

# St. Augustine, Florida Back Bay Coastal Storm Risk Management (CSRM) Feasibility Study

## MONTHLY PROGRESS MEETING *SEPTEMBER 2024*

**PLEASE MUTE YOUR PHONE AND COMPUTER  
TO AVOID BACKGROUND DISRUPTIONS.**

**WE WILL START PROMPTLY AT 1:05**

### **Presented by:**

Jason Harrah, Senior Project Manager (Jacksonville District, USACE)

Marty Durkin, Planning Technical Lead (Jacksonville District, USACE)

Jessica Beach, Chief Resiliency Officer (City of St. Augustine)



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EST. 1565



# AGENDA



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- Opening Remarks
- Study Overview
- Overall Study Schedule & Budget
- Initial Alternative Features Overview
- Schedule Updates (90-Day Window)
- Discipline Specific Study Updates
- Upcoming Public Engagements
- Sponsor Remarks
- Agency Questions/Comments
- Public Comments
- Closing Remarks



## Study Neighborhoods



## Study Authority: House Resolution 2646 (June 21, 2000): St. Johns County, Florida

Resolved by the Committee on Transportation and Infrastructure of the United States House of Representatives, That in accordance with Section 110 of the River and Harbor Act of 1962, the Secretary of the Army, acting through the Chief of Engineers, is **requested to survey the shores of St. Johns County, Florida**, with particular reference to the advisability of providing beach erosion control works in the area north of St. Augustine Inlet, the shoreline in the vicinity of Matanzas Inlet, and adjacent shorelines, as may be necessary in the interest of **hurricane protection, storm damage reduction, beach erosion control, and other related purposes.**

## Non-Federal Sponsor: City of St. Augustine (COSA)

POC: Jessica Beach, P.E., Chief Resilience Officer, [jbeach@citystaug.com](mailto:jbeach@citystaug.com)

## Study Area

- Entire COSA Municipal Boundary
- 17 Distinct Neighborhoods
- 3 Separate Land Masses
- Interconnected Water Bodies

## Objectives to be achieved within the City of

St. Augustine over a 50-year period of analysis from 2035-2085 are to...

1. Manage risk of coastal flood damages.
2. Manage risk to health and life-safety.
3. Manage risk to cultural and natural resources.
4. Manage flooding impacts to the local economy.



