Northeast Florida Regional Council
Military Installation Readiness Review

Technical Advisory Committee

March 26, 2026

Jacobs

Agenda

2:00 pm Welcome & Introductions

- Introduction
- Purpose of Meeting
- Project Scope & Overview

2:10 pm Ongoing Efforts: Marsh Migration and Coastal Adaptation

2:35 pm Ongoing Efforts: Encroachment and Wildfire Mitigation

3:00 pm Ongoing Efforts: Transportation and Congestion

3:25 pm Ongoing Efforts: Utility Resilience

3:50 pm Next Steps & Questions

Today's Objectives:

- Discuss on-going adaptation / mitigation efforts
- Identify potential resilience projects for the adaptation plan

Welcome & Introductions

Introductions

Technical Advisory Committee Mission

- To discuss relevant topics, provide expert opinion, follow up questions on assessment and adaptation, review preliminary findings and foster the identified outcomes toward implementation.

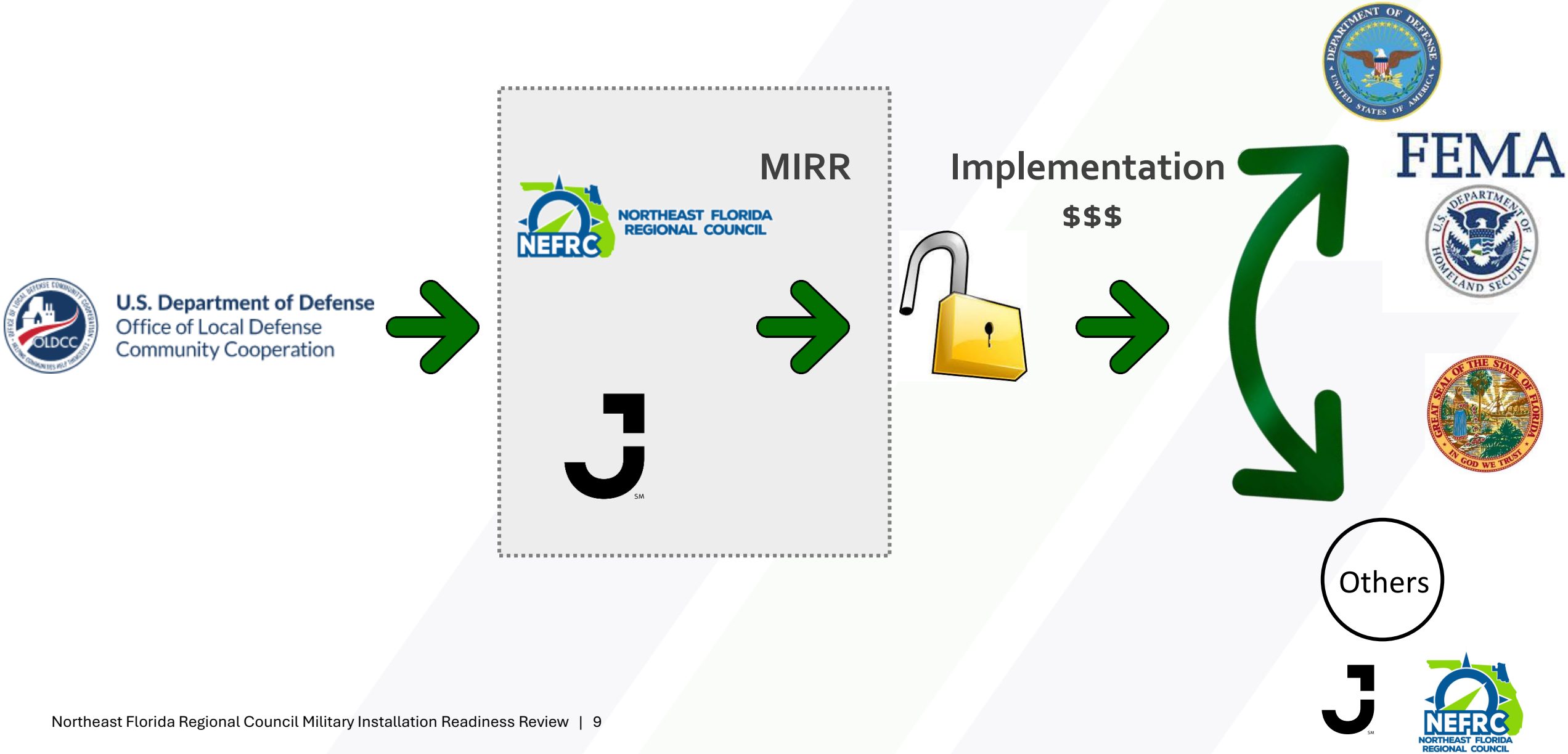
Project Status

The purpose of the MIRR is to identify the risks, hazards, and vulnerabilities of concern as it relates to the ability of the military to carry out its missions on the installation that could be mitigated through investments and solutions ***outside the fence line in the community.***

Project Timeline

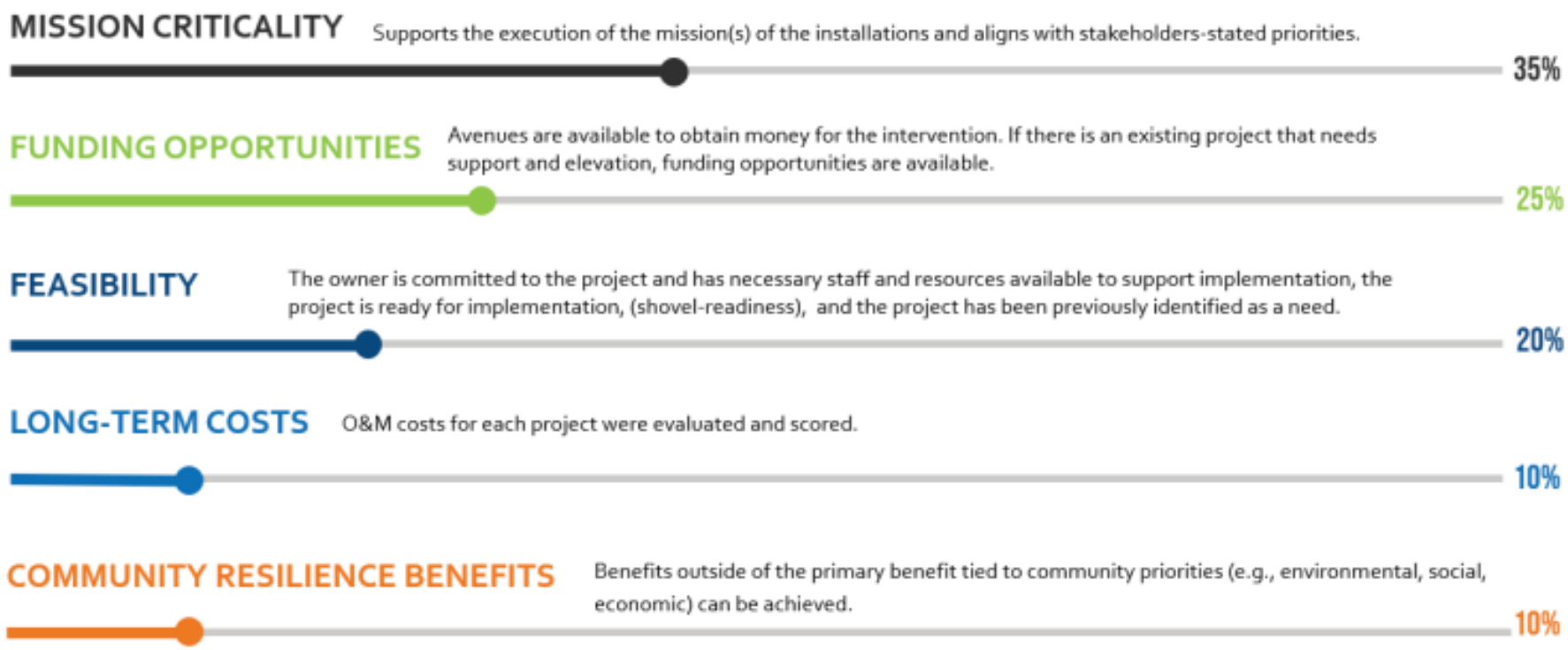
NEFRC
NORTHEAST FLORIDA REGIONAL COUNCIL

Pathway to Implementation



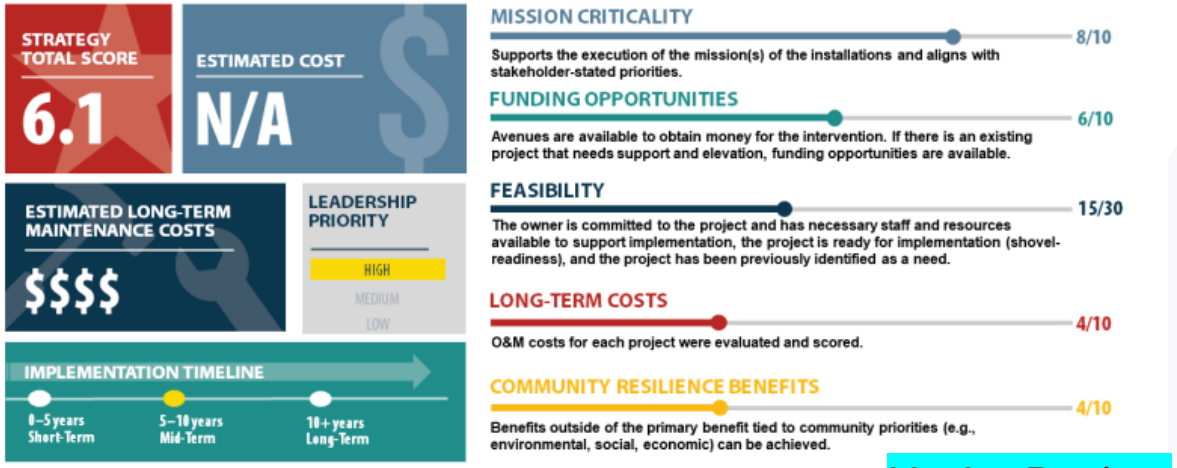
Outcomes of Others MIRRs

- South Florida identified 100 + adaptation projects/strategies
- Emerald Coast identified 52 adaptation projects/strategies
- Projects span all sectors
- Prioritization process



