

# Setting the Stage – The Evolving Role of SERPPAS in Coastal Resilience & Regional Adaptation

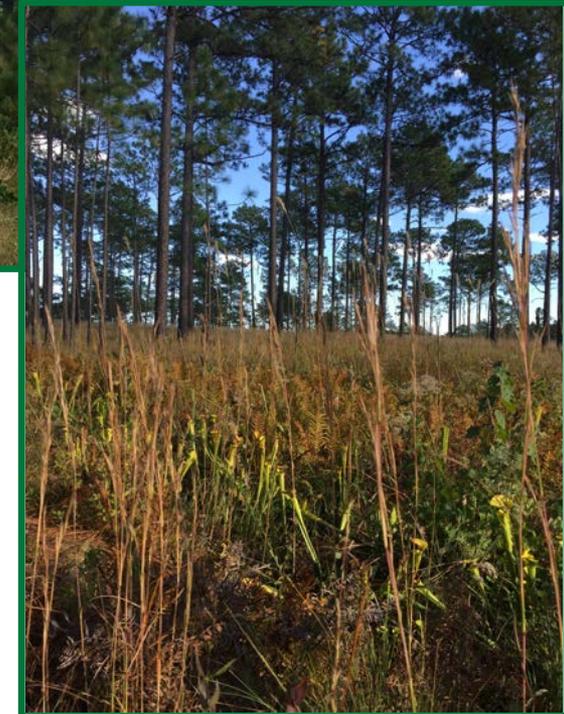
Addie Thornton

SERPPAS Coordinator



Setting the Stage

# SERPPAS Coastal Resilience & Regional Adaptation



Southeast Regional Partnership for  
Planning and Sustainability (SERPPAS)



# Building Resilience Partnerships and Capacity

- Understanding the climate related threats to DoD – focus on the natural and built environment
- Identified the interdependent and connected “ecosystem” of installations and communities
- Partnered with GA Sea Grant to build relationships between regional and local partners
- DoD Authorities updated to address ‘Military Installation Resilience’
- Project opportunities with DoD OEA and DoD REPI
- DoD Guidance to incorporate climate change impacts into installations planning, facilities management and natural resource management



# Advancing Readiness & Resilience

- Developing partnership with Pew Charitable Trusts
- Supporting NFWF, REPI and other coastal resilience projects
- Submitting proposal for Coastal Resilience & DoD Liaison through National Sea Grant Program
- USGS Work group lead!
- NOAA Principal Agency



Southeast Regional Partnership for  
Planning and Sustainability (SERPPAS)



# Sapling & Mature Stage

## Future Direction

- Building out the SERPPAS layers on the REPI Map to incorporate resilience data
- Integrating coastal resilience into Sentinel Landscapes in the SE
- Continue to advance partnerships with Sea Grant, Pew and others
- Share resources, tools and lessons learned with a focus on nature based solutions
- Foster strategic planning, collaboration and coordination on coastal resilience in the region
- SERPPAS Vision: Establishing a collaborative program to work with coastal and marine stakeholders to protect and sustain military compatible shoreline and marine space, the coastal economy and natural resources in the Southeast Region.



Southeast Regional Partnership for  
Planning and Sustainability (SERPPAS)





***Marine Corps  
Installations  
East***



**MARINE CORPS INSTALLATIONS EAST  
MARINE CORPS AIR STATION – CHERRY POINT**

**LIVING SHORELINES  
MCAS CHERRY POINT**

**SERPPAS COASTAL RESILIENCE SESSION**

**16 SEP 2020**



# Marine Corps Installations East



Browser: <https://repimap.org/>

REPI Interactive Map

Readiness and Environmental Protection Integration Program

ArcGIS World Geocoding

Measurement Result: 0 Sq Miles

Layer List

- REPI Military Installations and Ranges
- Other Military Installations and Ranges
- REPI State Summaries and Policy Options
- REPI Partnership Opportunity Areas
- Military Training Routes (MTRs)
- Special Use Airspaces (SUAs)
- Joint Land Use Studies (JLUS)
- Clear Zones (CZ) and Accident Potential Zones (APZ)
- Sentinel Landscapes
- Middle Chesapeake
- JBLM
- Georgia
- Fort Huachuca
- Eastern North Carolina
- Avon Park Air Force Range
- Camp Ripley
- SERPPAS
- Longleaf Pine Historic Distribution
- SERPPAS Military Mission Footprint

Hosted by Texas A&M University and managed by Booz Allen Hamilton for the REPI Program. Questions? [Contact us here](#). This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the database may be reflected on this map. This information is not intended for use for legal boundary definitions, regulatory interpretation, military training, or parcel-level analysis. The user of this information must be aware of data conditions and ultimately bear responsibility for the appropriate use.