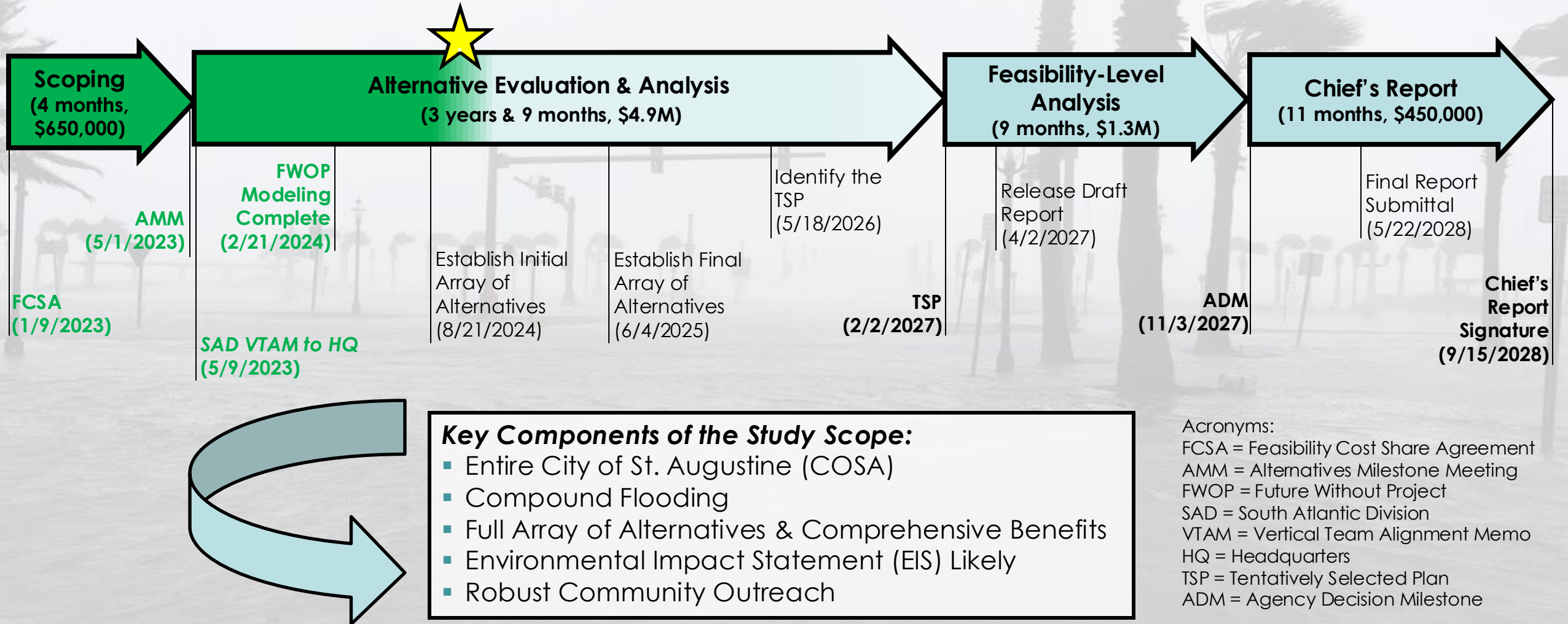
# STUDY OVERVIEW

★ We Are Here



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Schedule & Budget Overview: **5 years & 9 months, \$7.3M, Cost Share ~50% Fed, 50% Sponsor**