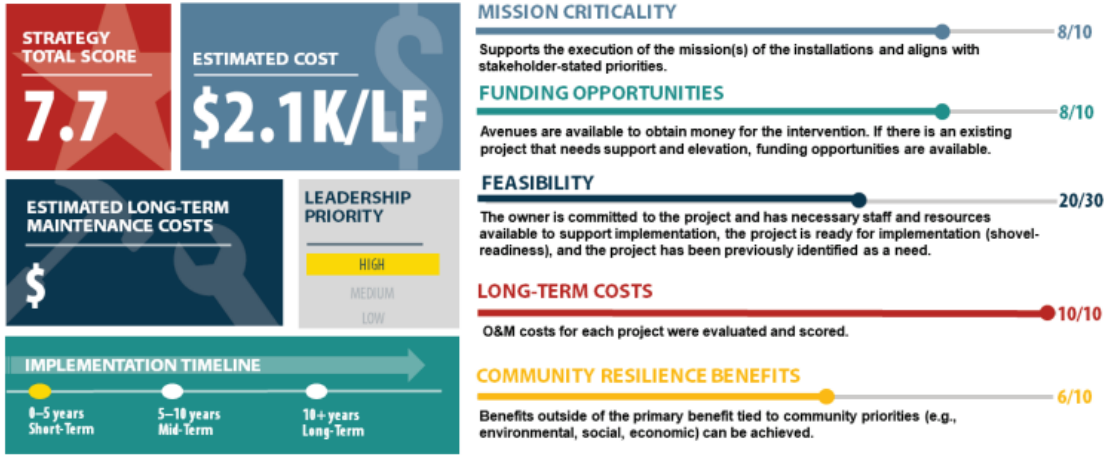
Outcomes of Others MIRRs

5.8.2 City of Mary Esther and Hurlburt Wastewater Conveyance



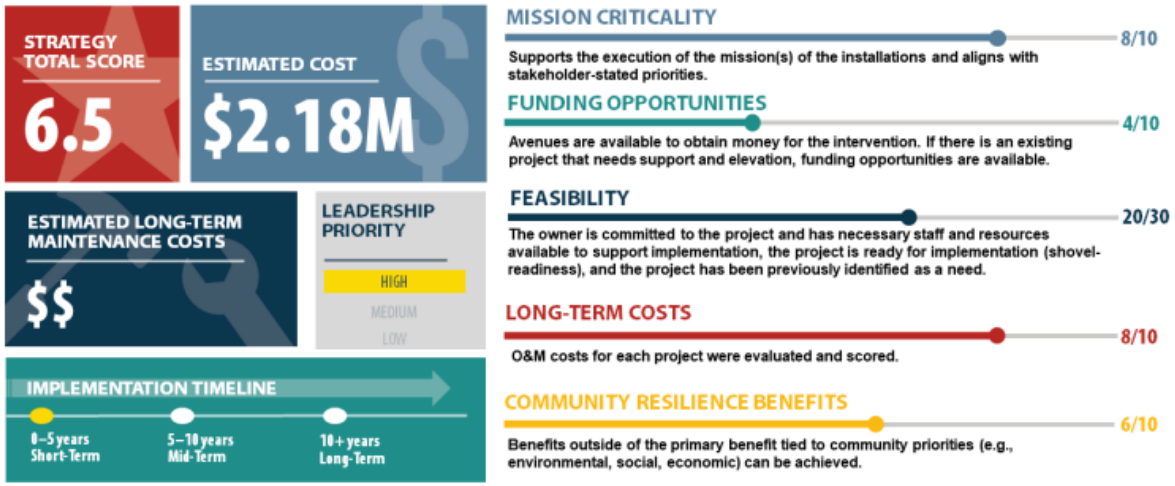
Under Review

5.5.1 NAS Pensacola Shoreline Protection



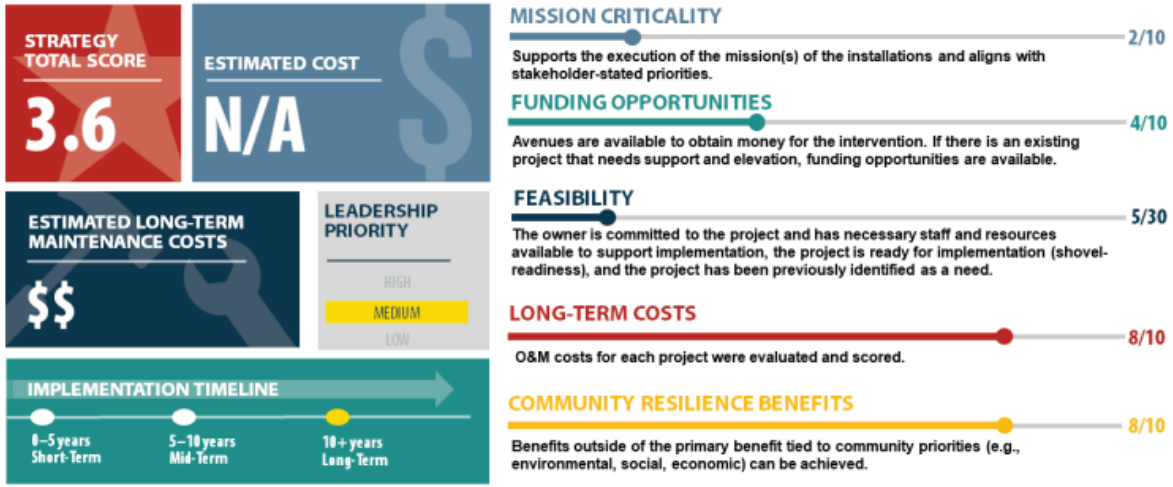
Next Cycle

5.6.3 Wildfire Mitigation



Next Cycle

5.6.7 City of Milton Flood Mitigation



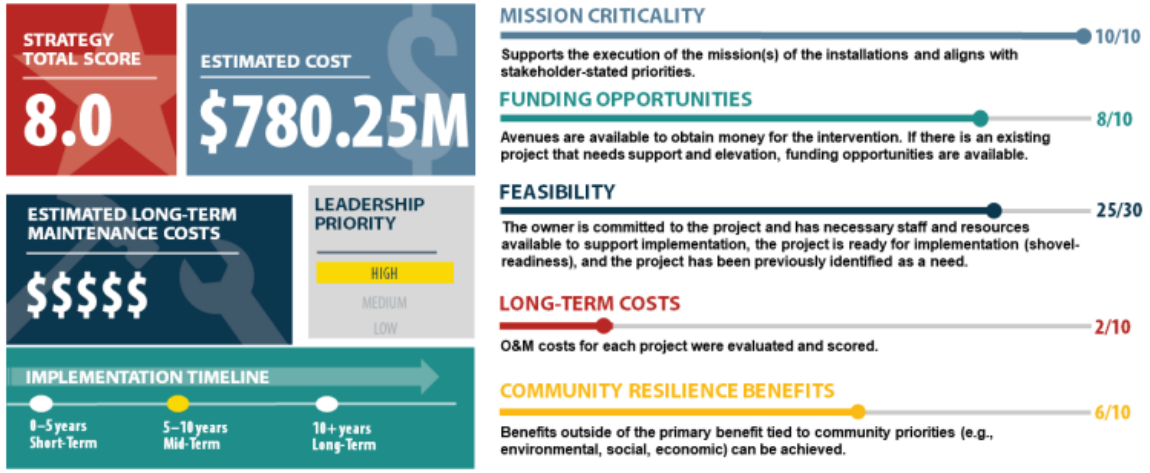
NEFRC NORTHEAST FLORIDA REGIONAL COUNCIL

Outcomes of Others MIRRs

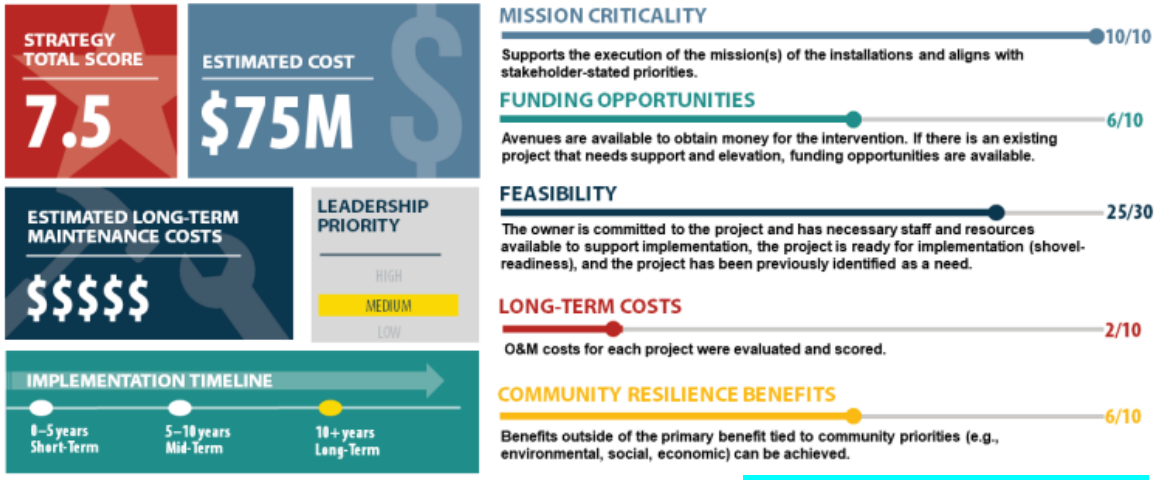
5.7.7 Eglin Orphan Parcel Master Plan

Funded - Complete

5.8.1 Highway 98 Congestion Relief Package

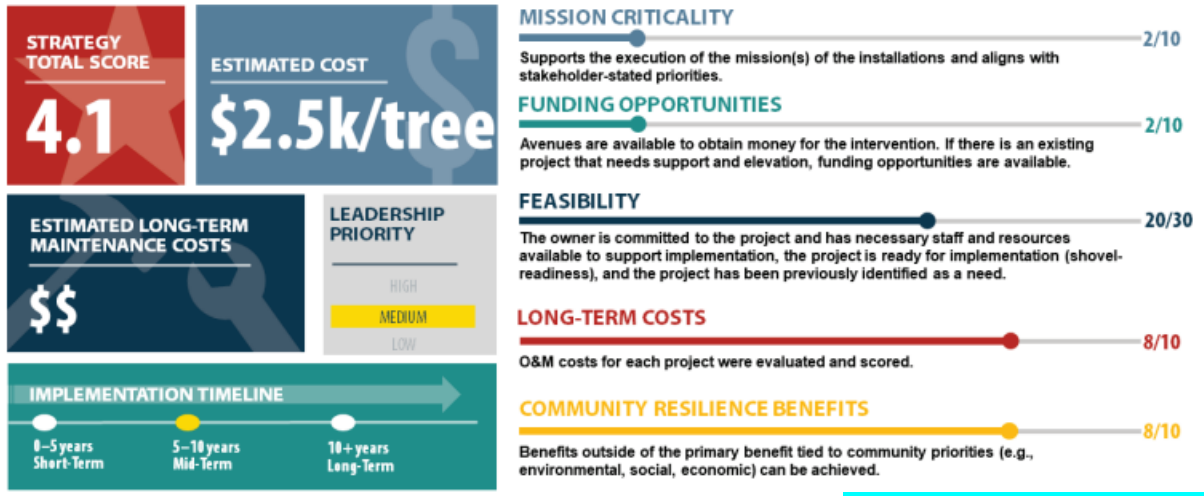


5.9.2 New North Water Treatment Plant



Funded – Out to Bid

5.10.7 Tree Canopy Restoration



Funded – Out to Bid

Ongoing Efforts: Marsh Migration & Coastal Adaptation

Vulnerable Assets

Asset Type and Name	Asset Owner	Extent	Mission-Criticality	Relevant Shocks/ Stresses	Risk to Mission	Level of Urgency	Installation
A1A	FDOT	Wonderwood Dr to Village of Mayport	Primary	SLR, Erosion, Surge	High	Immediate	NS Mayport
Shorelines	Various	East of installation, Atlantic shorelines	Primary	SLR, erosion, storm surge	High	Immediate	NS Mayport
Conservation Lands	DOI	Timuquana Preserve	Primary	SLR	Medium	Mid-Term	NS Mayport
Northside Fuel Depot	Naval Supply Logistics Command	West of installation in industrial park	Primary	Storm surge, Rainfall, Compound	Medium	Near-term	NS Mayport
Shorelines	TBD	Around installation	Primary	SLR, Erosion, Storm surge	High	Immediate	Blount Island