Natural Resources Institute | Carteret County, State of North Carolina DOT, Eri, HERE, Garmin, NGA, USGS, NPS



# Marine Corps Installations East



Browser: <https://repimap.org/>

REPI Interactive Map

Readiness and Environmental Protection Integration Program

Map: ArcGIS World Geocoding

Measurement Result: 1 Sq Miles

Layer List:

- Full List
- Favorites
- Add Layer from map service or zipped shapefiles:
  - URL:
  - Add
- Upload zipped shapefiles (44,000 total features):
- User Added
- Military
  - REPI Military Installations and Ranges
  - Other Military Installations and Ranges
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Natural Resources Institute | Earthstar Geographics | State of North Carolina DOT, Esri, HERE, Garmin |



# Marine Corps Installations East



Browser: <https://repimap.org/>

Navigation: REPI Interactive Map | SLD/CADA | MCAT 2.0 | DCPDS | Login | REPI SSO | ACCIPITER-COP | Mandatory Training | MCALF-BOGUE | MCAS Cherry Point - Home | MCICOM Portal - Home | Readiness and Environme... | Shared Documents | myPay | TWMS

### REPI Interactive Map

Readiness and Environmental Protection Integration Program

ArcGIS World Geocoding

Measurement Result: 0.5 Sq Miles

#### Layer List

Add Layer from map service or zipped shapefiles:

URL:

Add

Upload zipped shapefiles (<4,000 total features):

User Added

- Military
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# *Marine Corps Installations East*





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# Marine Corps Installations East



Browser: <https://repimap.org/>

REPI Interactive Map

Readiness and Environmental Protection Integration Program

ArcGIS World Geocoding

Measurement Result: 0 Sq Miles

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Natural Resources Institute | Microsoft | State of North Carolina DOT, Esri, HERE, Garmin, Inc

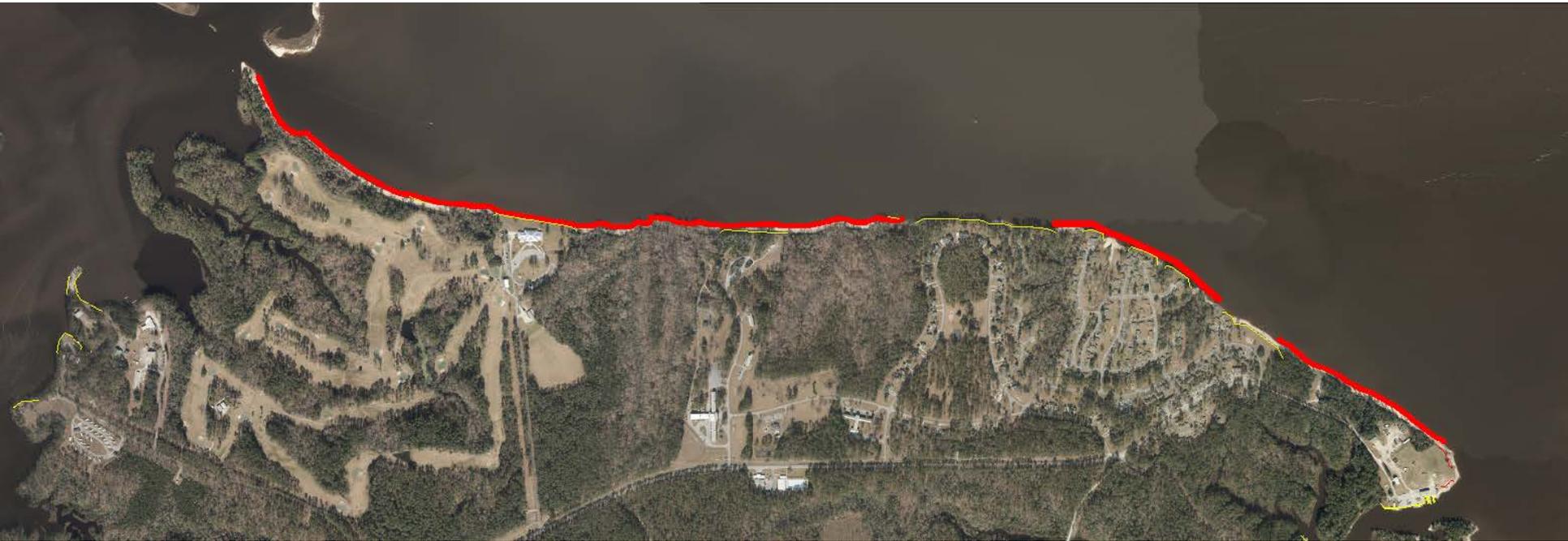


# Marine Corps Installations East





# *Marine Corps Installations East*





# Marine Corps Installations East



https://repimap.org/

REPI Interactive Map

Readiness and Environmental Protection Integration Program

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Measurement Result

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Upload zipped shapfiles (<4,000 total features): Upload