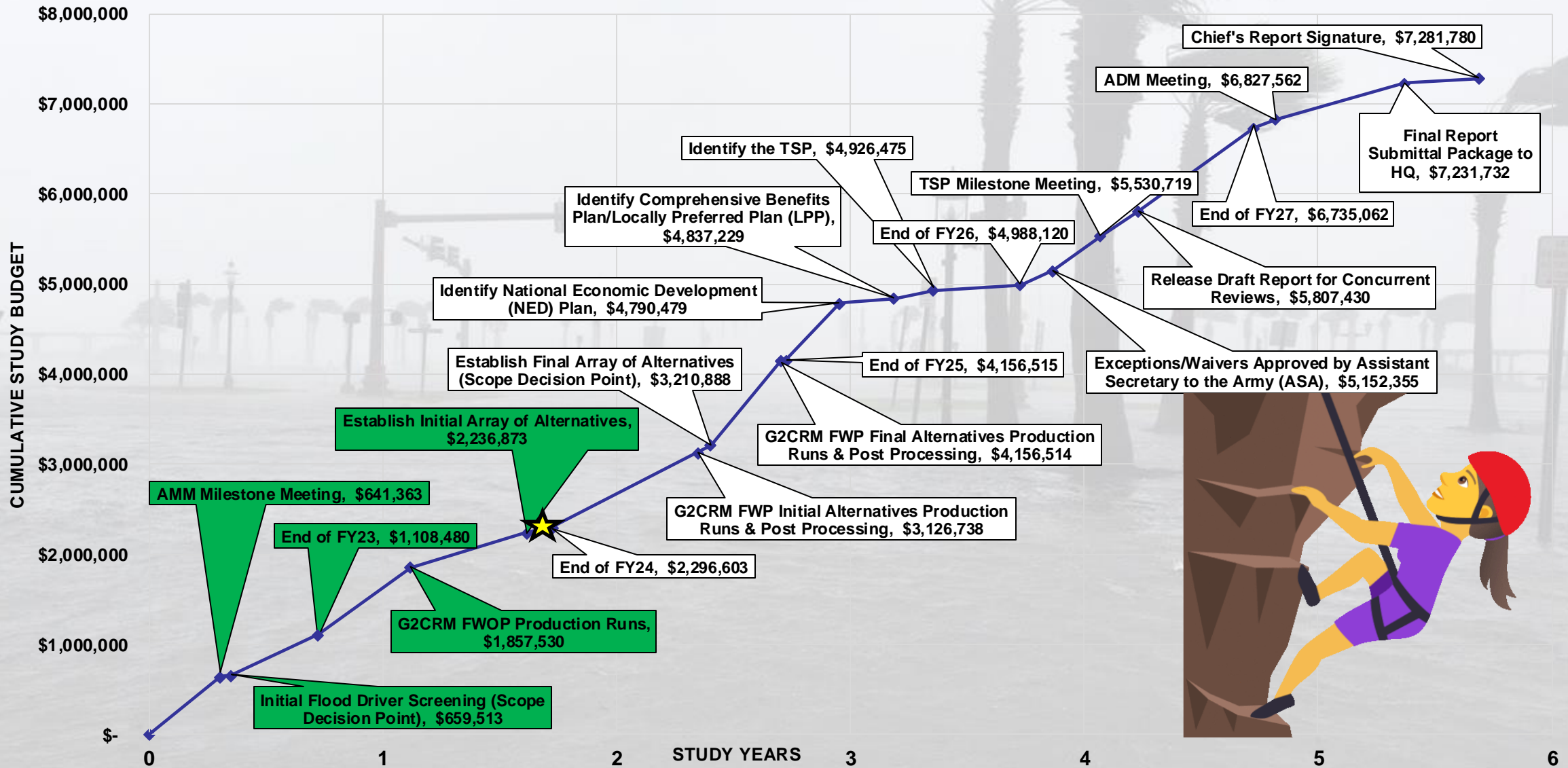




# STUDY SCHEDULE & BUDGET



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# Initial Alternative Features Overview



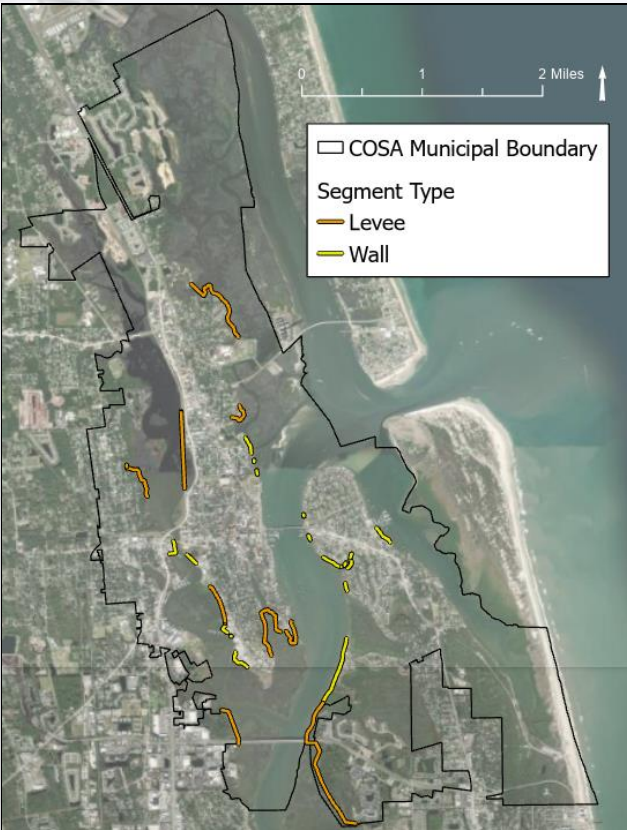
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Measure Category & Function	Feature Type & Description	Design Elevation (feet NAVD88)
<b>Wall / Levee</b> features stop flooding at the back bay shoreline.	<ul style="list-style-type: none"><li>- Walls would be used in areas where walls currently exist or where deep open water exists along the shoreline.</li><li>- Levees would be used in areas where enough footprint exists to support the width of a levee and where it could be combined with saltwater marsh features.</li></ul>	5-13
<b>Surge Barrier Systems</b> including various surge gates in combination with walls/levees/dunes stop flooding before it gets into the back bay waters.	<ul style="list-style-type: none"><li>- Surge Barrier Systems would combine gates across inlets and/or rivers that would close during storms along with walls, levees, and/or dunes to tie the system into high ground.</li></ul>	13-15
<b>Nonstructural</b> features reduce flood risk without directly effecting flooding processes.	<ul style="list-style-type: none"><li>- Elevation of up to approximately 4,700 single family residential structures.</li><li>- Floodproofing of up to approximately 3,200 commercial, public, or multifamily structures up to 3 feet above the ground elevation.</li><li>- Critical infrastructure could be elevated or floodproofed.</li><li>- Buyout and relocation could be used in certain locations.</li></ul>	5-15
<b>NNBFs</b> can reduce wave energy before it gets to the back bay shoreline.	Approximately 2,904 acres where salt marsh could be maintained or enhanced through thin layer placement, grass planting, and oyster reef creation along the western shoreline of the San Sebastian River.	N/A