NS Mayport

Shorelines- AIA

- Short-term
  - Critically eroded beach
  - Wetland inundation
  - Drainage impedance
- Mid-term
  - AIA overtopping
- Long-term
  - Jetty erosion

- Adaptation strategies
  - Beach nourishment
  - Jetty maintenance
  - Berms/ upland barriers
  - Canal gates
  - Land use transition
  - Owner coordination

Blount Island

Shorelines

- Short-term
  - Wetland inundation
  - Canal propagation
- Mid-term
  - Lower dock overtopping
- Long-term
  - Seawall adaptation
- Adaptation strategies
  - Asset maintenance
  - Bridge elevation
  - Tide gate

NAS Jacksonville

Shorelines

- Short-term
  - SE seawall overtopping
  - Marina inundation
- Mid-term
  - Scouring Roosevelt Blvd Bridge
- Long-term
  - Seawall adaptation

- Adaptation strategies
  - Seawall/ berm elevation
  - Impermeable barrier behind riprap
  - Additional shoreline protection

Supporting Department of Navy Mission Resilience in the Lower St. Johns River

March 26, 2026

University of Georgia Project Team

Institute for Resilient Infrastructure Systems
UNIVERSITY OF GEORGIA

Marine Extension and Georgia Sea Grant
UNIVERSITY OF GEORGIA

Sea Grant

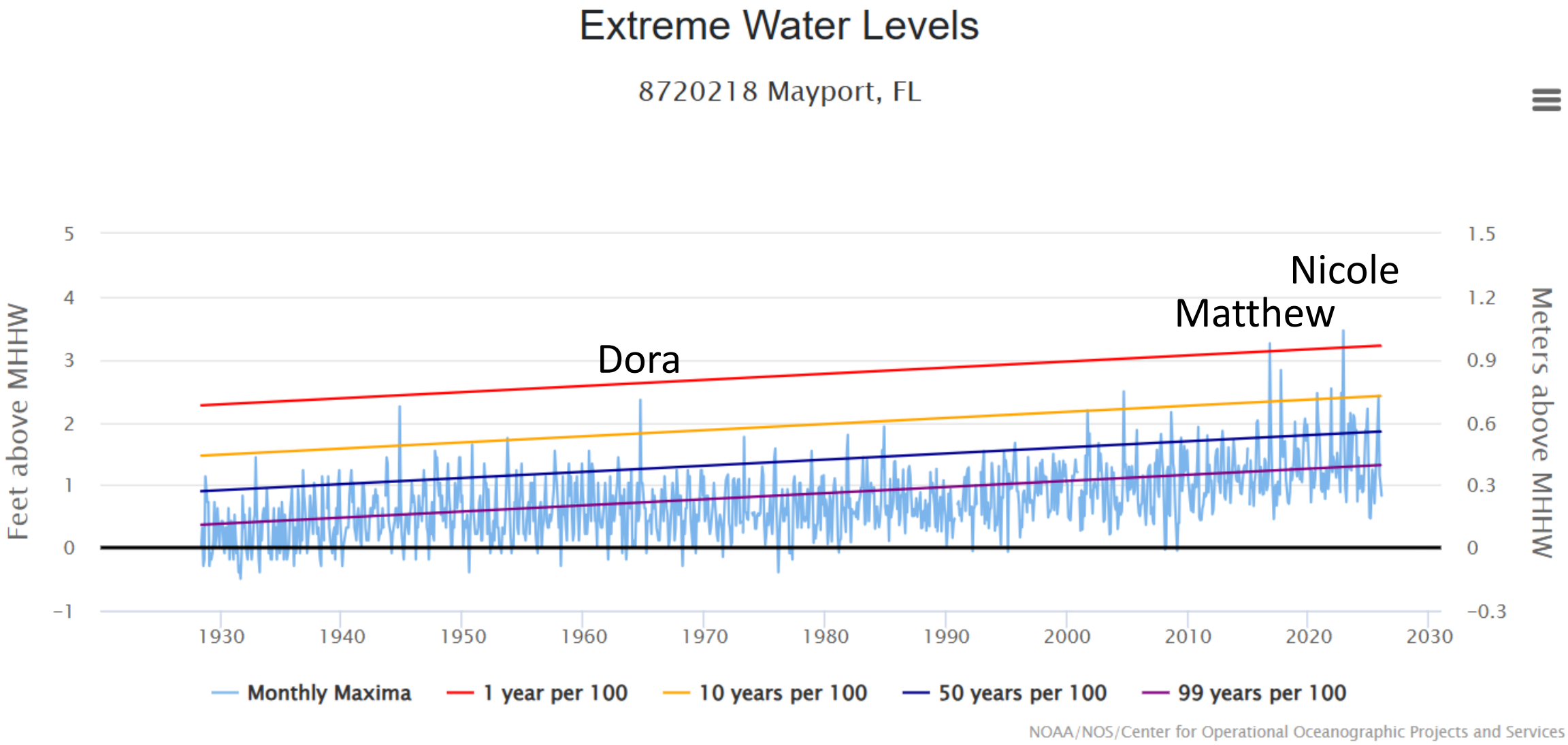
UNIVERSITY OF GEORGIA
Office of Research

Carl Vinson Institute of Government
UNIVERSITY OF GEORGIA

- **Ben Carswell, M.S.**, Implementation Specialist
- **Zak Ruehman, P.E.**, Director of Engineering Services
- **Matt Bilskie, Ph.D.**, Associate Professor, College of Engineering
- **Sydney Williams, Ph.D**., Nature-based Solutions Specialist, Georgia Sea Grant
- **Kate Thornton, M.P.H.**, Project Manager, UGA Research Institute
- **Brock Woodson, Ph.D.**, Professor, College of Engineering, Co-Director of the Institute for Resilient Infrastructure Systems
- **Mackenzie Hulse, E.I.T**, Coastal Resilience Engineer
- **Georgia Mitchell**, M.S. Student, College of Engineering
- **Jon Calabria, Ph.D. P.L.A.**, Professor, College of Environment and Design
- **Scott Pippin, J.D.,** Defense Community Resilience Program Manager, Carl Vinson Institute of Government
- **Rachel Dingley, M.L.A.**, Design Professional, Carl Vinson Institute of Government
- **Brian Simmons, Ph.D.**, Public Service Faculty, Carl Vinson Institute of Government