User Added

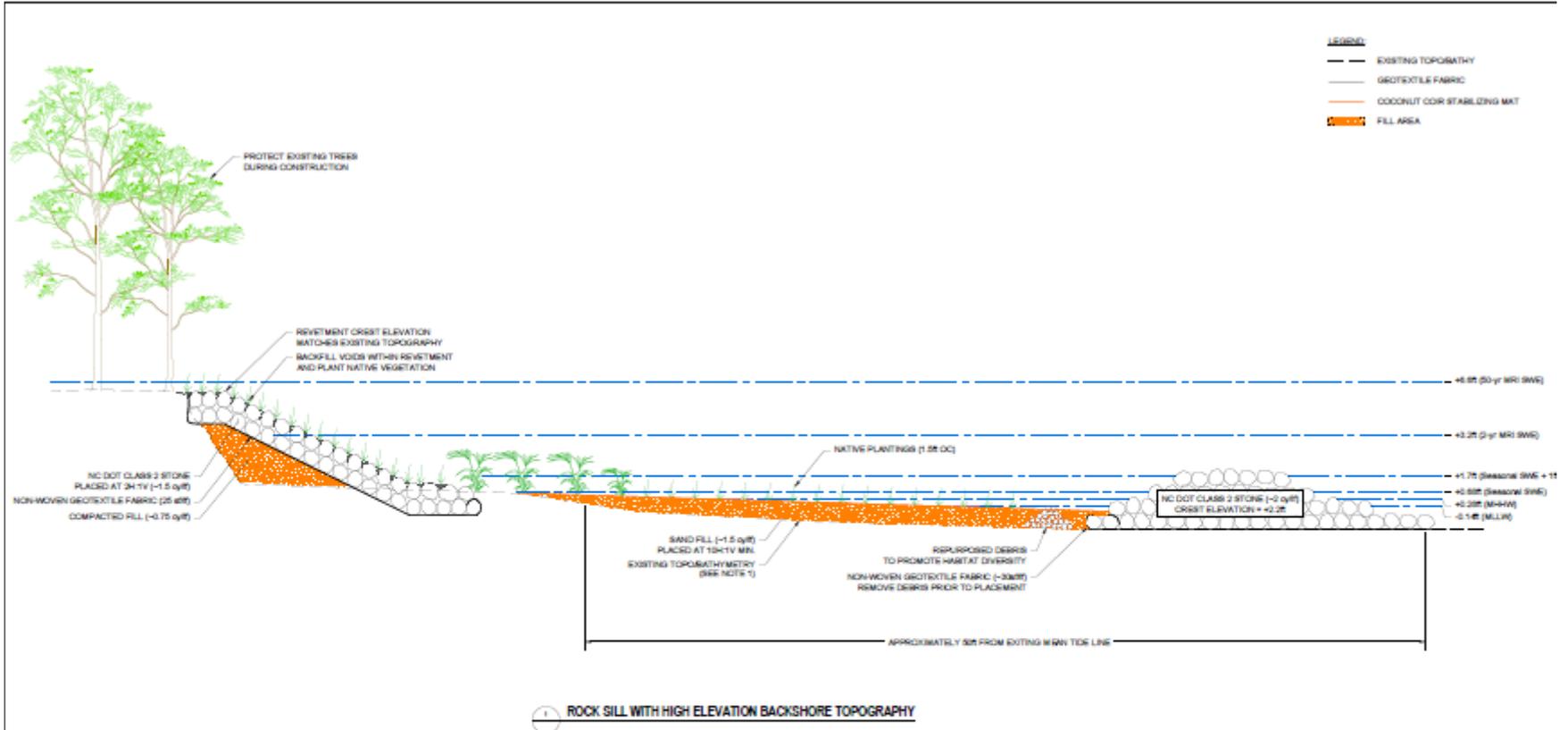
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# Marine Corps Installations East



1 ROCK SILL WITH HIGH ELEVATION BACKSHORE TOPOGRAPHY

**GENERAL NOTES:**

1. THE EXISTING TOPOGRAPHY & BATHYMETRY SHOWN IN THE TYPICAL SECTION WAS APPROXIMATED BASED ON DATA OBTAINED FROM THE NOAA OFFICE FOR COASTAL MANAGEMENT COASTAL FUNDATION DIGITAL ELEVATION MODEL AND FIELD OBSERVATIONS MADE BY GHD ON JULY 11th, 2016.
2. ALL QUANTITIES ARE APPROXIMATE.
3. ALL ELEVATIONS ARE REFERENCED TO NAVD83.