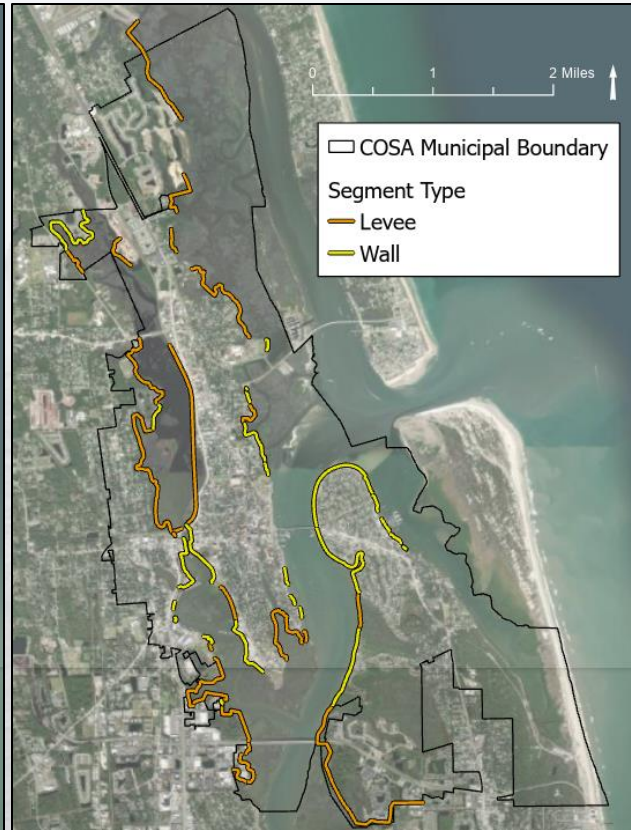


\*Design elevations in reference to NAVD 88

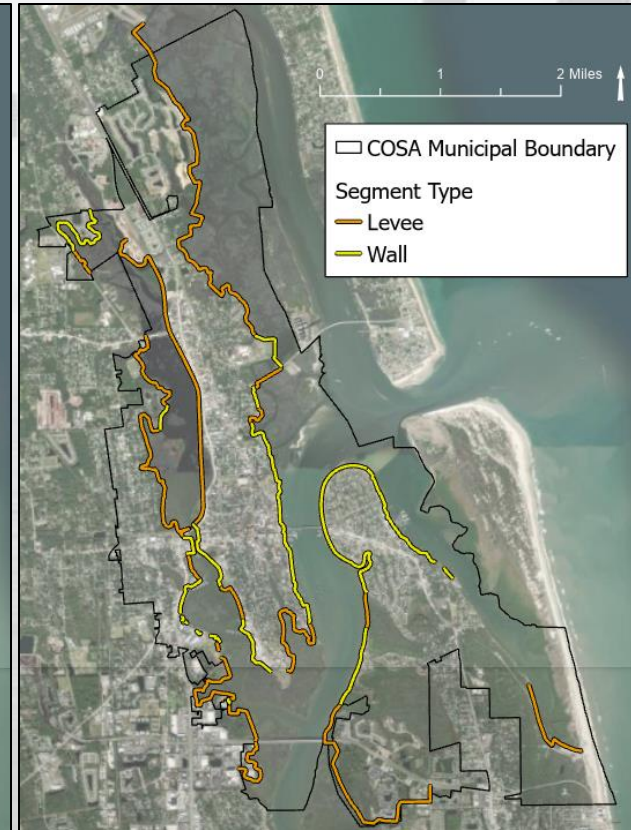
**5' Design Elevation**  
~2.0 miles of wall  
~5.1 miles of levee



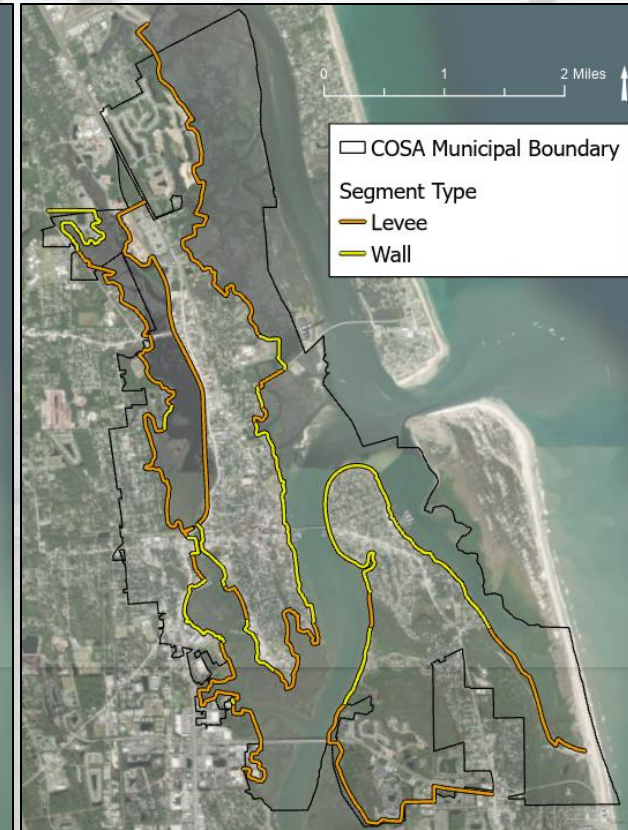
**7' Design Elevation**  
~7.5 miles of wall  
~13.6 miles of levee



