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

Addie Thornton
SERPPAS Coordinator
Grass Stage

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
Bottlebrush Stage
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
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.
MARINE CORPS INSTALLATIONS EAST
MARINE CORPS AIR STATION – CHERRY POINT

LIVING SHORELINES
MCAS CHERRY POINT

SERPPAS COASTAL RESILIENCE SESSION

16 SEP 2020
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

1) **LOCALIZED** TREATMENT AT THE BUILDING LEVEL
2) **LINEAR TREATMENT** ALONG ROADS AND PARKING
3) **REGIONAL TREATMENT**
4) **COASTAL IS THE CABOOSE OF THE TREATMENT TRAIN**

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The **Defense Train** for **Mission Assurance** and Security

4) **THE INCREASED WIND LOAD REQUIREMENT IS THE FINAL LINE OF DEFENSE**
3) **THE DESIGN FLOOD ELEVATION IS THE THIRD LINE OF DEFENSE**
2) **NATURE BASED INFRASTRUCTURE IS THE SECOND LINE OF DEFENSE**
1) **COASTAL IS FIRST LINE OF DEFENSE AGAINST SURGE**
Green and Grey Infrastructure

Improving Coastal Resiliency

- Structural Options
- Natural and nature-based options
- Hybrid Options
- Non-structural Options

Policy
Guidelines
Practices
Standards
Rules
Regulations
Compliance
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 Stakeholders and/or Partner Working Group Members

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<thead>
<tr>
<th>Potential Partners</th>
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<tbody>
<tr>
<td>TNC</td>
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<tr>
<td>Conservation Internation</td>
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<tr>
<td>World Wildlife Fund</td>
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<tr>
<td>USFWS</td>
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<tr>
<td>Florida FWC</td>
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<tr>
<td>Restore America’s Estuaries</td>
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<tr>
<td>National Fish and Wildlife Foundation</td>
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<tr>
<td>Defenders of Wildlife</td>
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<tr>
<td>University of Florida</td>
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<tr>
<td>University of Georgia: Institute for Resilient Infrastructure</td>
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<tr>
<td>USACE</td>
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<tr>
<td>Engineer Research and Development Center</td>
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<tr>
<td>Construction Engineering Research Laboratory</td>
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<tr>
<td>Installation Readiness Division</td>
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<tr>
<td>Coastal Resilience Program/Mobile District</td>
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<tr>
<td>Environmental Laboratory</td>
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<tr>
<td>FDEP</td>
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<td>Resilient Coastline Program</td>
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<tr>
<td>Office of Resilience and Coastal Protection</td>
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<tr>
<td>Northwest District</td>
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<tr>
<td>Office of Ecosystem Restoration</td>
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<tr>
<td>Aquatic Preserve Program</td>
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<td>FEMA</td>
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<td>Office of Economic Adjustments</td>
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<td>EPA (Region 4)</td>
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<tr>
<td>NOAA</td>
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<tr>
<td>Northwest Florida Water Management District</td>
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<td>Bay County</td>
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<tr>
<td>St. Andrews State Park Aquatic Preserve</td>
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<tr>
<td>Southeast Conservation Adaptation Strategy (SECAS)</td>
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<td>Southeast Regional Partnership for Planning and Sustainability (SERPAS)</td>
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<tr>
<td>Strategic Environmental Research and Development Program (SERDP)</td>
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<tr>
<td>U.S. Department of Transportation - Federal Highway Administration</td>
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<td>U.S. Geologic Survey (USGS)</td>
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*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

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

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?