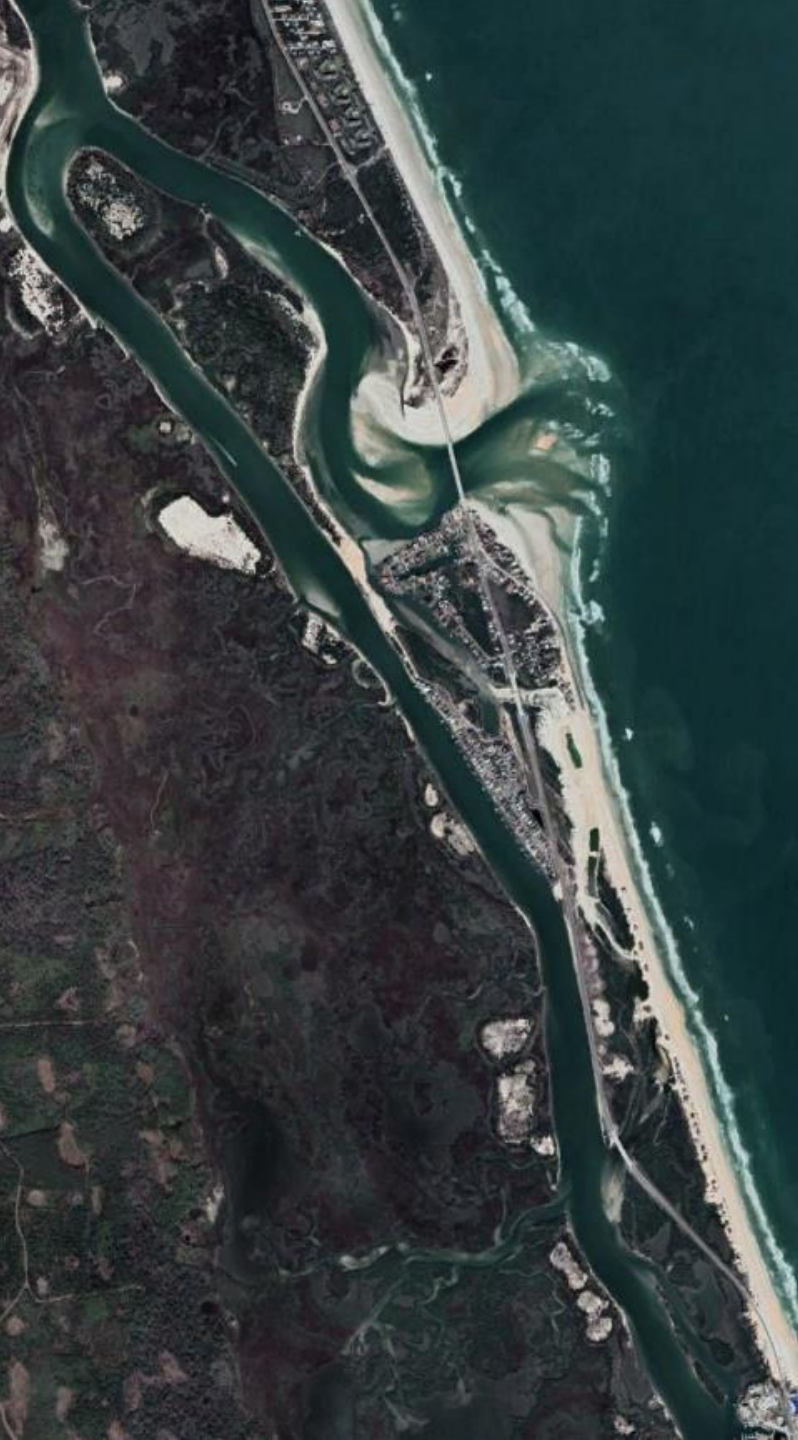
INTERA-GEC
446 3rd Street, Suite 7
Neptune Beach, Florida 32266