**9' Design Elevation**  
~9.5 miles of wall  
~17.8 miles of levee



**11/13' Design Elevation**  
~10.9 miles of wall  
~20.9 miles of levee







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# WALL/LEVEE FEATURES

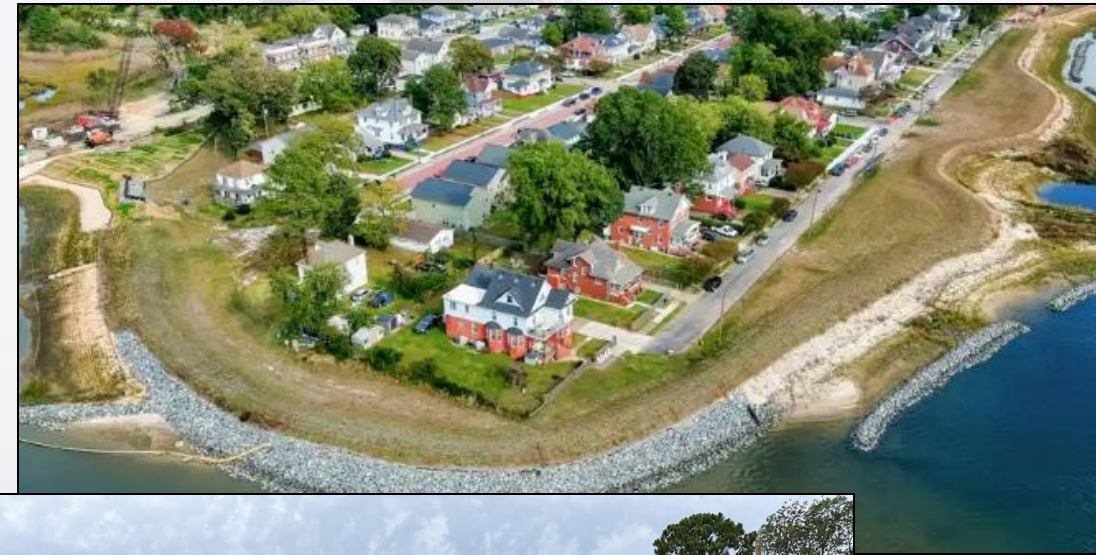


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Various Wall Examples



Ohio Creek Levee, Virginia



Delivering Value To

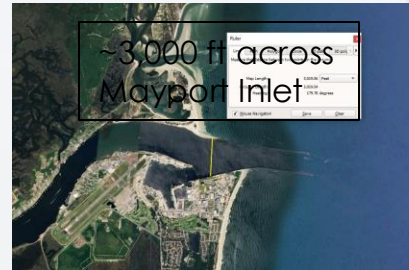


# SURGE BARRIER SYSTEM

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## Atlantic Coast Surge Barrier:

Gates at Mayport, St. Augustine, Matanzas inlets.  
1.5 miles of surge gates across 3 inlets and 48.4 miles of wall/dune barrier along coastline between the gates and tying into high ground.