<p>No. Issue Date</p>				<p>Revised as indicated &amp; approved by:</p>		<p>GHD INC. 2500 Pegasus Parkway, Suite 10 Washington, DC 20008 TEL: 800.852.8100 www.ghd.com</p>		<p>Drawn: JAMES DAVIS Design: JAMES DAVIS Check: MICHAEL SAMMETT Project Manager: MICHAEL SAMMETT Date: 08/27/2016</p>		<p>Client: LG ENVIRONMENTAL SOLUTIONS, INC. Project: Marine Corps Air Station Cherry Point Title: Living Shoreline Feasibility Study Project No.: 11181401 Scale: 3/4"=1' Sheet No.: C-302 TYPICAL SECTIONS</p>		<p>Sheet 8 of 10</p>
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**Tyndall Air Force Base**  
*Installation of the Future*

**Coastal Resilience Overview**

**28 Aug 2020**

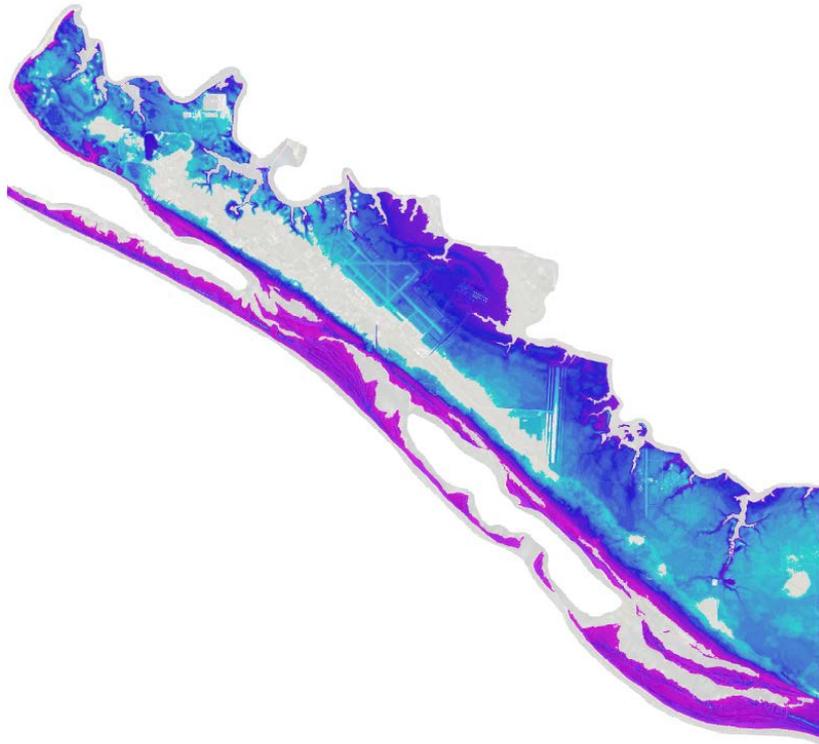


# Coastal Resilience Strategy--Tyndall AFB



## Vertical and Horizontal Infrastructure

### Design Flood Elevation



### Wind Load Standards

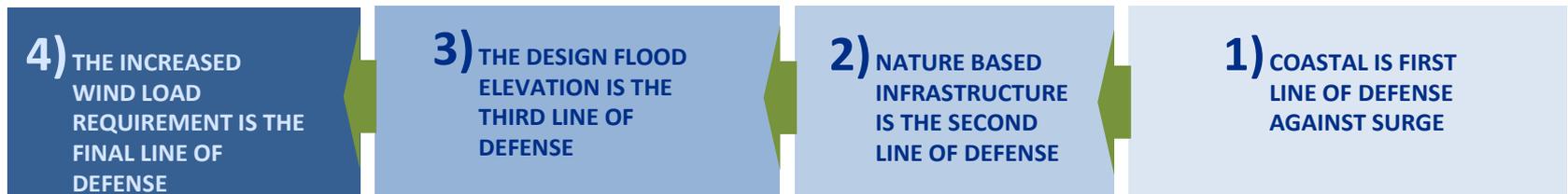


# Coastal Resiliency and Risk Mitigation

## The Treatment Train for Stormwater Management



## The Defense Train for Mission Assurance and Security



## Green and Grey Infrastructure



# Nature based coastal defenses – Pilot projects

Coastal defenses can involve Nature-Based approaches, used around the world.

At Tyndall, the idea is to trial nature-based coastal defenses that could be upscaled to further reduce flooding at the base.