NOVEMBER 22, 2023



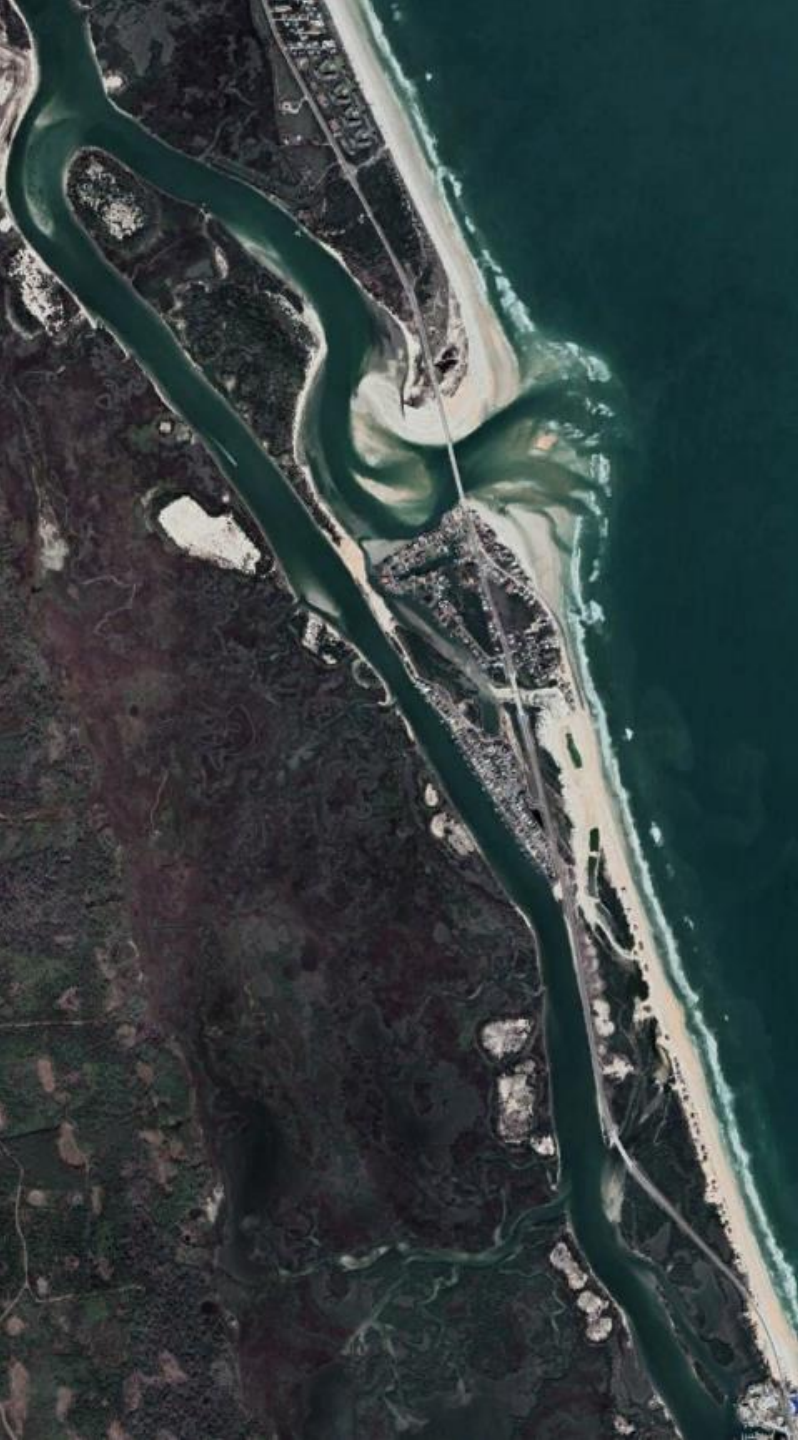
Summer Haven River Study





Study Objective & Scope

- OBJECTIVE:
 - Develop a list of environmentally and financially sustainable long-term solutions to maintain the flow of the Summer Haven River.
- SCOPE:
 - Collect and review data
 - Analyze coastal processes
 - Numerically model the coastal processes
 - Formulate and evaluate conceptual alternative solutions
 - Summarize the work in a report
 - Conduct public outreach events



Initial Screening of Alternatives

Alternatives evaluated for effectiveness and potential for regulatory approval

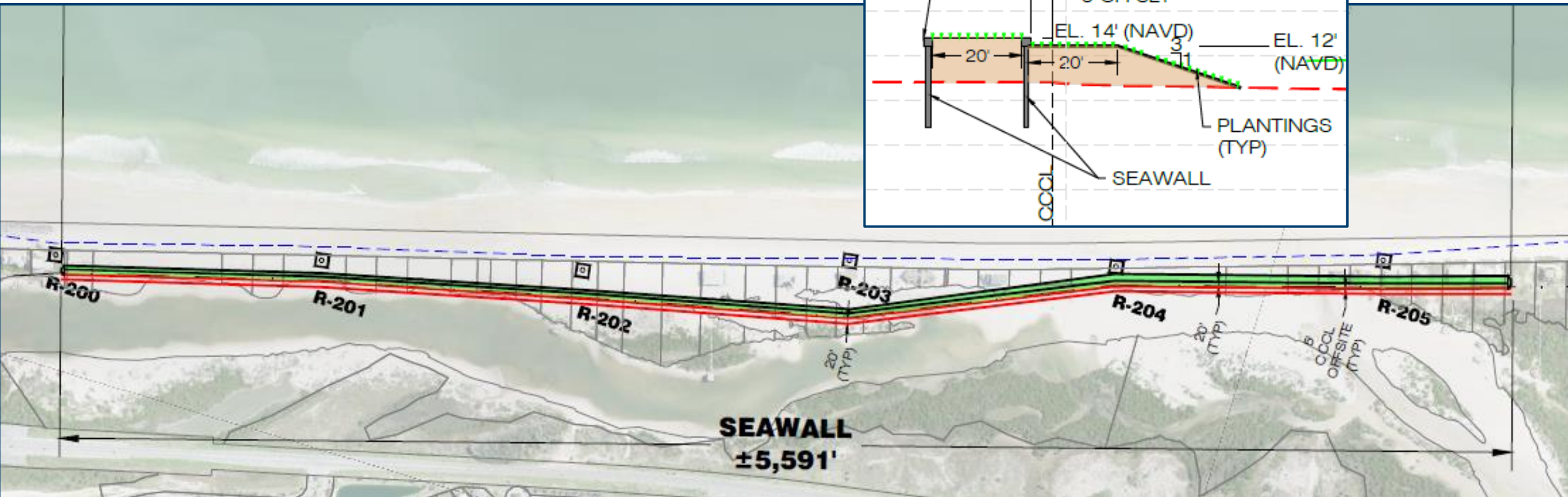
- Seawall
- Revetment
- Dune Restoration
- Beach and Dune Restoration
- T-Head Groins
- Breakwaters and Reefs
- Dune Restoration with Core