Galveston Surge Barrier Design Rendering, Texas



Rotterdam Surge Barrier, Netherlands





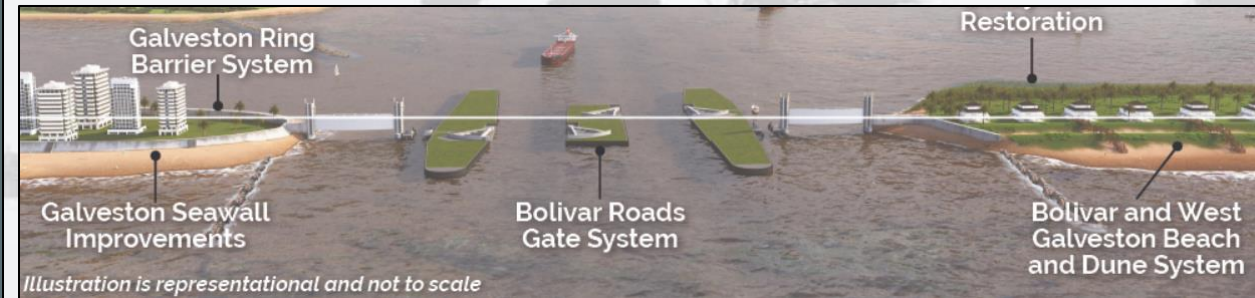
## City Surge Barrier:

Gates at the St. Augustine Inlet and IWW north and south of the city.

1.1 miles of surge gates across waterways and 17.4 miles of wall/levee/dune barrier between the gates and tying into high ground.