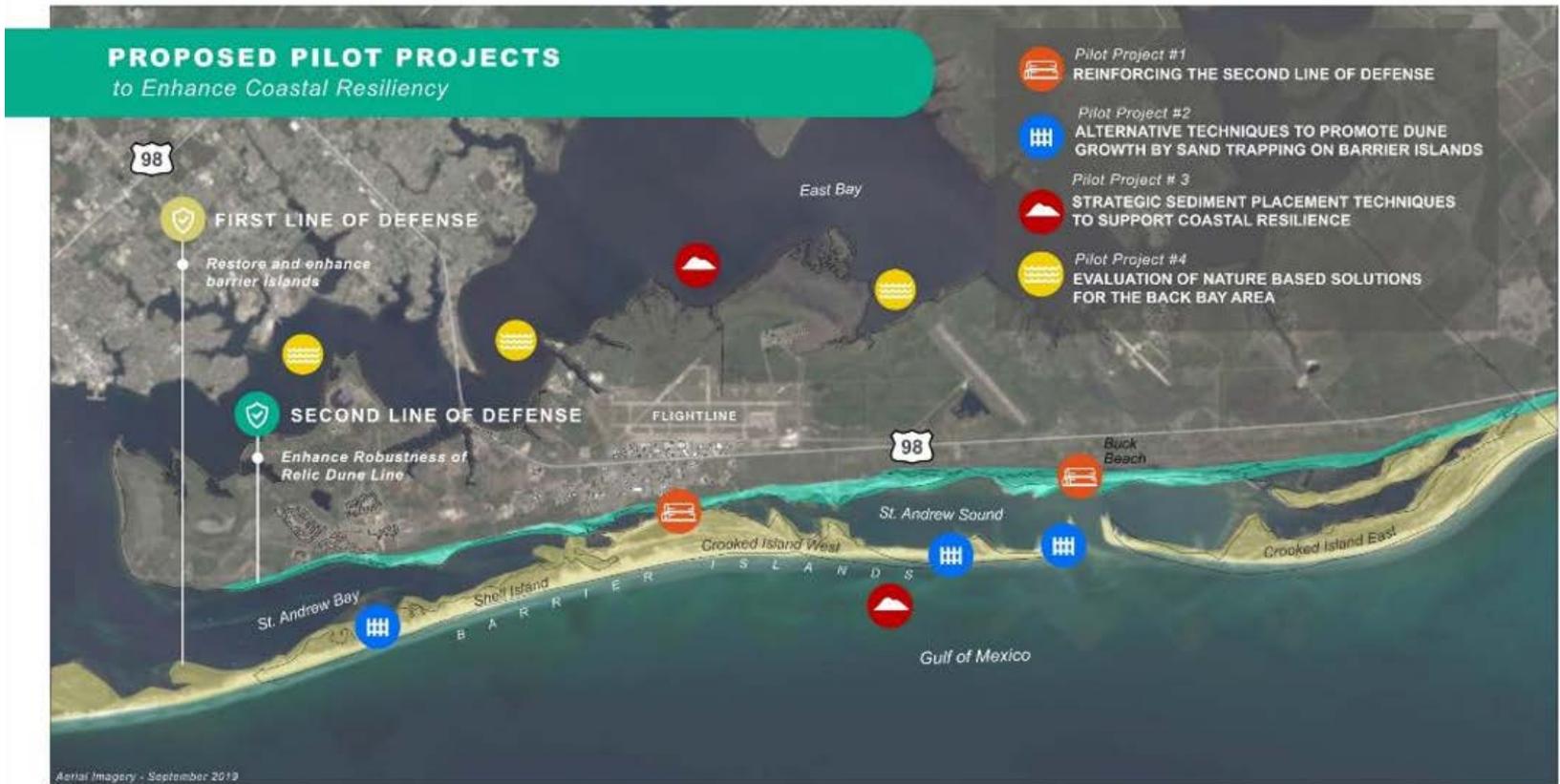
## **Benefits:**

- Reduced financial damages to buildings and infrastructure
- Reduced interruption to mission activities
- Enhanced habitats which brings a host of additional benefits



All pilot projects being discussed are pre-decisional and contingent upon regulatory approval

# Nature-Based Coastal Resilience - 4 Pilot Projects Planned



# Pilot Project #1 – Construction Projects

## Oyster Reef Construction

- Possible site: Buck Beach
- In near shore waters
- Approx. 3-ft water depth
- Approx. 1,000 ft long
- Top elev: 3 ft NAVD
- Side slopes: 3:1
- Rock structure with oyster balls and shells

Objectives: erosion control, flood risk reduction and habitat enhancement.

## Sand Dune Construction

- Possible site: Zone 4
- Avoids all environmental, social, stormwater and utility constraints.
- Approx. 500 ft long
- Top elev: 14 ft NAVD
- Side slopes: 5:1 and 10:1

Objectives: flood risk reduction.

\* Consider potential Bay County East Pass dredging project?

## Horizontal Levee Construction

- Possible site: near MSA
- Located in planted pine area
- Avoids wetlands, drainage and other constraints.
- Approx. 1,000 ft long x 600 ft
- Top elev: 12-14 ft NAVD
- Side slopes: 30:1 or flatter

Objectives: erosion control, flood risk reduction and habitat enhancement.