Summer Haven Possible BOCC Action #1

Seawall and Dune Landward of the CCCL

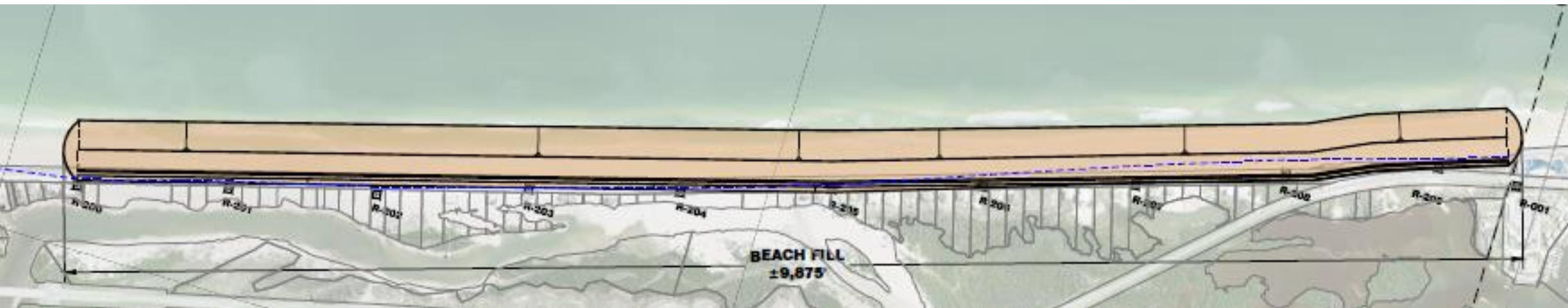
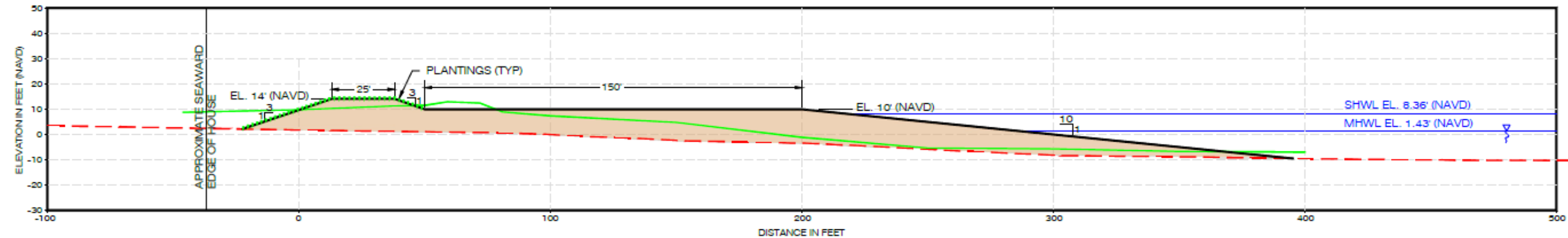
Initial Construction	50-year Maintenance	50-year total Cost
\$47.1M	\$11.9M	\$59.0M

Construction easements needed from property owners.



Summer Haven Possible BOCC Action #2 Beach and Dune Nourishment

Initial Construction	50-year Maintenance	50-year total Cost
\$34.3M	\$87.6M	\$121.9M



Fill volume: 1.5 mcy; fill density: 150 cy/ft; renourish beach every 5 years with 750,000 cy per event

Summer Haven Possible BOCC Action #4 - Managed Retreat

- 20 private parcels within and north of the last breach area are a priority.
- Purchased parcels would become public open space.
- Study used 2023 just (market) value from the St. Johns County Property Appraiser: \$3.1M
- Update: The Commission directed staff to provide opportunities for buyouts from willing sellers who want to divest their threatened property on the Old A1A South beach.
- A \$5M grant was secured from the State Legislature and the County is seeking additional grants to provide matching funds.
- Interested property owner can contact the SJC Land Management Systems at (904) 209-0760.



Summerhouse Study



Summerhouse Conditions Post-Ian



Summerhouse Privately-Funded Potential Solutions



Seawall Protecting Building 20

- Construction = \$1.24 million
- Maintenance = 0.28 million
- Total = \$1.52 million



Beach and Dune Nourishment

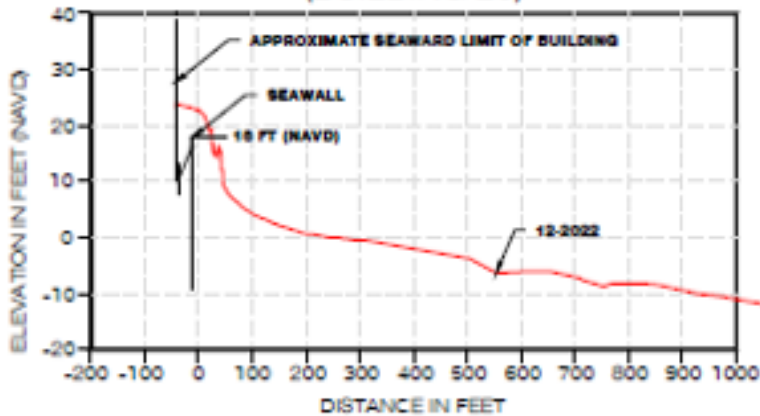
- Construction = \$5.79 million
- Maintenance = \$47.1 million
- Total = \$52.89



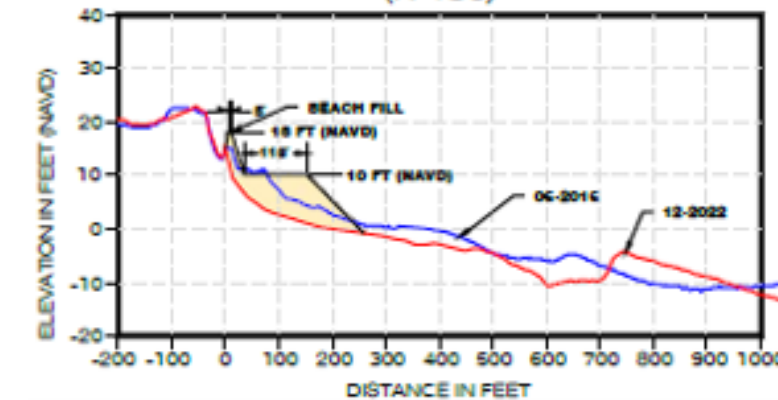
(Note: costs are in 2023 present worth equivalents).