Galveston Surge Barrier Design Rendering, Texas



New Orleans Sector Gate



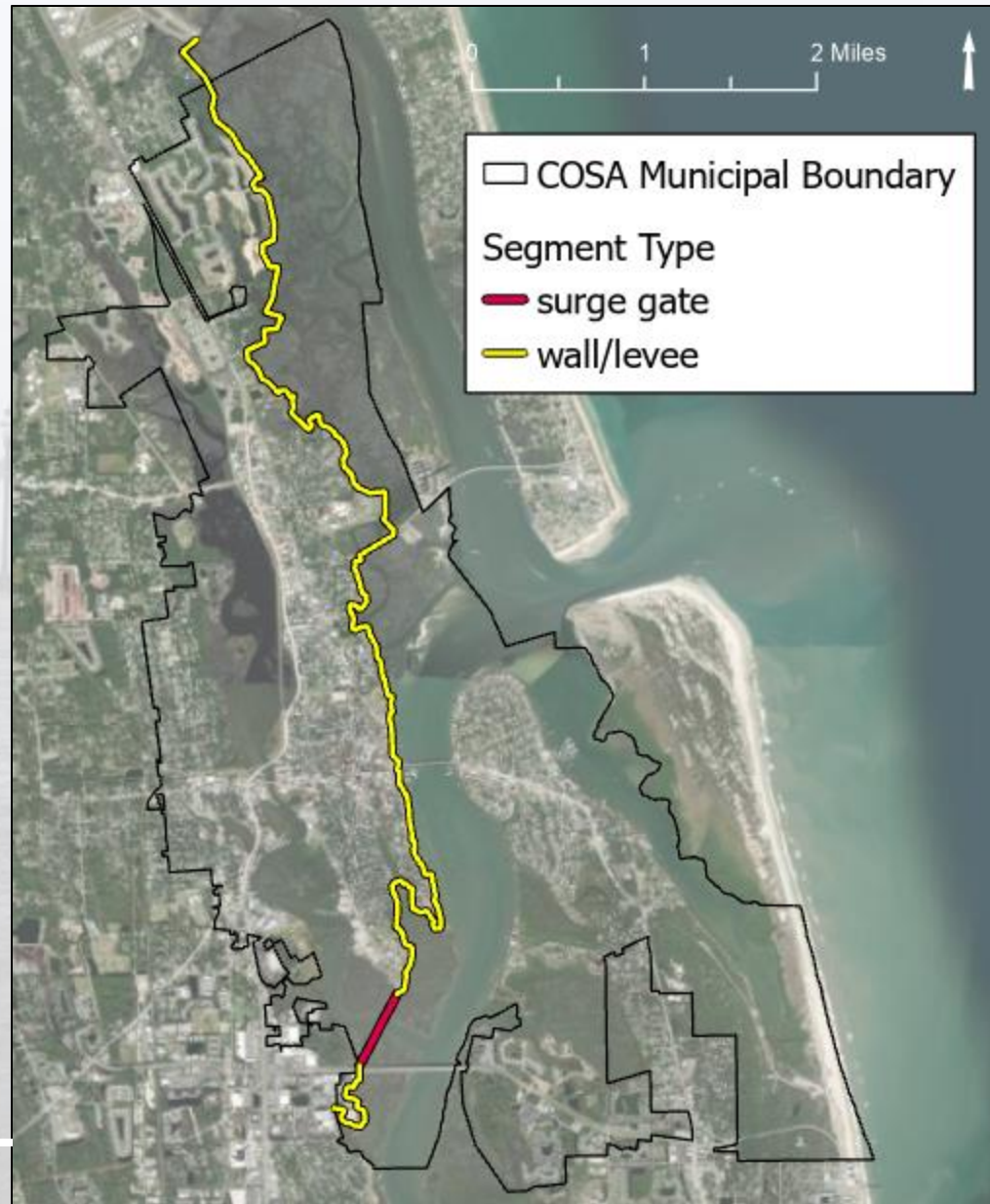


# SURGE BARRIER SYSTEM

## San Sebastian River Surge Barrier:

Gate at entrance of San Sebastian River combined with wall/levee around rest of the Downtown Peninsula and Wester San Sebastian model areas.

0.5 miles of gate(s) across San Sebastian River and 9.1 miles of wall/levee/dune barrier tying into high ground.



New Orleans Sector Gate





# NONSTRUCTURAL FEATURES

~4,700 residential structures that could be elevated.



~3,200 commercial & public structures that could be floodproofed.





~3,000 acres where salt marsh could be maintained or enhanced.

## Potential Features:

- Spartina Marsh
- Juncus Marsh
- Mangroves
- Oyster Reef
- Oyster Shells
- Seagrass Planting
- Living Shoreline
- Sand Placement (such as dunes or berms)
- Breakwaters
- Seawalls
- Etc.



Above & Below: Renderings showing NBSs used in combination with wall/levee features.





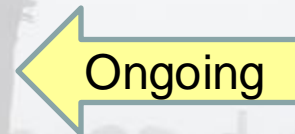
# PATH FORWARD

## KEY SCHEDULE ACTIVITIES - LOOK AHEAD



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Key Activities	Finish Date
FCSA Executed	1/9/2023
AMM Milestone Meeting	5/1/2023
Initial Flood Driver Screening (Scope Decision Point)	5/17/2023
End of FY23	9/30/2023
G2CRM FWOP Production Runs	2/21/2024
Establish Initial Array of Alternatives	8/21/2024
End of FY24	9/30/2024
G2CRM FWP Initial Alternatives Production Runs & Post Processing	5/15/2025
Establish Final Array of Alternatives (Scope Decision Point)	6/4/2025
G2CRM FWP Final Alternatives Production Runs & Post Processing	9/22/2025
End of FY25	9/30/2025
Identify National Economic Development (NED) Plan	12/22/2025
Identify Comprehensive Benefits Plan/Locally Preferred Plan (LPP)	3/17/2026
Identify the TSP	5/18/2026
End of FY26	9/30/2026
Exceptions/Waivers Approved by Assistant Secretary to the Army (ASA)	11/20/2026
TSP Milestone Meeting	2/2/2027
Release Draft Report for Concurrent Reviews	4/2/2027
End of FY27	9/30/2027
ADM Meeting	11/3/2027
Final Report Submittal Package to HQ	5/22/2028
Chief's Report Signature	9/15/2028



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# UPCOMING PUBLIC ENGAGEMENT



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Dates	Events
September 19 <sup>th</sup> , 2024 @ 1:00pm	Monthly Webinar
October 23 <sup>rd</sup> , 2024	In Person Public Workshop Lightner Museum (Alcazar Room) 75 King St.
November 21 <sup>st</sup> , 2024 @ 1:00pm	Monthly Webinar
December 19 <sup>th</sup> , 2024 @ 1:00pm	Monthly Webinar
January 16 <sup>th</sup> , 2025 @ 1:00pm	Monthly Webinar



# DISCIPLINE SPECIFIC UPDATES/ACTIONS



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- **Planning Technical Lead:** Marty Durkin
- **Engineering Technical Lead:** Patrick Snyder
- **Economics Lead:** Vongmony Var
- **Environmental Lead:** Katie Lebow
- **Cultural Resources Lead:** Zuzana Chovanec
- **Real Estate Lead:** Chris Bukolt
- **Office of Counsel:** Katie Gwin
- **Landscape Architecture Lead:** Sabrina Collins





# PUBLIC OUTREACH (STUDY WEBSITE)



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St. Augustine Back Bay Study - V

experience.arcgis.com/experience/06bb9c98d9184bd9a374a244f6d27474/

\_USACE Finance Mapping News USACE Google

St. Augustine, FL Back Bay Coastal Study





Engineering Economics Environmental Cultural Resources Real Estate About

U.S. Army Corps of Engineers - Jacksonville District Main Website

## Welcome to the St. Augustine, Florida Back Bay Coastal Storm Risk Management (CSRM) Web Experience Homepage

Upcoming Events: Our Next Public Meeting will be held on October 4th, 2023 at 6:30pm. < Prev Next >

This Web Experience Homepage is a visual representation of the ongoing St. Augustine CSRM Study. During the study, this page will be updated with the latest information to include meeting agendas, minutes, graphics, etc. to keep the public and agencies engaged as partners in developing a long term solution to flooding within the City of St. Augustine.