MAYPORT PROJECT SITE

Increasing Frequency of Extreme Tides



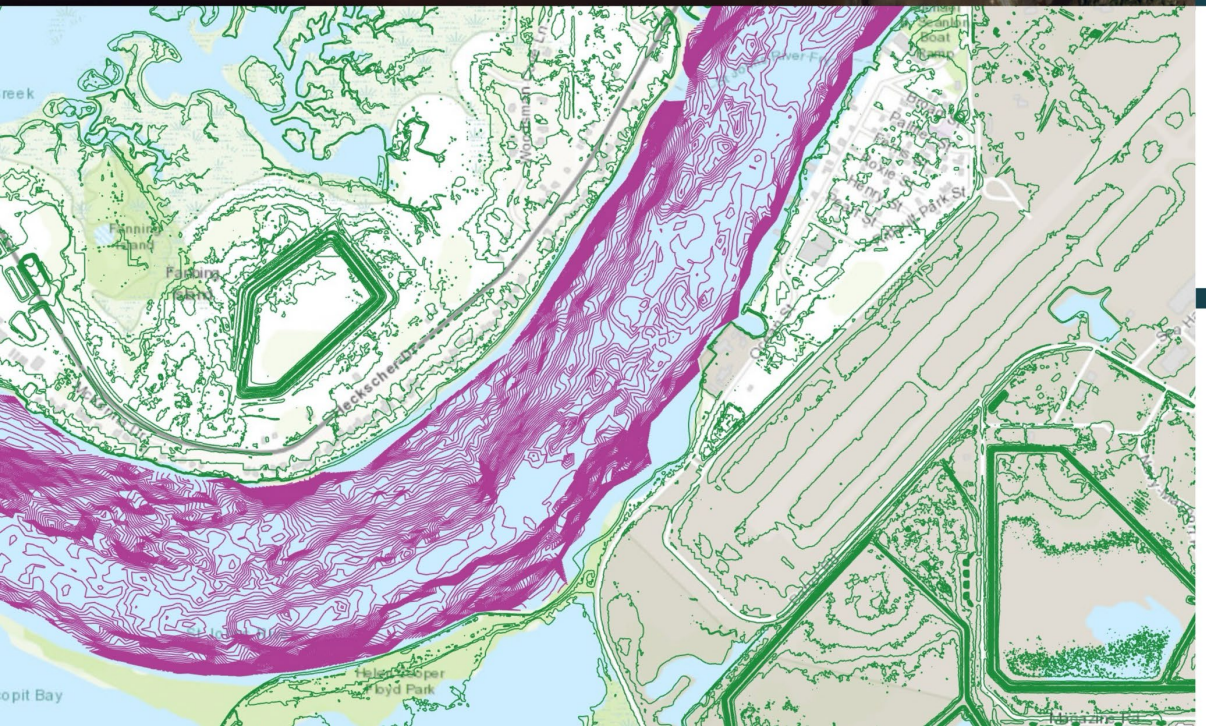
PROJECT STEPS

Community engagement

Data and Model Development

Collaborative Design Development and Selection

Implementation Roadmap



DESIGN CHALLENGES

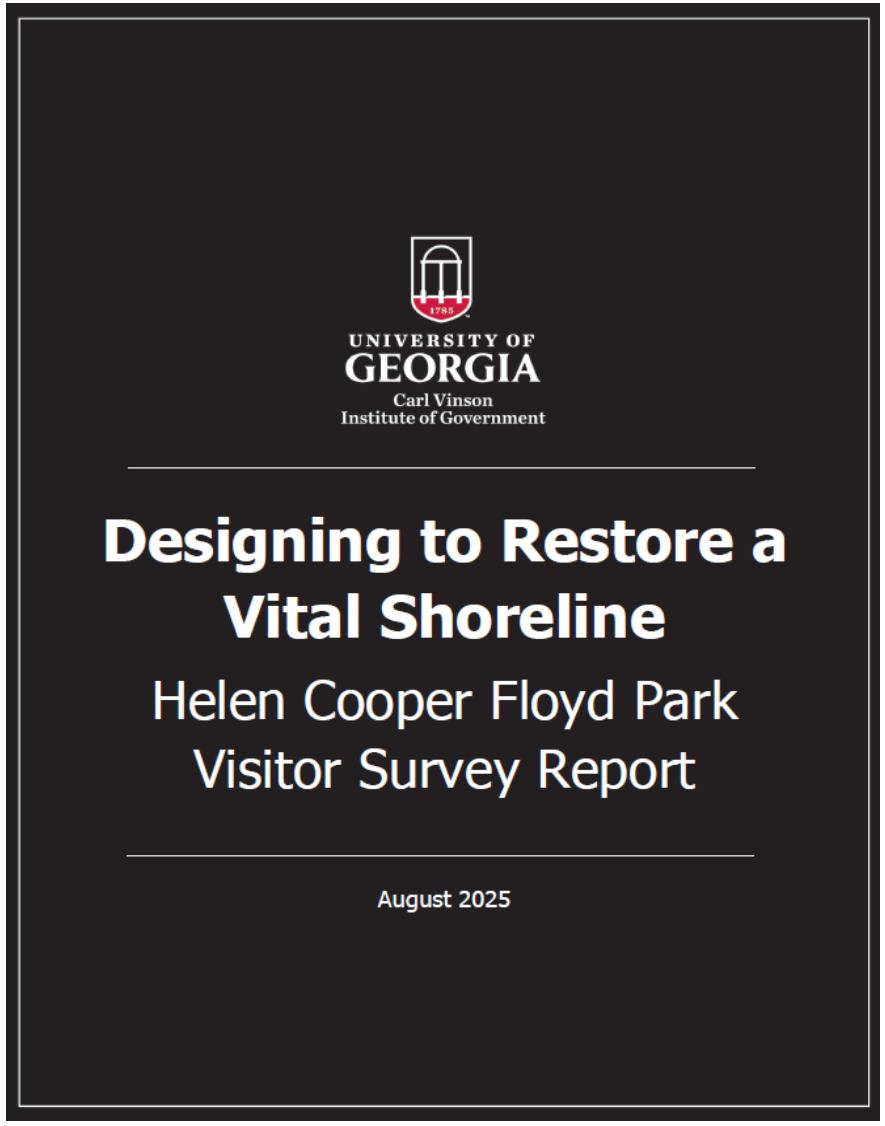
Public vehicle access exacerbating erosion

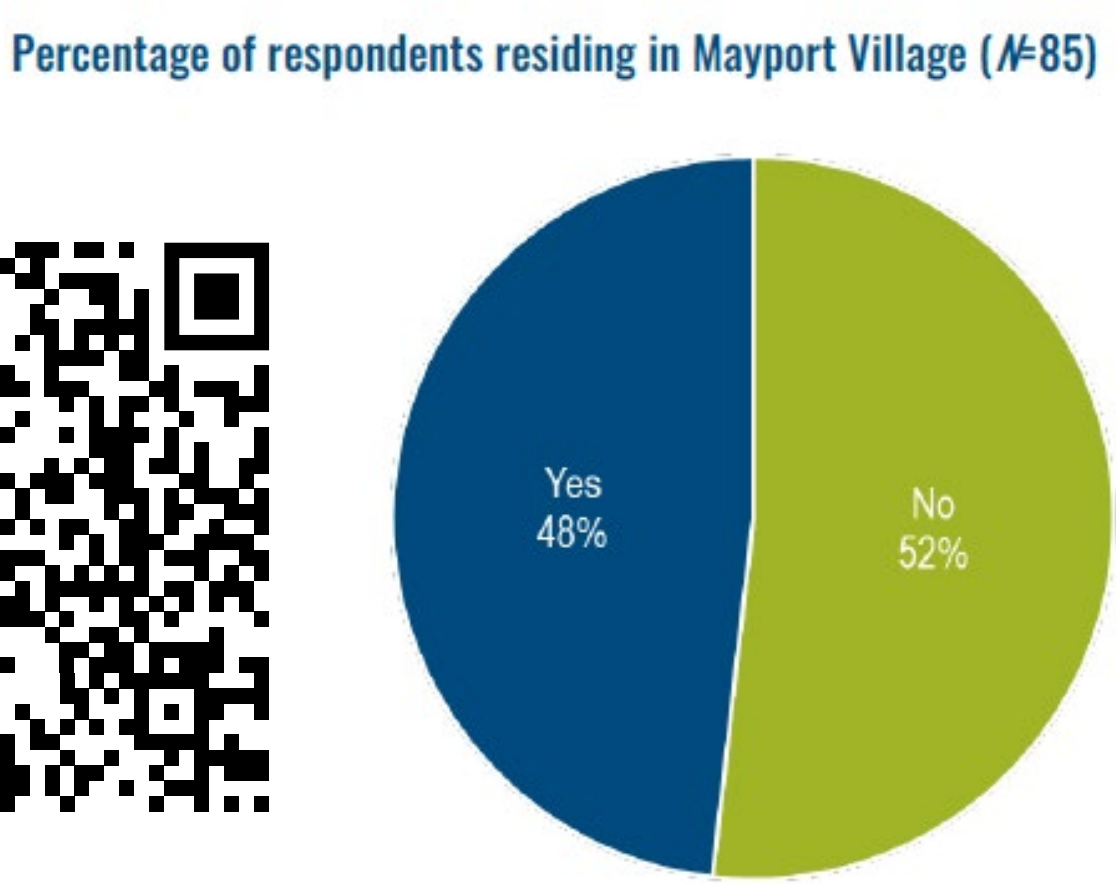
Limited design space

Strong, turbulent currents

Complex multi-project landscape, with different institutional leads

Community Survey Results





Community Survey Results

Figure 4: Frequency of visiting the shoreline (*N*=84)

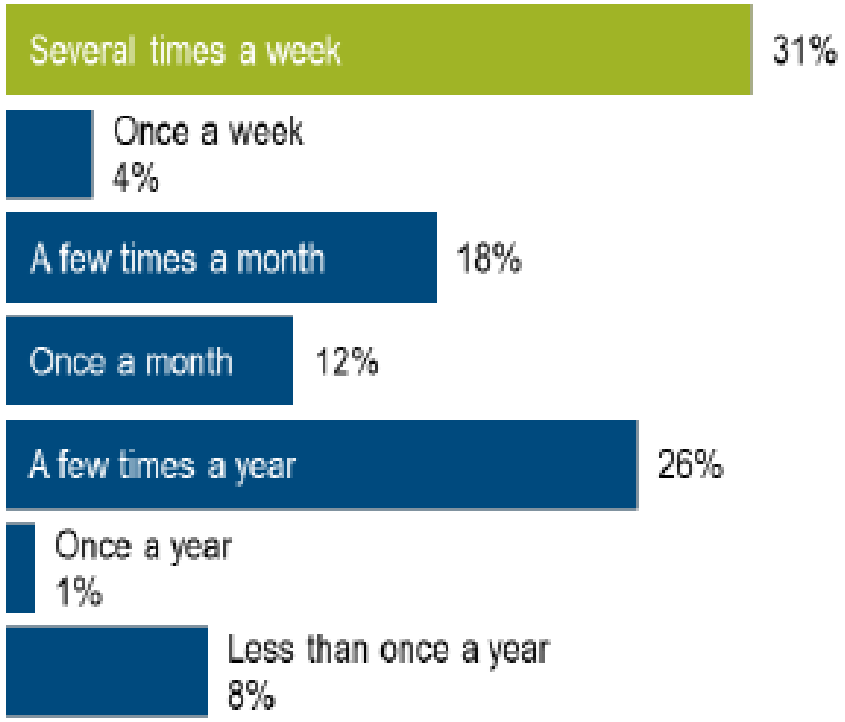
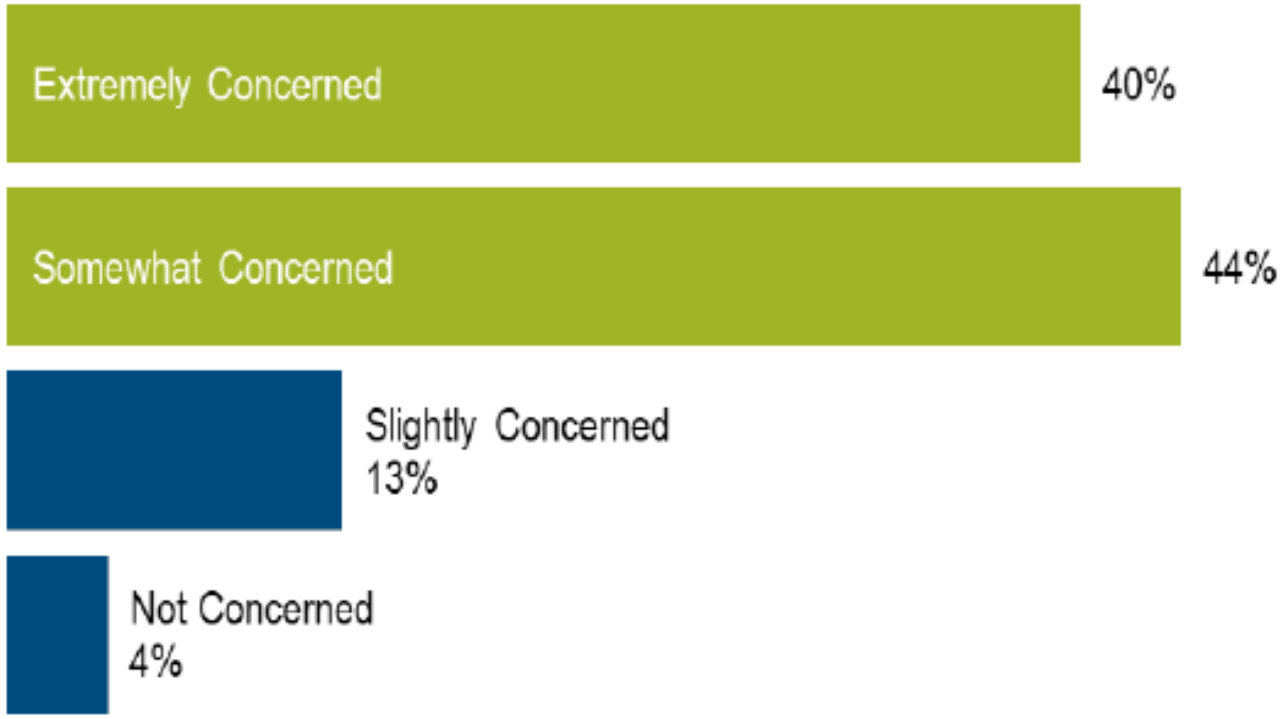