\* Maintain vehicular access.

## Marsh Enhancement

- Possible site: in back bay
- In near shore waters
- Approx. 3-ft water depth
- Expand existing marsh area
- Sediment and planting
- Approx. 1,000 ft long x 600 ft
- Top elev: up to MHHW

Objectives: erosion control, flood risk reduction and habitat enhancement.

\* Maintain drainage and flushing.



Gulf Side



Bay Side



# Pilot Project #2 – Sand Trapping (Crooked Island West)

## Sand Fencing

- 300 ft length, for comparison
- 4 ft high wood slat fencing
- Use V-pattern with 6-8 ft spacing for turtle ingress/egress
- Located in weak lines of defense

Objectives: promote sand dune growth to provide flood risk reduction.

## Woody Debris Placement

- 300-ft length, for comparison
- 900 CY of woody debris
- Grouped in 1,000 SF clusters to mimic other strategies for comparison
- Located on relic dunes

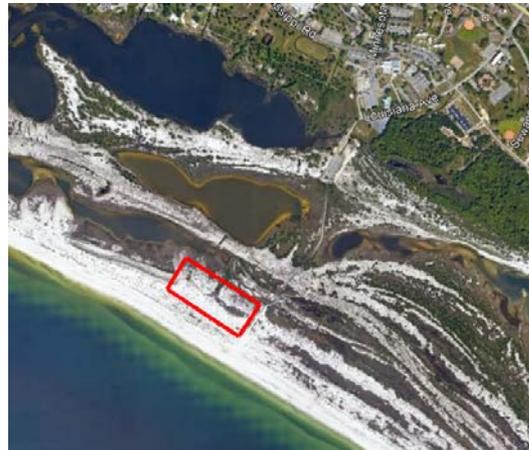
Objectives: promote sand dune growth to provide flood risk reduction.

## Vegetation

- 300 ft length, for comparison
- Plantings grouped in 1,000 SF clusters
- 0.36 acres total planted area
- Includes sea oats and groundcover
- Located on relic dunes

Objectives: promote sand dune growth to provide flood risk reduction.

## Potential Project Sites (not to scale)



## Potential Stakeholders and/or Partner Working Group Members

Potential Partners
TNC
Conservation International
World Wildlife Fund
USFWS
Florida FWC
Restore America's Estuaries
National Fish and Wildlife Foundation
Defenders of Wildlife
University of Florida
University of Georgia: Institute for Resilient Infrastructure
USACE
Engineer Research and Development Center
Construction Engineering Research Laboratory
Installation Readiness Division
Coastal Resilience Program/Mobile District
Environmental Laboratory

Potential Partners
FDEP
Resilient Coastline Program
Office of Resilience and Coastal Protection
Northwest District
Office of Ecosystem Restoration
Aquatic Preserve Program
FEMA
Office of Economic Adjustments
EPA (Region 4)
NOAA
Northwest Florida Water Management District
Bay County
St. Andrews State Park Aquatic Preserve
Southeast Conservation Adaptation Strategy (SECAS)
<b>Southeast Regional Partnership for Planning and Sustainability (SERPPAS)</b>
Strategic Environmental Research and Development Program (SERDP)
U.S. Department of Transportation - Federal Highway Administration
U.S. Geologic Survey (USGS)

### ***Partners Can Serve A Variety of Roles – Some Partners Can Have Multiple Roles***

Fellow Grantees, Technical Expertise, Grant Funds, Regulatory/Permitting Guidance, Programs/Partners

## Immediate Grant Opportunities & Partnerships

Name	Application Deadline	Amount	Eligibility
<b>National Fish &amp; Wildlife Foundation Coastal Resilience Program</b>	November 11, 2020	125,000 - \$3M	State, local, non-profit, academia
NOAA Ecological Effects of Sea Level Rise	Now	Modest funding available now	Academic, government, NGO
<b>FDEP Resilient Coastlines - Planning</b>	October 9, 2020	\$75,000 max	Florida communities and academia
<b>FDEP Resilient Coastlines - Implementation</b>	October 9, 2020	\$500,000 max	Florida communities and academia
FEMA Building BRIC	January 29, 2021	\$500M available nationally	Communities with Hazard Mitigation Plan, states, tribes