(BUILDING 20)



(R-193)





Summerhouse Possible BOCC Action #1



Continue to request USACE to study Butler and Crescent beaches from R-151 south to the Matanzas Inlet (already requested by County).

- Could lead to future projects on the Summerhouse and adjacent northern beaches
- Summerhouse could indirectly benefit from beach fill projects placed on adjacent beaches even if no government-sponsored beach project occurs directly on its beach as the beach fill spreads the fill material alongshore beyond the project area to the adjacent beaches.
- County can expect to contribute up to \$1.5 million in financial or in-kind services to the study efforts, potentially reduced through contributions from the FDEP's BMFA program.



Summerhouse Possible BOCC Action #2



Initiate a formal inlet management plan study

- Help manage the erosion issues on both sides of the inlet.
- While not necessarily alleviating their full issues, Summerhouse and Summer Haven beaches could both benefit from the bypassed material.
- Study costs would likely approach \$500,000, potentially reduced through receipt of funds from the FDEP's BMFA program and FIND's WAP.

Inlet Management Plan Considerations

- Barrataria has experienced extreme erosion along the southern shore inside the inlet.
- If a formal channel was dredged towards the north side of the inlet, it could redirect the flow of water in and out of the inlet away from Barrataria and alleviate the erosion.



Figure 4.34 Exceedance of Critical Velocity at Peak Ebb Flow — Scenario 4 (Dredged Inlet Channel)



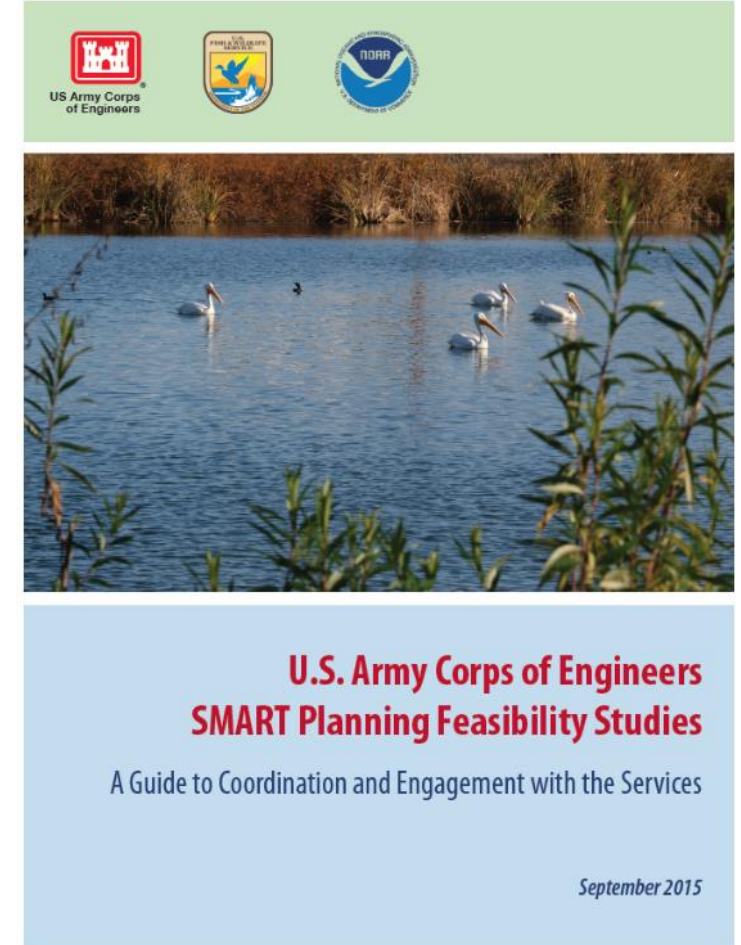
Figure 4.35 Exceedance of Critical Velocity at Peak Flood Flow — Scenario 4 (Dredged Inlet Channel)

U.S. Army Corps of Engineers



New Feasibility Study Request

- The USACE has prior authorization for feasibility studies in St. Johns County.
- The County has made annual requests for new studies for the beach at Summer Haven and Butler/Crescent Beach.
- The County has expressed its intent to participate in the studies and pay half of the \$3M per-study cost.
- The USACE Jacksonville District has expressed capacity for the new study in through annual budgets and work plans.
- Federal funding will need to be provided and the USACE and the County would need to execute a cost share agreement for the USACE to initiate the investigations.