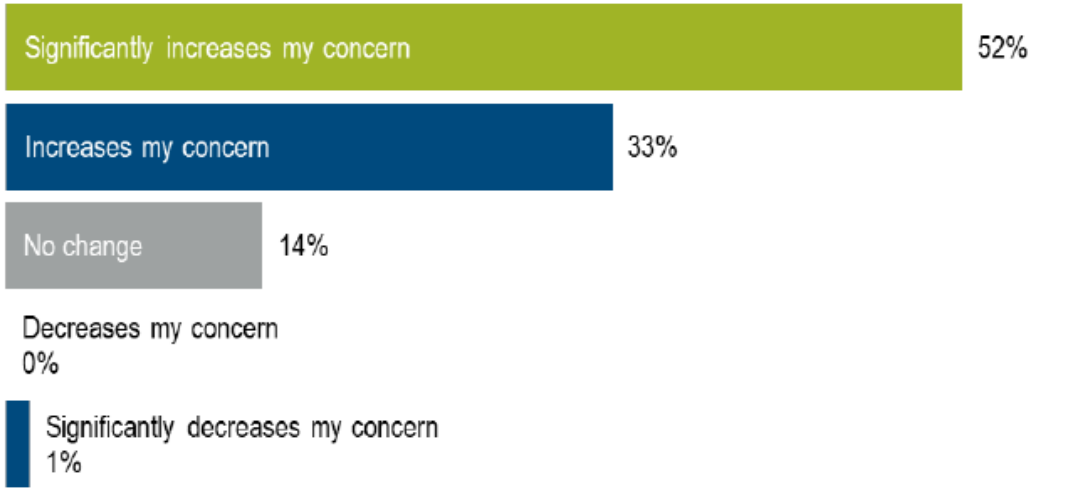
Figure 12: Level of concern about coastal erosion along the shoreline (*N*=80)



Community Survey Results

Figure 14: Google Street View™ images displaying shoreline in 2013 (top) & 2024 (bottom)

Figure 15: Change in concern about coastal erosion after viewing images of shoreline (*N*=79)



Community Survey Results

Figure 23: Level of importance for design features for structural interventions

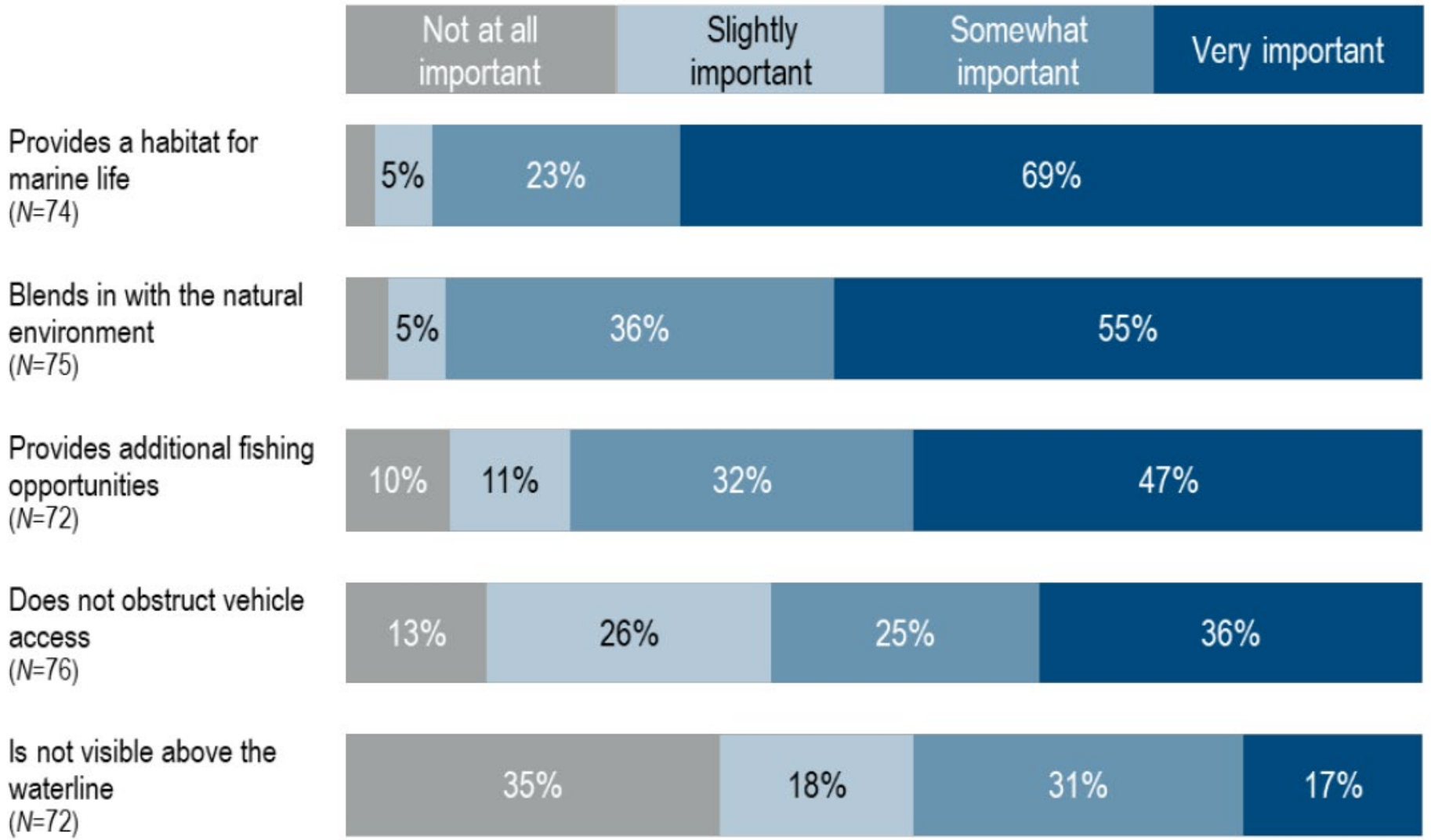
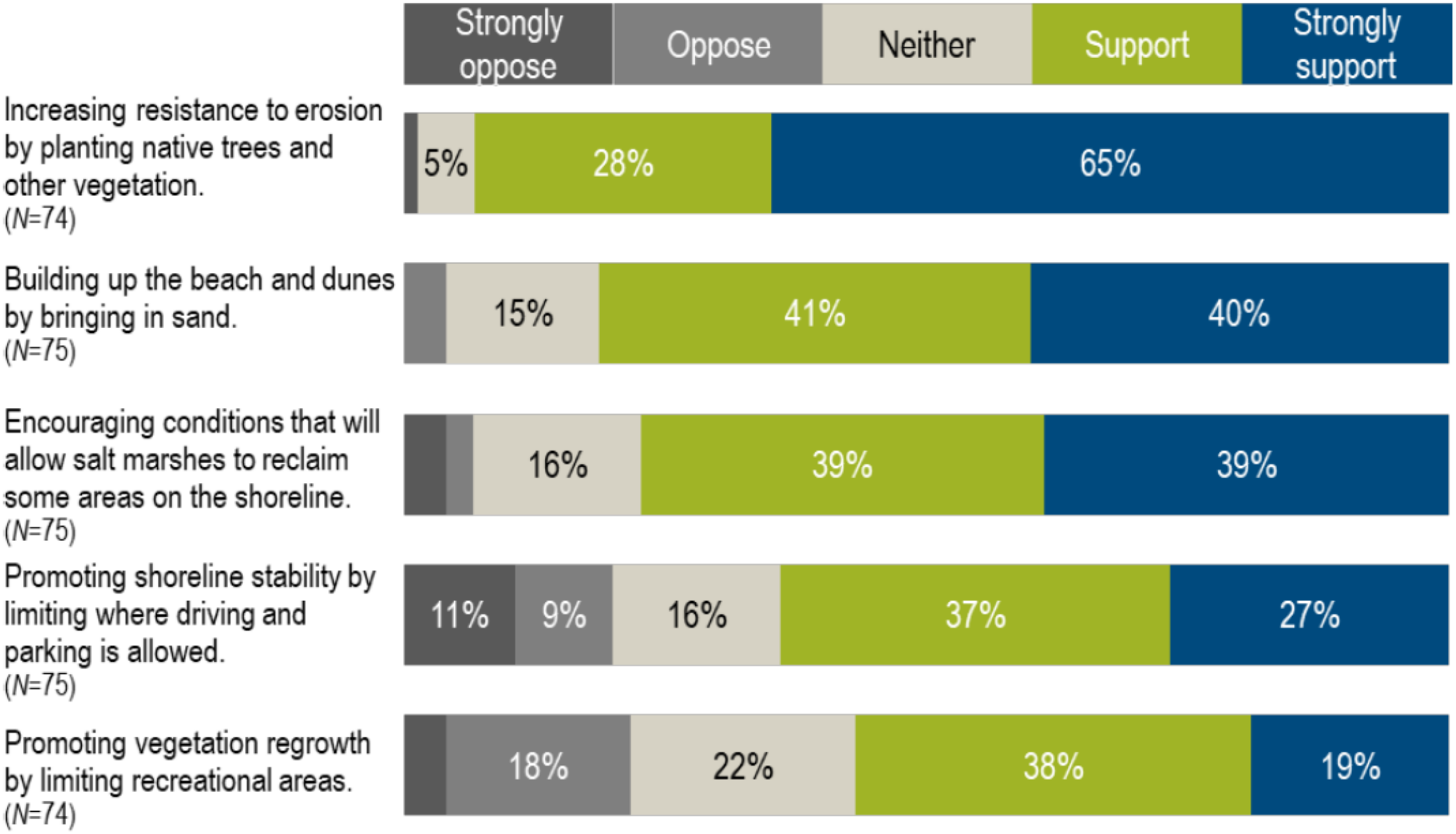
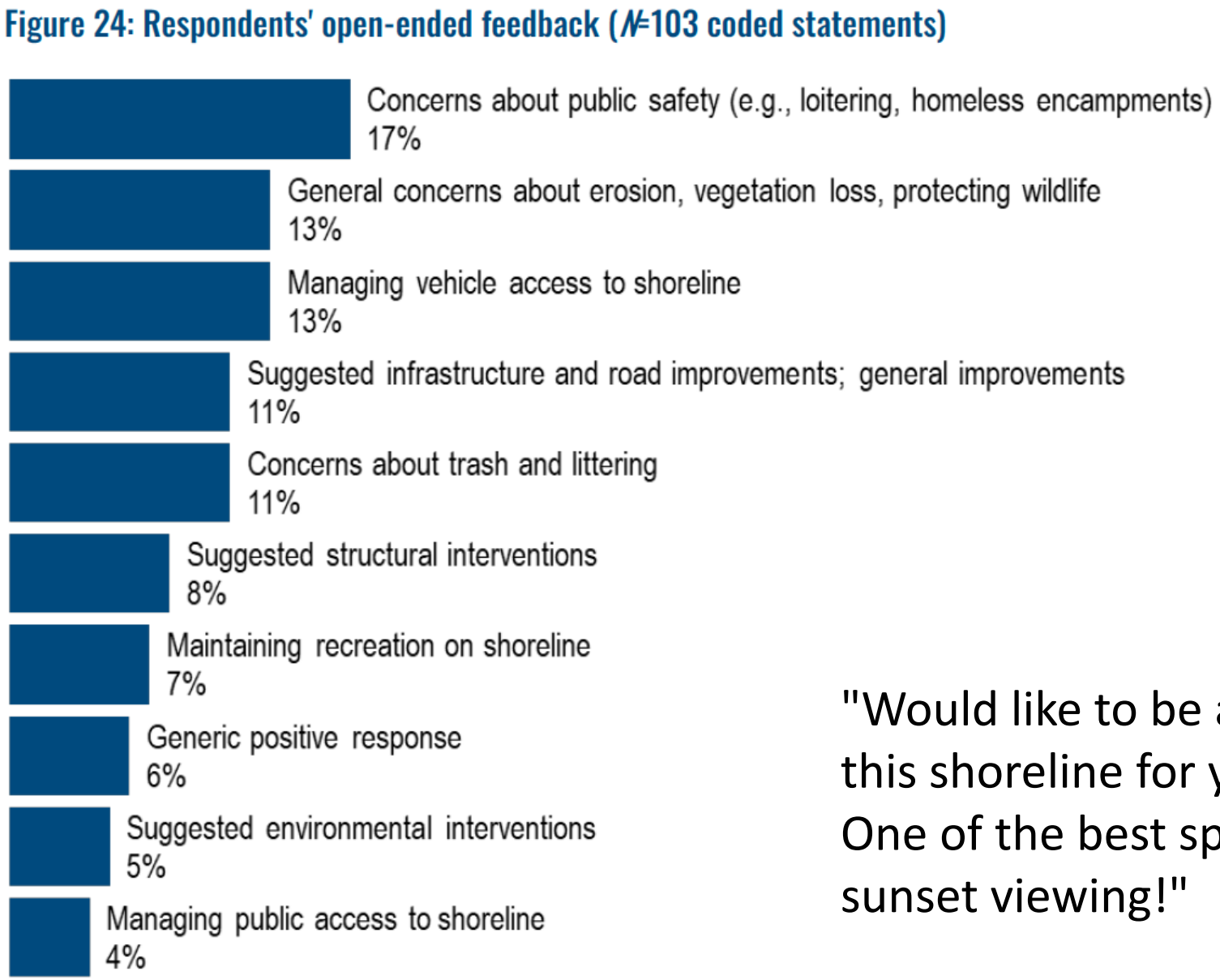