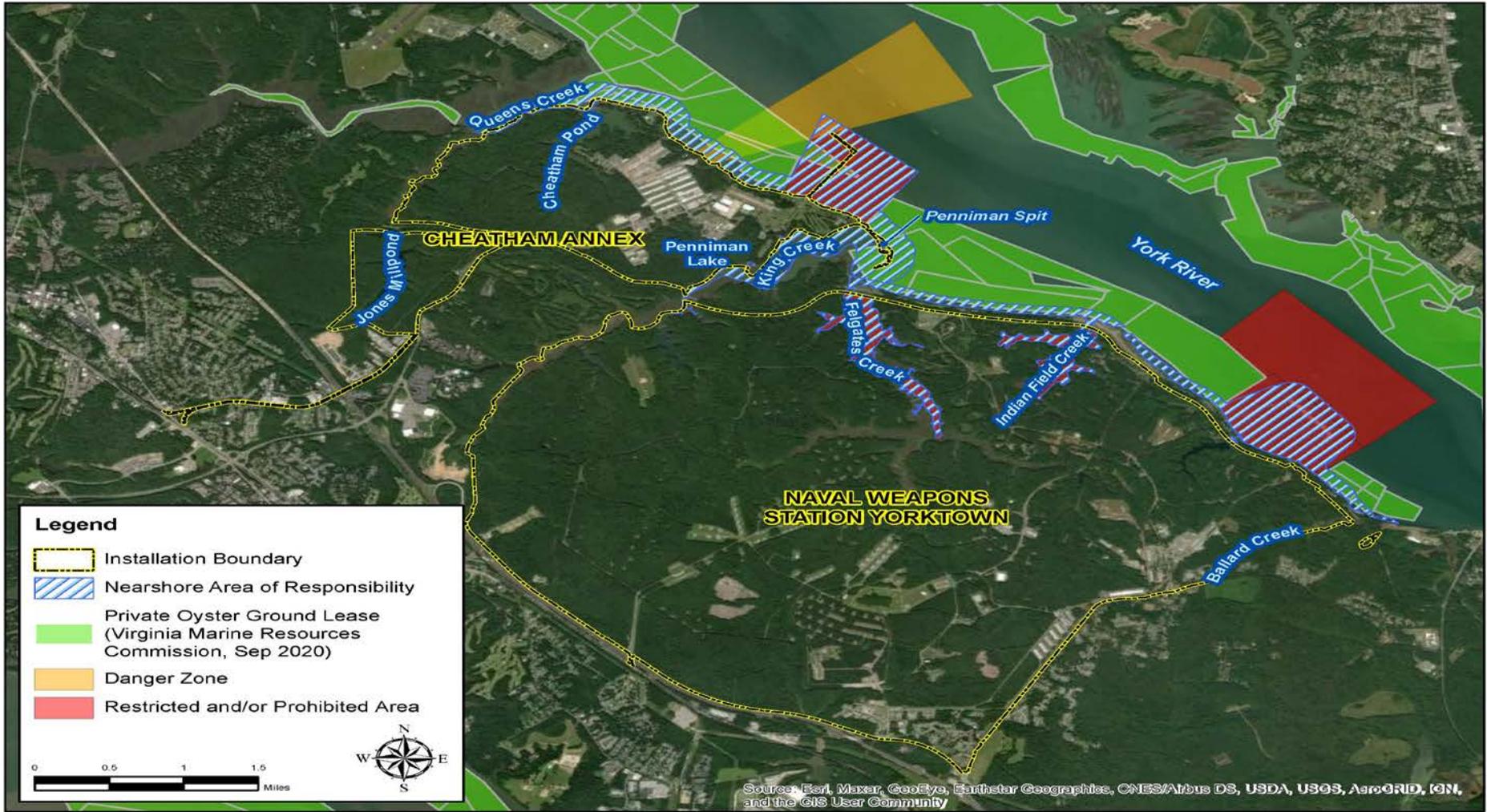
## Next Steps

### Current Work in Progress

1. Planning for Working Group Meeting in September
2. Year 1 Roadmap & Phase II Award
  - Schedule of activities
  - Grant applications
  - Quick win projects
  - Phase II RFP Released—Award expected NLT 30 Sep 2020
3. Partner Portal on Tyndall Coastal Resiliency Website