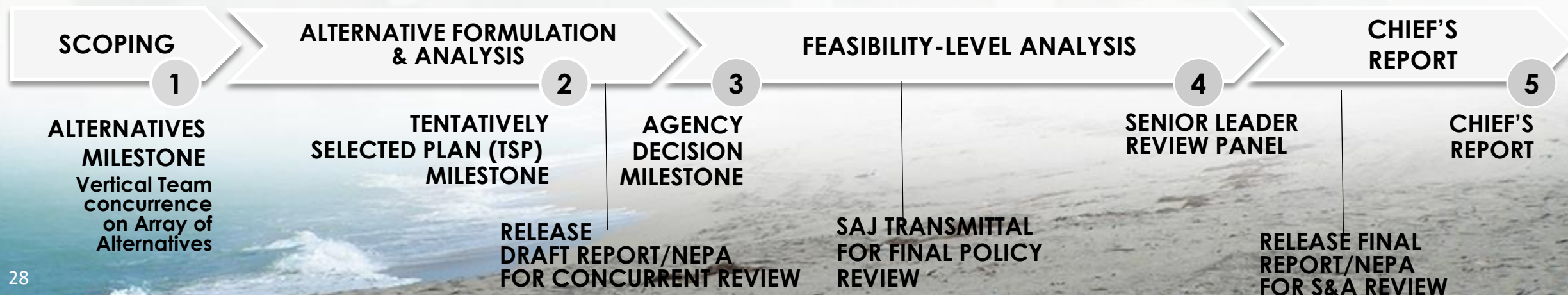
USACE PLANNING PROCESS



6 Step Planning Process

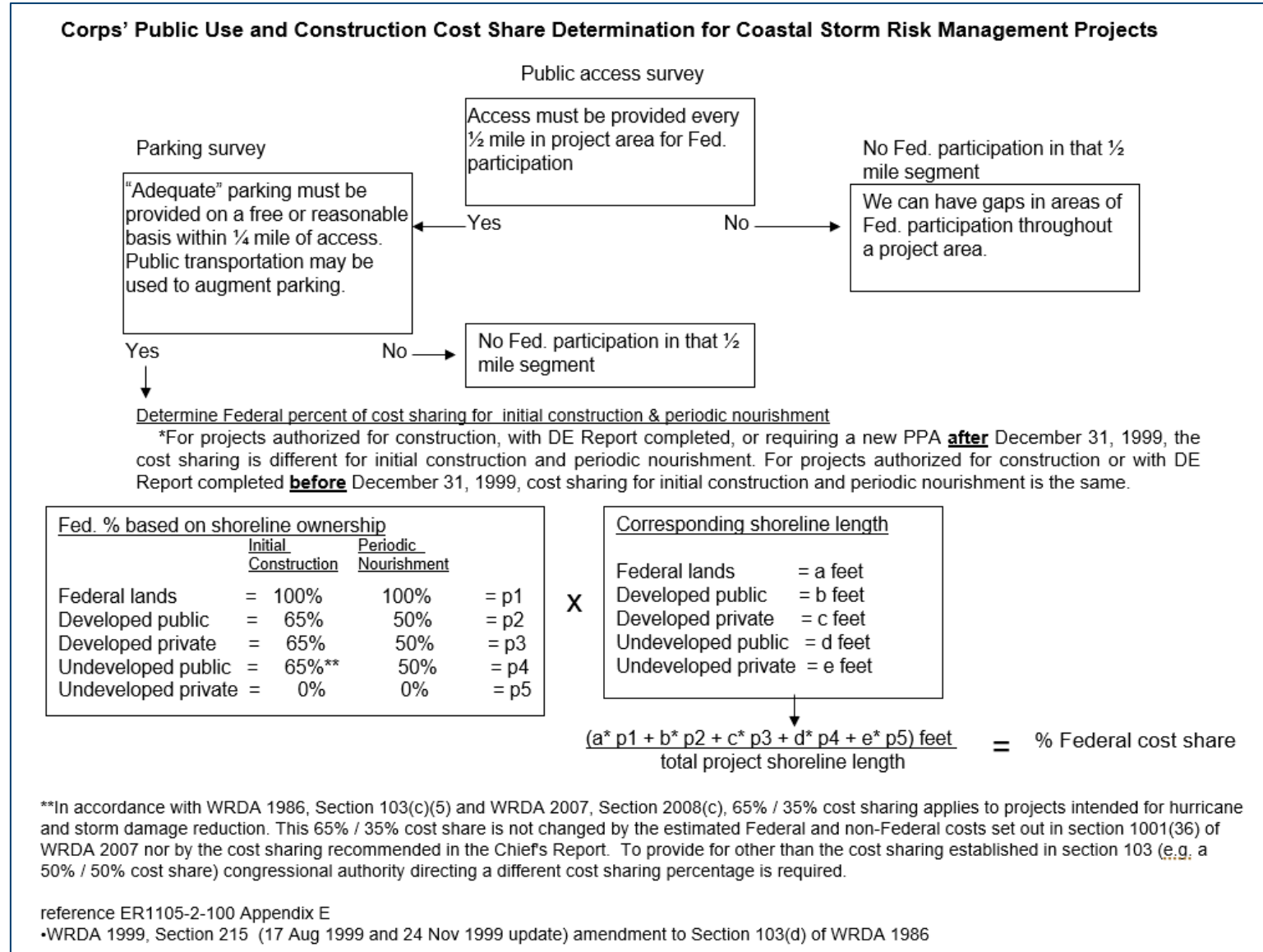
1. Identifying Problems and Opportunities
2. Inventorying and forecasting conditions
3. Formulating alternative plans
4. Evaluating alternative plans
5. Comparing alternative plans
6. Selecting a plan