### Page Contents

- Study Overview
- Plan Formulation
- Monthly Planning Meetings
- Interactive Map
- Public Meetings/Workshops
- News, Social Media, Helpful Links
- Scope, Schedule, and Budget
- Contact Information

For better viewing experience, please use Google Chrome or Mozilla Firefox browsers. Also, please use a PC to interact with the web experience homepage.

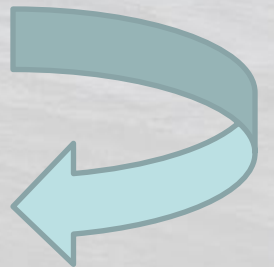
ArcGIS Experience Builder technology animates the complicated concepts considered by the design team by allowing users to:

- See the improvements and reduced flooding impacts from this study in the City of St. Augustine (COSA)
- Experience the various alternatives and recommended plan with detailed artistic graphics and renderings
- Examine Engineering, Economic, Cultural, and Key Environmental Features

## STUDY OVERVIEW

Study Authority

This study is being conducted under the authority from the June 21, 2000, House Resolution 2646 that granted authority for a Coastal Storm Risk Management (CSRM) study in St. Johns County, Florida:  
"Resolved by the Committee on Transportation and Infrastructure of the United States House



<https://experience.arcgis.com/experience/06bb9c98d9184bd9a374a244f6d27474/>

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# PUBLIC OUTREACH (SPONSOR SITES)



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## Submit Public Comment

US Army Corps of Engineers Jacksonville  
District: St. Augustine Florida Back Bay  
Feasibility Study

Scoping Meeting and Comment Period  
Notice Letter for USACE St. Augustine  
Back Bay Coastal Storm Risk Management  
(CSRM) Feasibility Study (PDF)

[Home](#) > [Government](#) > [Resiliency](#) > [Planning/Studies](#) > Back Bay Feasibility Study with the Army Corps of Engineers

## Back Bay Feasibility Study with the Army Corps of Engineers

The objectives of the study include (1) reduce flooding caused by coastal storms, extreme high tides, and future projected sea level rise in the study area; (2) explore opportunities to increase community resiliency from future coastal storms. Issues that are anticipated include concern for aesthetics, cultural resources, recreation, socioeconomic, environmental justice, wetlands, fish and wildlife resources, threatened and endangered species, and water quality. CSRM measures to be evaluated may include a combination of structural (i.e., tidal gates, seawalls, revetments, levees, drainage improvements, building elevation, etc.), non-structural (i.e., relocation, buyouts, etc.), and natural and nature-based features (i.e., living shorelines, vegetated features, oyster reefs, and maritime forests). Public Comments will be accepted throughout the life of the study.

Back Bay Signing Ceremony January 9th, 2023



## Submit Public Comment



Email: [BackBay@citystaug.com](mailto:BackBay@citystaug.com)



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of Engineers**®  
Jacksonville District

[Jacksonville District Website](#)

[Monthly Project Delivery Team \(PDT\) Meetings](#)

## Social Media

<https://www.instagram.com/citystaug/>  
<https://www.facebook.com/citystaug>  
<https://twitter.com/citystaug>





# PUBLIC OUTREACH



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## St. Augustine, Florida, Back Bay CSRM Feasibility Study Monthly Planning Webinar Aug. 15, 2024, 1-2:30 p.m.

Presented by U.S. Army Corps of Engineers  
and the City of St. Augustine

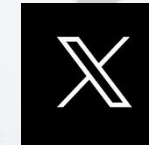
Join online

<https://usace1.webex.com/meet/jason.s.harrah>

Call in

Dial 1-844-800-2712

Enter access code 199 927 9909







# CLOSING REMARKS/QUESTIONS



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- **Sponsor Remarks**
- **Federal Agency Questions/Comments**
- **State Agency Questions/Comments**
- **Local Agency Questions/Comments**
- **Public Comments**