<http://tyndallcoastalresilience.com/>

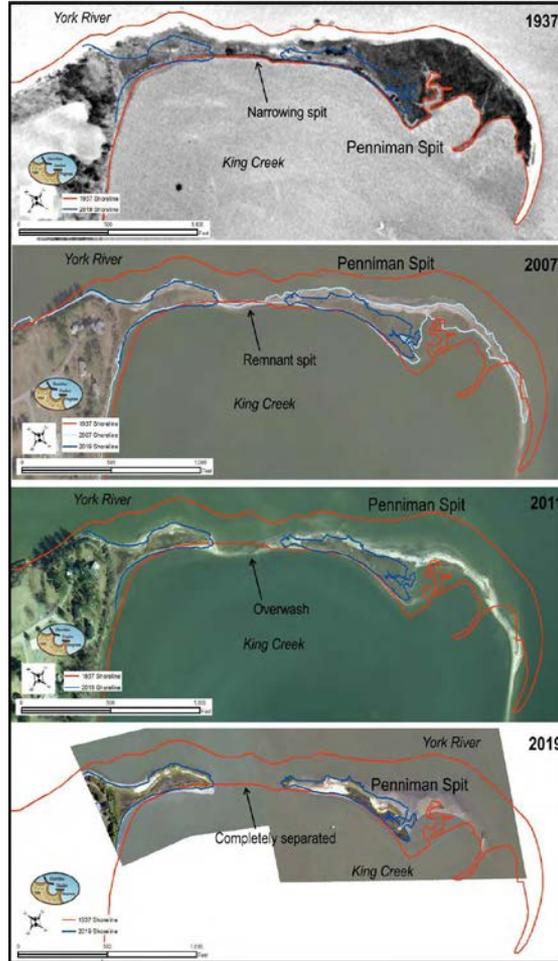




**Legend**

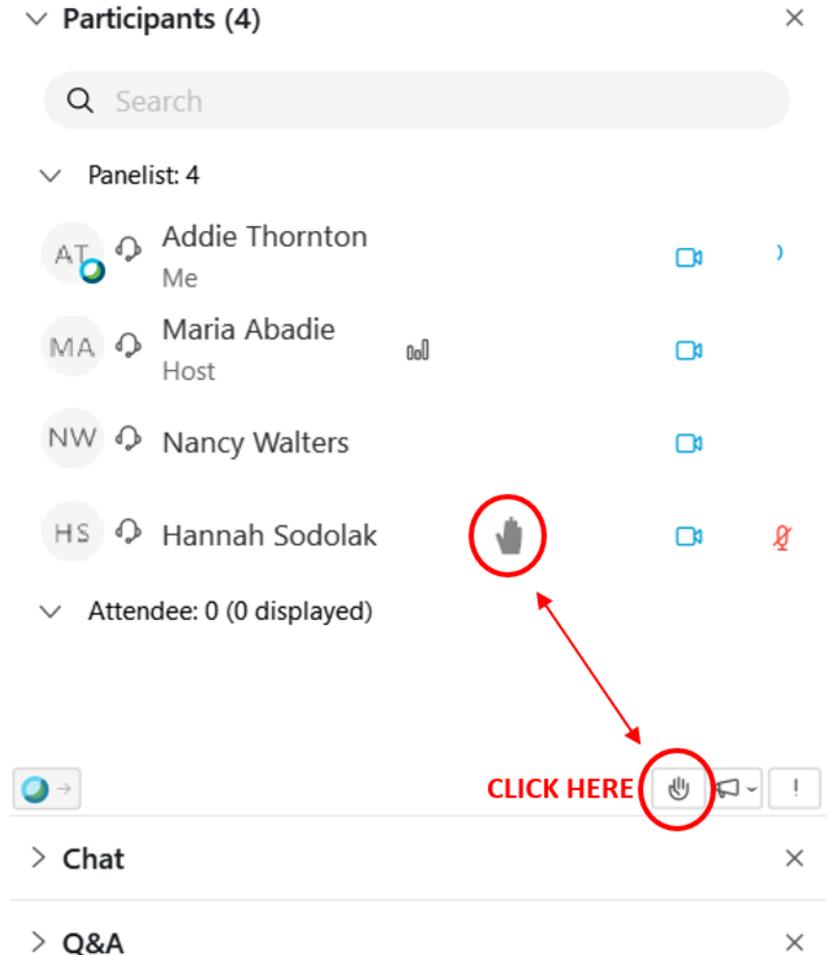
-  Installation Boundary
  -  Nearshore Area of Responsibility
  -  Private Oyster Ground Lease (Virginia Marine Resources Commission, Sep 2020)
  -  Danger Zone
  -  Restricted and/or Prohibited Area
- 0 0.5 1 1.5 Miles
- 

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



# SERPPAS Principals Discussion

- Use the raise hand feature to enter the dialogue
- Click the participants circle at the bottom of your screen
- In the right bottom corner of the participants box, click on the hand icon to raise your hand
- Keep your hand raised until you have been called on



The screenshot displays the Zoom meeting interface. At the top, the 'Participants (4)' section is expanded, showing a search bar and a list of four panelists: Addie Thornton (Me), Maria Abadie (Host), Nancy Walters, and Hannah Sodolak. Below the panelists, it indicates 'Attendee: 0 (0 displayed)'. At the bottom of the participants list, there is a toolbar with several icons. A red circle highlights the hand icon, and a red arrow points from it to the text 'CLICK HERE' which is also circled in red. Below the toolbar, there are sections for 'Chat' and 'Q&A', both with expandable arrows and close buttons.



# SERPPAS Principals Discussion

- How can SERPPAS influence the coastal resilience strategy through the NFWF – DoD partnership?
- What excites or concerns you about the SERPPAS actions on coastal resilience and regional adaptation?
- What additional resilience issues or specific projects should SERPPAS consider addressing?