Figure 18: Level of support for nature-based interventions



Community Survey Results

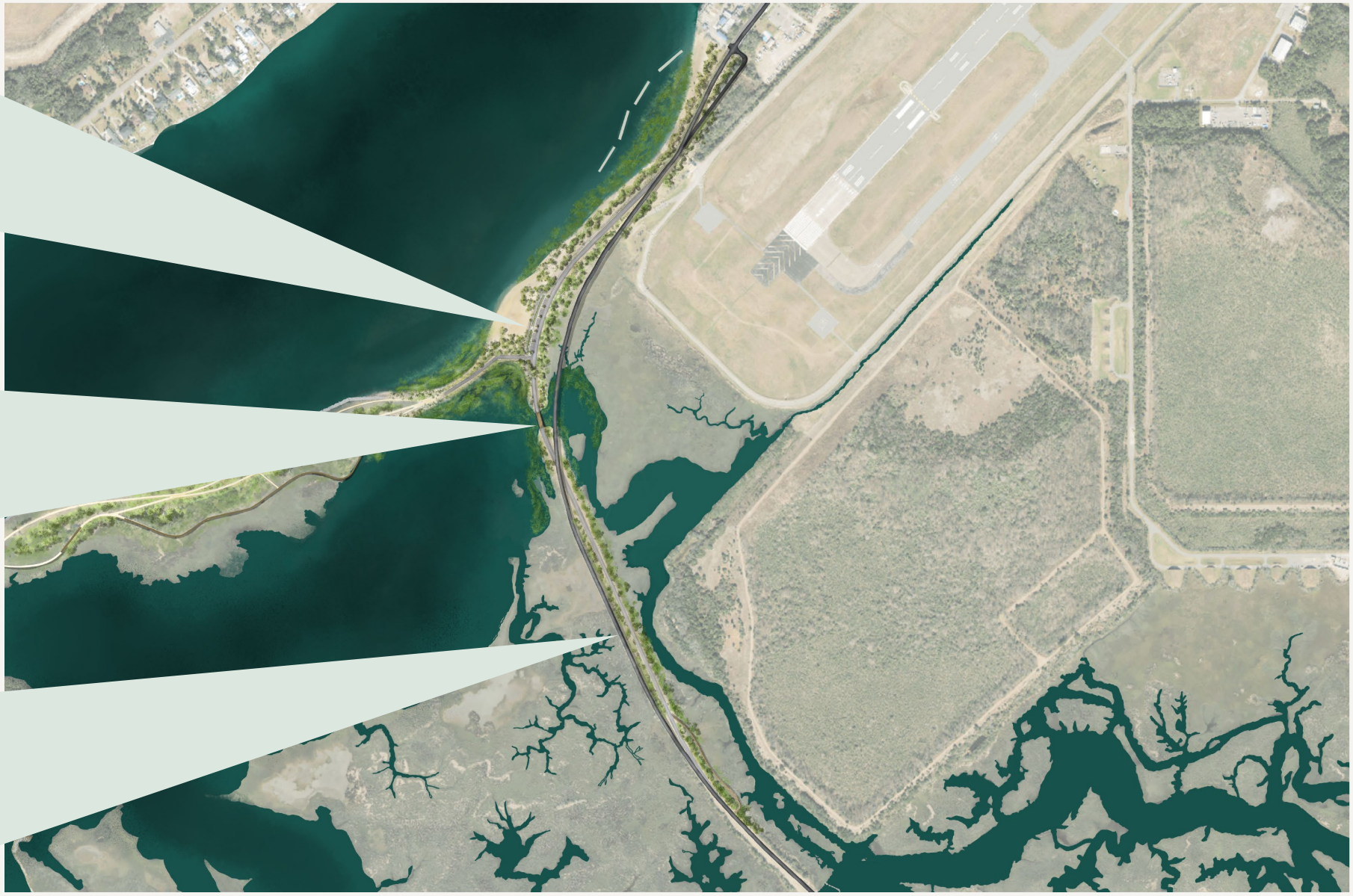


"Something needs to be done that is going to work. It is frustrating to see something done and just wash away. It would be more important to us to see something effective even if it limits vehicle access. It would be important to us to preserve access to people and for marine life to continue."

"Would like to be able to enjoy this shoreline for years to come. One of the best spots in Jax for sunset viewing!"

Preliminary Conceptual Visioning

PRELIMINARY CONCEPTUAL VISIONING



Metrics: **7.5** acres created marsh, **2.67** acres of beach creation, **22** standard and 2 ADA parking stalls added, **2,391** ft of existing A1A repurposed for pedestrians and cyclists , **4,418** ft added paths, **1,964** sq.ft. bioretention, **7** vegetated islands with curb cuts

2026 Outlook – Timeline and Deliverables

QUARTER 1

Milestones

- Share Community Survey Results
- Assess Site
- **Convene Steering Committee**

January to March 2026

QUARTER 2

Milestones

- Develop Conceptual Design Elements
- **Host Design Charette**
- Short List of Shoreline Design Elements
- Run Hydrodynamic Modeling on Shortlisted Elements
- Solicit Peer Quality Control Review
- Arrange Informational Calls with Regulatory Interests

April to June 2026

QUARTER 3

Milestones

- Finalize Modeling Products
- **Reconvene Steering Committee**
- Substantially Complete Engineering Design Products
- Develop Opinion of Probable Cost to Construction
- Draft Implementation Roadmap