These six steps usually occur iteratively and sometimes concurrently



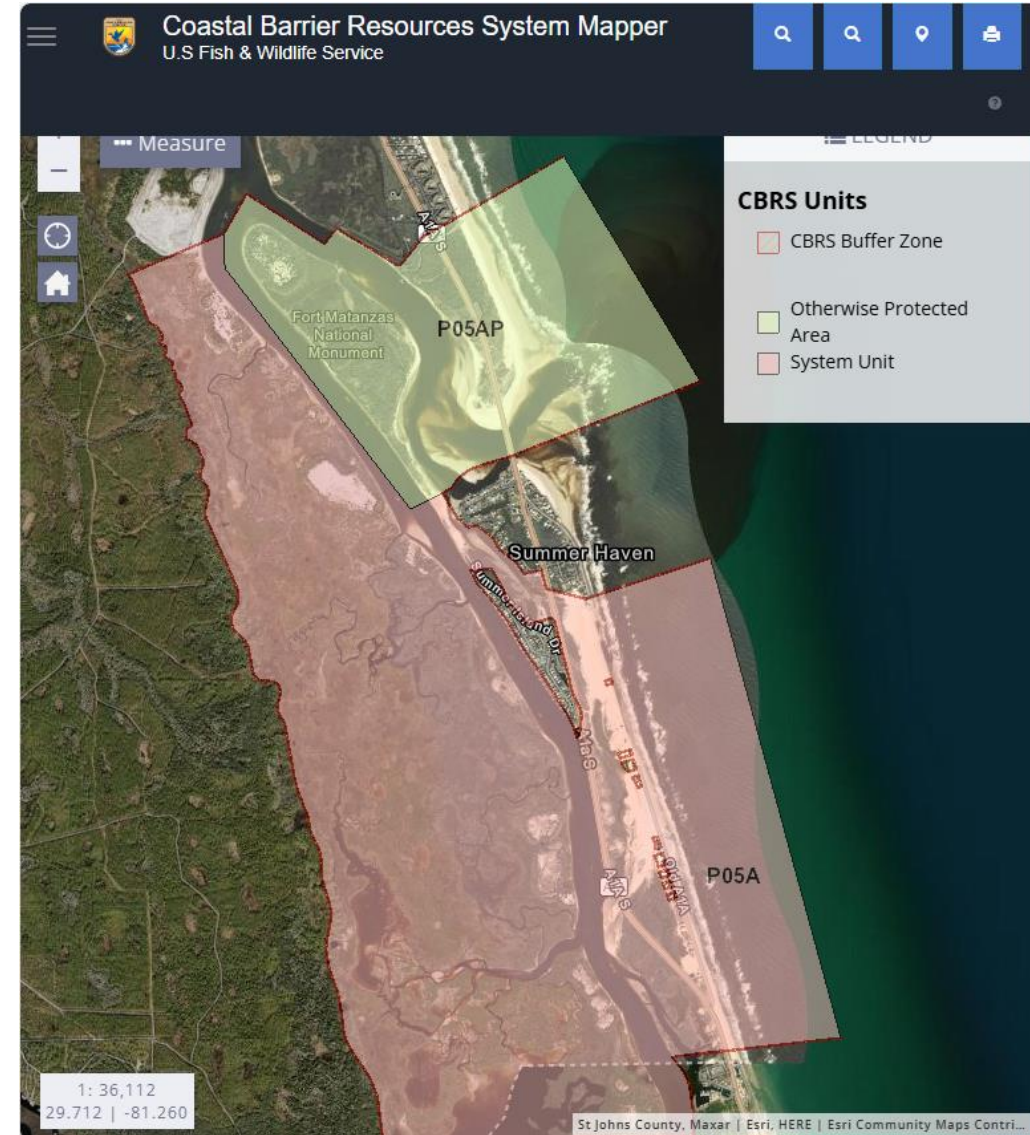
New Feasibility Study Request

- The study would need to confirm:
- That there is sufficient public access to confirm there is public interest in a project
- There is a positive benefit to cost ratio insofar as the total cost of the proposed 50-year project would need to be less than the damages the project is predicted to save.
- Public access is also one of the main factors in the determination of cost share.



Past Feasibility Study: 2004-2017

- “The Summer Haven reach was evaluated separately due to its remote location relative to the rest of the study area and unique physical characteristics (e.g., limited number of houses)”
- Management Measures considered after initial screening included: No Action, Acquisition of Land and Structures, Sand Covered Soft Structure, Beach Nourishment, Groins, Submerged Artificial Reef, Submerged Artificial Multi-Purpose Reef, and Dunes and Vegetation
- All the beach between revetments on Old A1A are part of a Coastal Barrier Resource System Unit (CBRS Unit), per the Coastal Barrier Resources Act (CBRA).
- The presence of a significant amount of undeveloped private property in the CBRS Unit forced the USACE to abandon further investigation in the CRBS Unit due to a prohibition on expending federal funds in a manner that would encourage development in CRBS Units



Past Feasibility Study: 2004-2017

Quote from Study

With non-federal sponsor concurrence, the decision was made at the Alternatives Milestone to drop the Summer Haven Reach from further analysis based on the following:

- Summer Haven is a geographically separate reach from the other two reaches and has extremely limited public access/parking.
- Major infrastructure such as SR A1A has already been relocated landward.
- There are a minimal number of structures in the southern portion of the reach.
- Structures in the northern portion of the reach are fronted by a revetment, reducing damage risk.
- Rebuilding of damaged structures is questionable given limited road access and damage susceptibility.
- The sponsor is purchasing properties when able and not allowing future development of the acquired properties.
- With the existing structural inventory growing smaller, it is highly likely that damages would not justify a 50-year CSRM project anywhere in the reach.
- Alternatives are also limited by the presence of a CBRS unit in three-quarters of the reach.

ST. JOHNS COUNTY, FLORIDA

South Ponte Vedra Beach, Vilano Beach,
and Summer Haven Reaches

COASTAL STORM RISK MANAGEMENT PROJECT
FINAL INTEGRATED FEASIBILITY STUDY
AND ENVIRONMENTAL ASSESSMENT



March 2017

FEMA



FEMA Beach Programs

Background

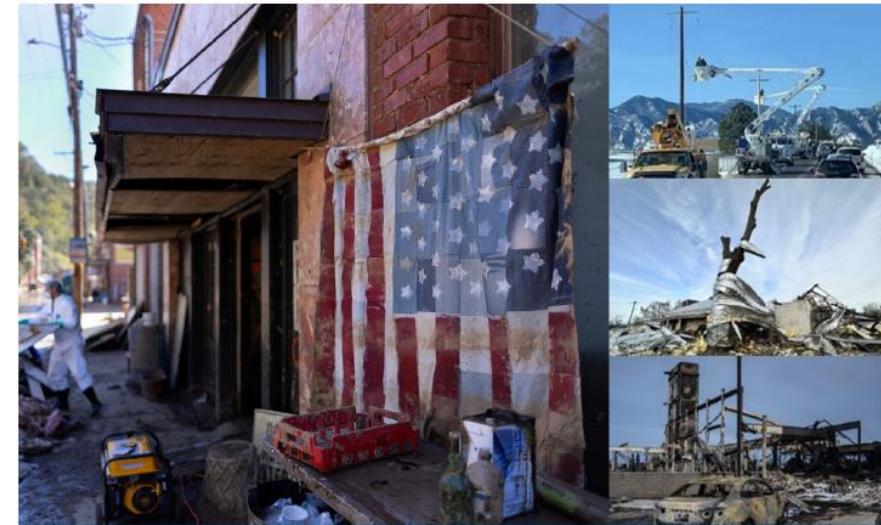
- FEMA funded projects must demonstrate cost reasonableness.
- FEMA can cost share after a disaster in two types of projects:

Category B: Emergency Protective Measures

- If a property had a dune high enough to protect from flooding from a 5-year storm before the disaster and now does not have protection due to sand loss during the storm,
- FEMA can cost share in sand placement to address the immediate threat by restoring 5-year-storm flood protection or pre-storm elevation, whichever is less.
- Category B dune work will not result in eligibility for future Category G projects.

Category G: Parks, Recreation, Other

- Cost share in storm-damage repairs to an “engineered beach”
- An Engineered Beach is a beach built with imported sand to a permitted design without USACE or FEMA funding, and periodically maintained to engineered standards
- There are no engineered beaches in the county south of the St Augustine Inlet



Public Assistance Program and Policy Guide

Version 5.0, Effective January 6, 2025

(FP 104-009-2)



FEMA

A1A

Overwashes

- FDOT has cleared sand from A1A and replaced the dune many times
- If the overwashes begin to destroy the road, FDOT may be able to justify installing seawall
- FDOT has started a working group with UF and the County to look for resiliency opportunities



Sep 30, 2022 at 10:28 AM

Recent Action



After presenting the results of the studies, the BCC directed staff to obtain an economic analysis of the benefits of the potential projects outlined in the reports.



**ST. JOHNS COUNTY, FL
BOARD OF COUNTY COMMISSIONERS**

REQUEST FOR PROPOSALS

RFP NO: 1803

SUMMER HAVEN ECONOMIC IMPACT STUDY

**St. Johns County Purchasing Department
500 San Sebastian View
St. Augustine FL 32084
(904) 209-0150 – Main
www.sjcfl.us/Purchasing/index.aspx**



Tell Us What You Think!

Take this brief survey to help identify the activities of the Summer Haven River area! This information supports our efforts to estimate the economic impacts of the Summer Haven River. Your voice is critical to the success of the study and this survey is an opportunity to share critical information that shows the activities and spending supported by the Summer Haven River. Thank you for taking the time to share your thoughts.

https://www.surveymonkey.com/r/SHR_Survey



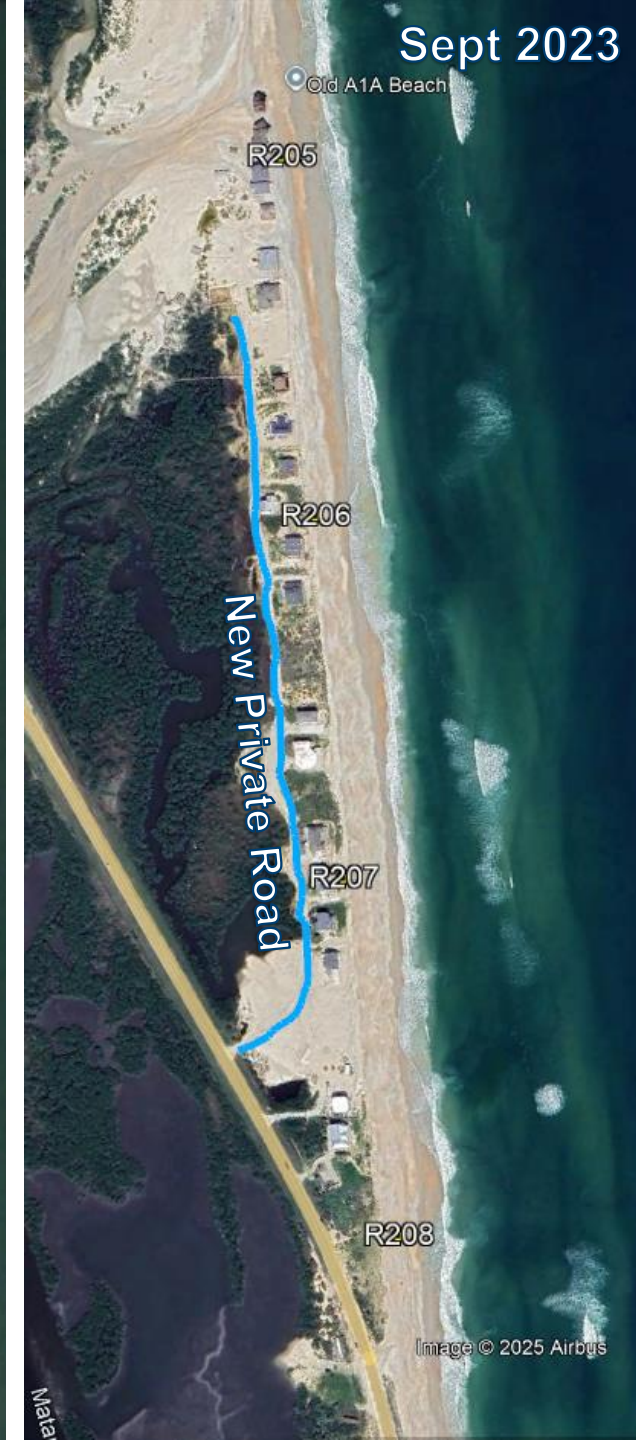
If you would prefer a printed version of the survey mailed to you, or if you have any questions about the survey, please contact the Survey Manager, Laila Racevskis of the Balmoral Group, at (850) 201-7164, or at LRacevskis@balmoralgroup.us