July to September 2026

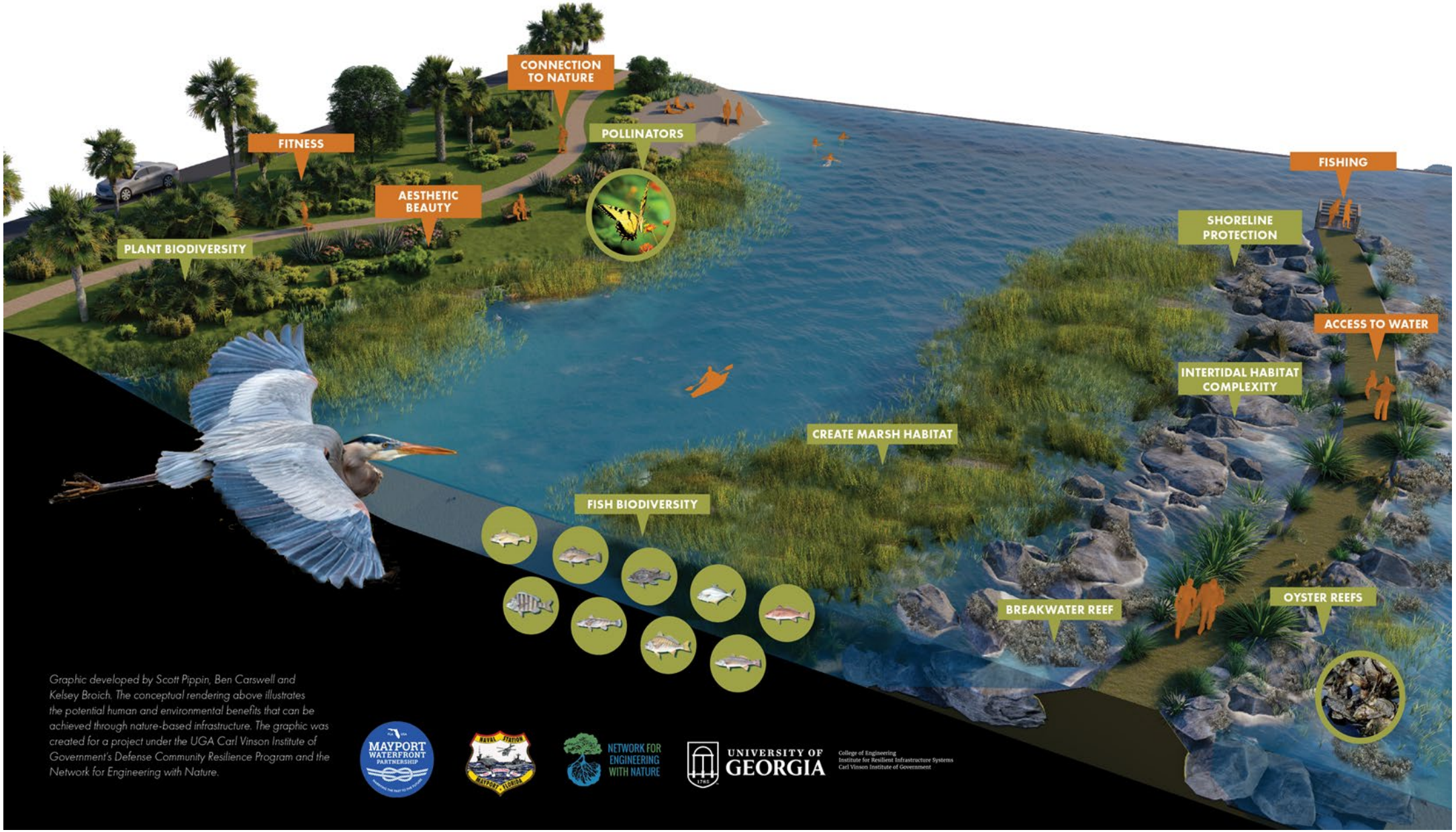
QUARTER 4

Milestones

- Finalize 30% Design Drawings
- Finalize Implementation Roadmap
- Closeout Project

October to December 2026

This project is made possible through a grant from the National Fish and Wildlife Foundation, with support from the Department of the Navy.



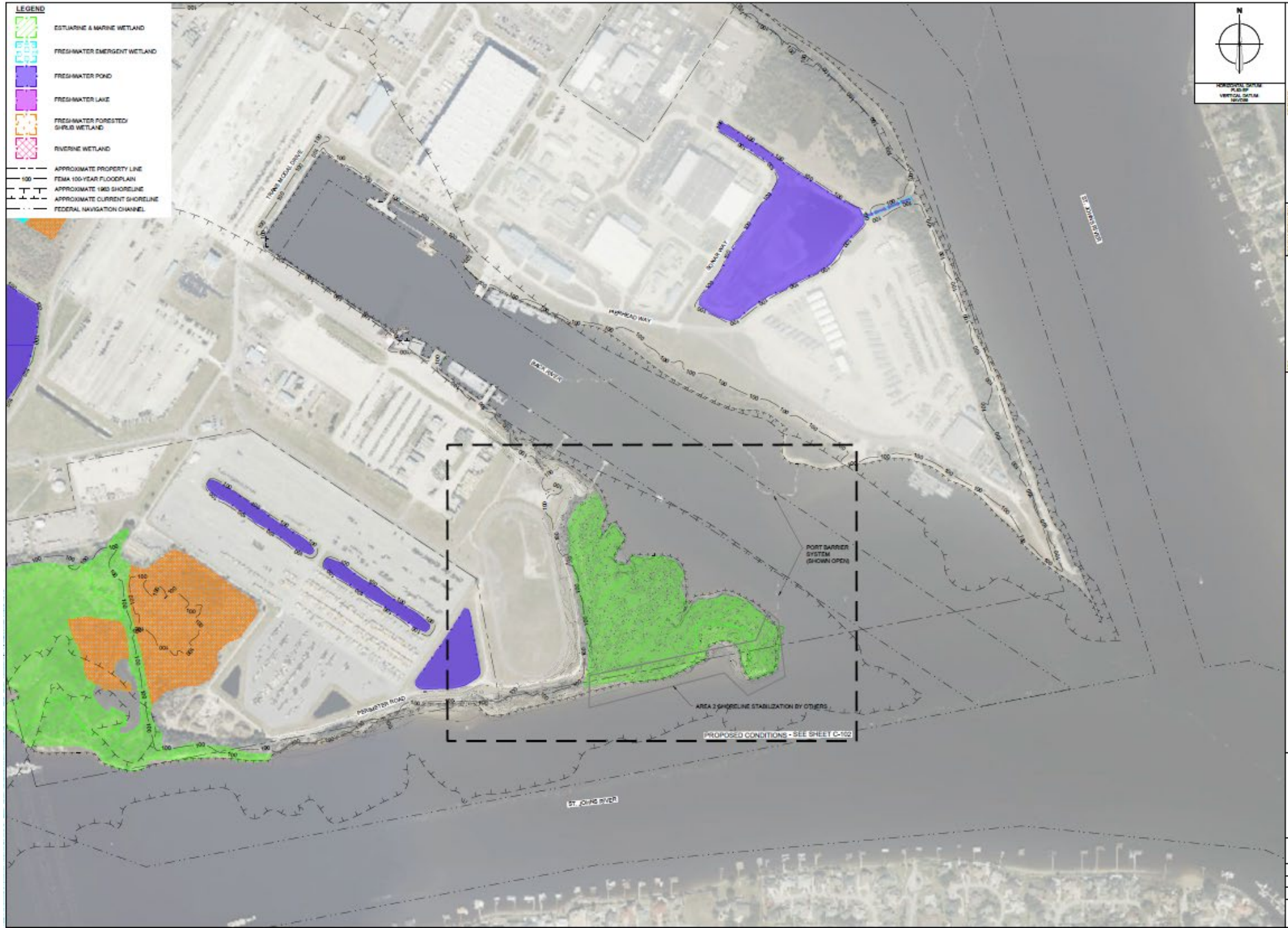
EA Engineering, Science, and Technology, Inc., PBC

UNC INSTITUTE FOR THE ENVIRONMENT

UNIVERSITY OF GEORGIA

U.S. MARINE CORPS MISSION RESILIENCE

NATURAL HAZARD RESILIENCE AT MARINE CORPS SUPPORT FACILITY BLOUNT ISLAND



COASTAL HABITAT ENHANCEMENT
BLOUNT ISLAND
ADDRESS
JACKSONVILLE, FLORIDA

EXISTING CONDITIONS PLAN

EA Engineering, Science, and Technology, Inc., PBC
225 Schilling Circle, Suite 400
Hunt Valley, Maryland 21031
(410) 584-7000
www.eaest.com

GRAPHIC SCALE IN FEET

FULL SIZE PLOT: 24" x 36"
DATE: OCTOBER 2023
PROJECT NUMBER: 63480

C-101
SHEET 3 OF 5

CONCEPT DESIGN PLANS - NOT FOR CONSTRUCTION


PARRIS ISLAND BROAD RIVER SHORELINE
Natural Infrastructure Core Prototype
EXISTING STORMWATER POND
WOODY DEBRIS
STONE REVETMENT
Crest Elevation 9'
DEFENDER REEF
+3.2' NAV88 Top Elevation
Rendered by Kelsey Broich, UGA Carl Vinson Institute of Government

Ongoing Efforts: Encroachment & Wildfire Mitigation

NEFRC
NORTHEAST FLORIDA REGIONAL COUNCIL

Vulnerable Assets

Asset Type and Name	Asset Owner	Extent	Mission-Criticality	Relevant Shocks/ Stresses	Risk to Mission	Level of Urgency	Installation
Conservation Lands/ Parcels Surrounding Installation Boundary	Various	Installation Boundary	Primary	Encroachment (development pressures), Wildfire	High	Near to Long-term	Camp Blanding
NOLF Whitehouse	Various	Installation Boundary	Primary	Encroachment (development pressures), Wildfire	High	Immediate	NAS Jax

Wildfire Risk Assessment in Northeast Florida: Focus on Military Installations

Analyzing Fire Risks and Mitigation Strategies for Military Sites

Presented to the Northeast Florida Regional Council (NEFRC)
Military Installation Readiness Review (MIRR)
March 26, 2026

Speaker

Adam Hoyles, PWS

Environmental Manager

Freese and Nichols

Jacksonville, Florida

- Professional Wetland Scientist with 30 years of experience in environmental permitting and ecological risk
- Experience supporting military installations, infrastructure, and sensitive facilities
- Background in listed species surveys, prescribed fire support, and land management
- Works closely with state and federal agencies on environmental risk and mitigation

FREESE AND NICHOLS

Malcolm Baldrige National Quality Award
Recipient **2010** & **2024**

Agenda

- Wildfire Risk in Northeast Florida
- Predictive Tools & Monitoring
- Partnerships & Interagency Coordination
- Management Models Compared
- Recommendations

Overview of Wildfire Risk in Northeast Florida

“Fire is a good servant but a bad master.”— Danish Proverb

Climate and Weather Patterns Impacting Fire Risk

Seasonal Drought

Seasonal drought reduces fuel moisture and increases ignition and spread potential