Economic analysis report due late summer 2025



Old A1A Access

- Old A1A South pavement destroyed in 2016
- Restoration efforts have not been able to stabilize the right of way for road construction
- Private property owners are working to create access for their homes



Future Decisions



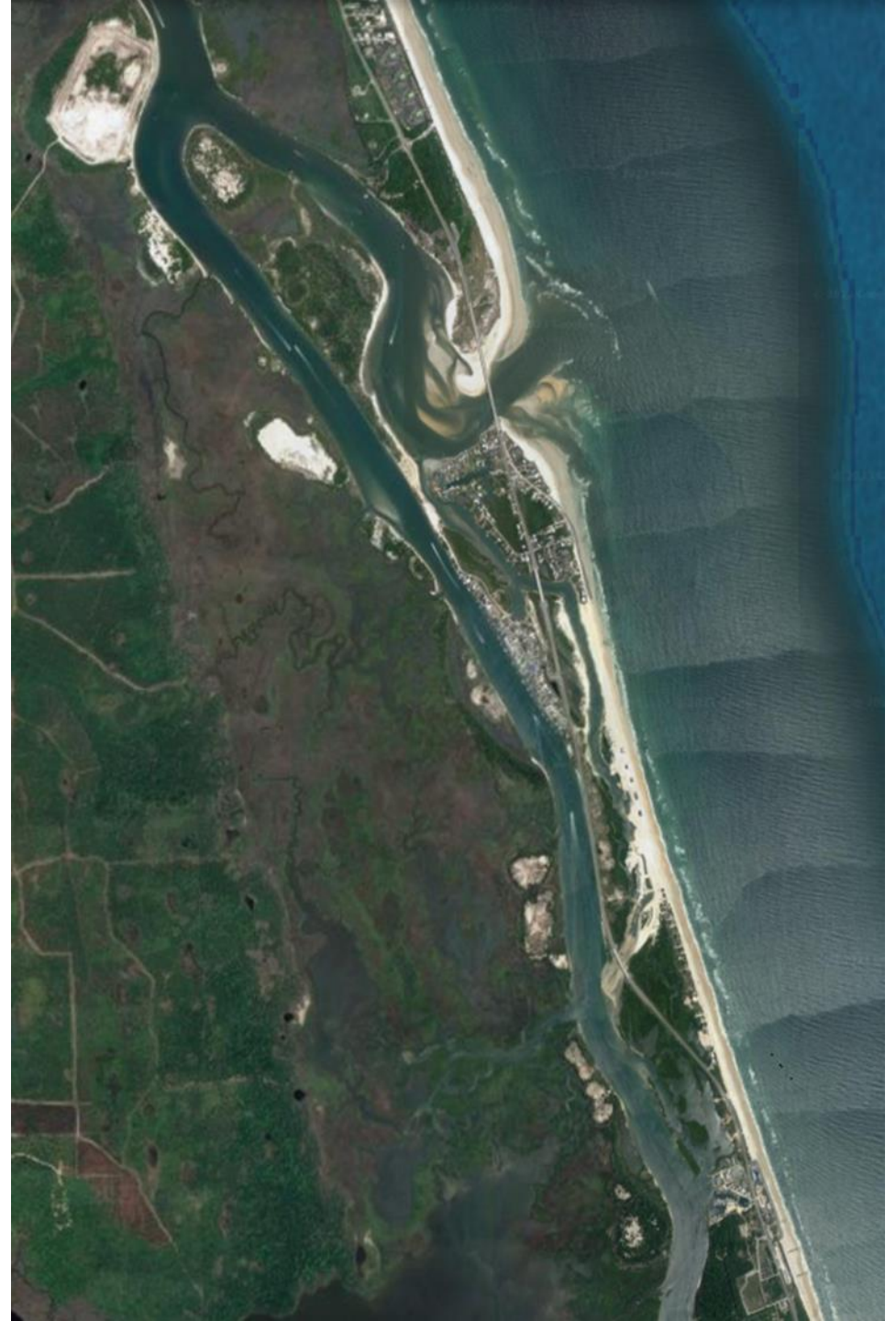
Future Decisions

Board of County Commissioners

- Approval and funding needed for additional movement towards alternatives or additional studies

USACE Participation

- Congressional action necessary to authorize and fund new feasibility study



Questions and Discussion