Fuel Loading

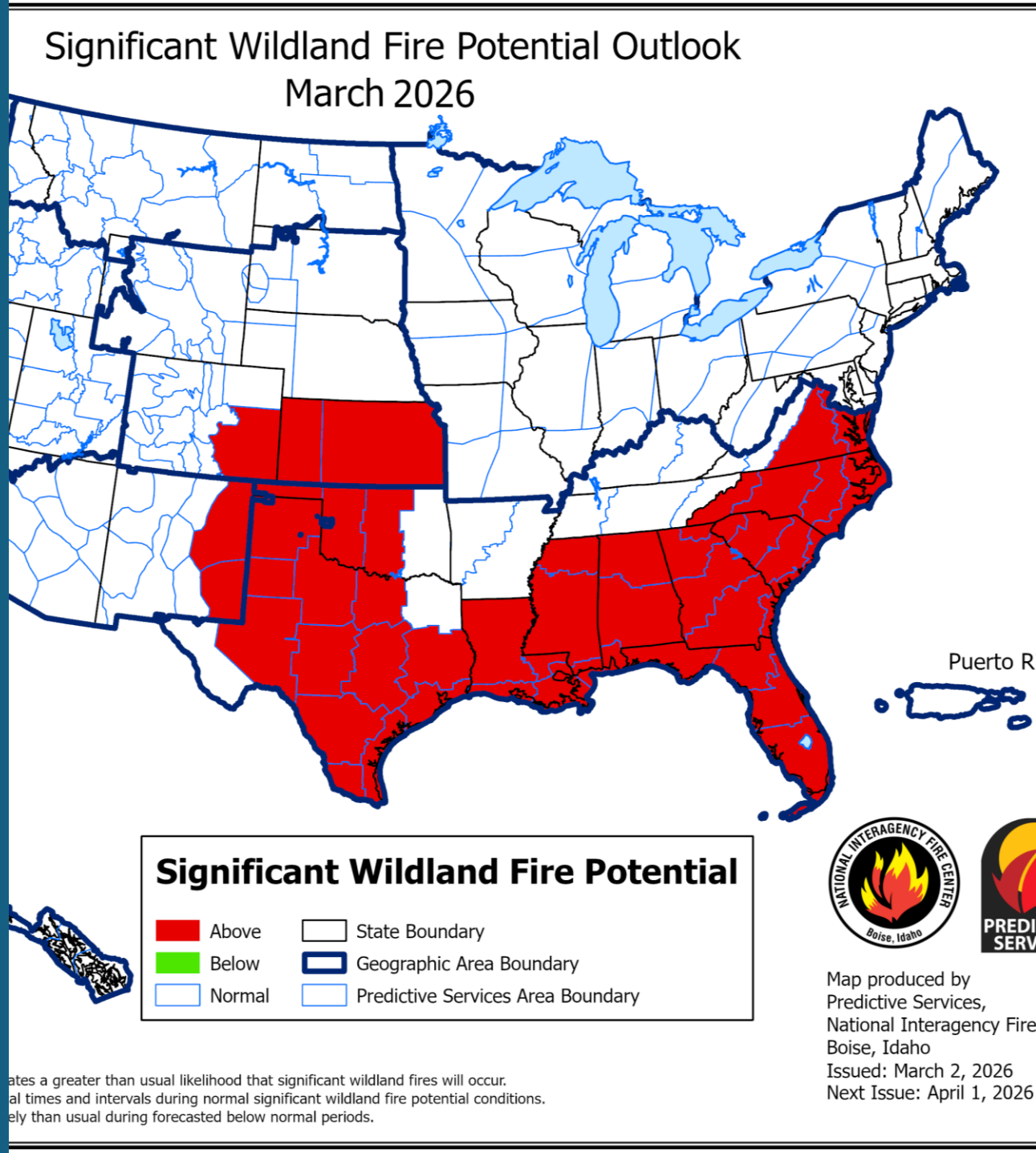
Deferred or constrained prescribed fire leads to fuel accumulation

CO_2 Fertilization

Rising atmospheric CO_2 is increasing vegetation growth, adding to available fuels

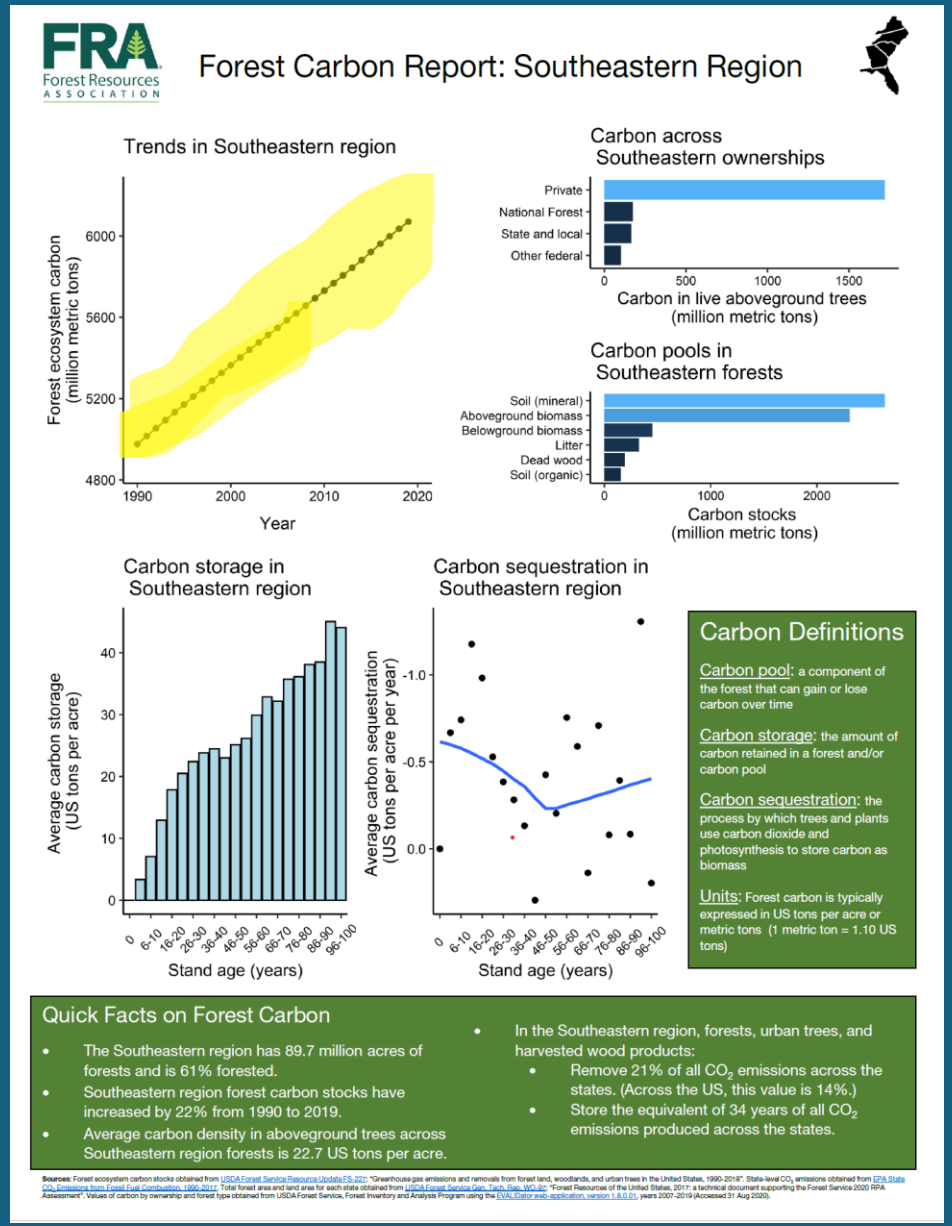
NICC Predictive Services Outlooks

- **7-Day Outlook: Updated daily during fire season; highlights short-term areas of significant fire potential based on regional predictive services inputs**
- **National Outlook: Identifies areas with above, near, or below normal fire potential to support proactive fire management decisions.**
- **Decision-support focus: Designed to improve readiness, resource allocation, and protection of life and property—not to predict exact fire outcomes**



CO_2 Fertilization and Fuel Accumulation

- Forest biomass in the Southeast has increased dramatically over recent decades
- Elevated atmospheric CO_2 is a primary driver of this growth, independent of climate variability
- More biomass = more fuel = higher baseline wildfire intensity
- Fire management systems built for past conditions now face a different starting point



Existing Working Partnerships in Florida:

- The Gulf Coastal Plain Ecosystem Partnership (GCPEP)
- Florida Division of Emergency Management – Statewide Mutual Aid Agreement (SMAA)
- Department of Defense Interagency Wildland Fire Partnerships

Interagency Wildfire Commitments & Partnerships

- **Florida Division of Emergency Management – Statewide Mutual Aid Agreement (SMAA)**
- **Local mutual aid agreements with county and city fire/rescue departments (Clay County, Duval County, City of Jacksonville) Department of Defense and Navy Region Southeast mutual aid and operational support agreements**
- **Joint training and incident response protocols with local, state, and federal agencies**
- **Participation in Northeast Florida Regional Council Military Installation Readiness Review (MIRR) and regional resilience planning**
- **Coordination with US Forest Service and Florida Forest Service for wildfire response and prescribed fire**

Gulf Coastal Plain Ecosystem Partnership (GCPEP) – Structure, Priorities, and Mission Alignment

- Partnership of military, state, private, and conservation organizations featuring Eglin Air Force Base, NAS Pensacola, and NAS Whiting Field
- Landscape-scale management for longleaf pine and rare species
- Supports Eglin AFB mission and ecological goals
- Evolved over 30 years into a national model for collaborative conservation

Wildfire Management Models: NE Florida vs. GCPEP

Aspect	NE Florida Status Quo	GCPEP Model (Western Panhandle)
Approach	Reactive, incident-driven	Proactive, landscape-scale collaboration
Land Ownership	Fragmented, multiple jurisdictions	Coordinated across military, state, private, and NGO
Prescribed Fire	Limited by regulatory constraints and short planning	Used at scale, coordinated across boundaries
Risk Reduction	Inconsistent, often misses proactive opportunities	Consistent, fuels managed before crisis
Resource Sharing	Local mutual aid agreements, incident command	Shared priorities, joint planning, resource pooling
Ecological Outcomes	Variable, often secondary to mission readiness	Integrated: mission readiness + ecological resilience
Planning Horizon	Short-term, focused on immediate response	Long-term, adaptive management and restoration

Wildfire Risk Management: Moving Forward in Northeast Florida

Key recommendations:

1. Fuels coordination working group
2. Identify cross-boundary treatment opportunities
3. Tabletop exercise

Aligning agencies and landowners around a common strategy can achieve both military and ecological goals

Ongoing Efforts:
Traffic & Congestion

Vulnerable Assets

Asset Type and Name	Asset Owner	Extent	Mission-Criticality	Relevant Shocks/ Stresses	Risk to Mission	Level of Urgency	Installation
Mayport Rd	FDOT / Atlantic Beach	Wonderwood Dr to installation gate	Primary	Rainfall flooding	Medium	Near-Term	NS Mayport
McCormick Rd / Wonderwood	FDOT	Bridge approach at Greenfield Creek	Primary	Storm surge	Medium	Near-Term	NS Mayport
Regional Roadways	Various	State Rd 10, Atlantic Blvd, US-90, JT Butler Blvd, 3rd St S, Beach Blvd, Dune Ave	Primary	Storm surge, Rainfall flooding, SLR, Compound flooding	Medium	Near-Term	NS Mayport
State Road 16	FDOT	Between 225 and 215 near entrance gate	Primary	Single point of failure, Rainfall flooding	Medium*	Near-term	Camp Blanding
Heckscher Drive	FDOT	295 to Dave Rawls Blvd	Primary	Surge, SLR, Congestion, Lack of redundancy	High	Near-term	Blount Island
Blount Island Blvd	JAXPORT	Heckscher to Blount Island	Primary	TBA	TBA	TBA	Blount Island
Dave Rawls Blvd	JAXPORT	Heckscher Dr to Blount Island	Primary	Storm surge, aging infrastructure, Lack of redundancy (weight restrictions)	High	Near-term	Blount Island
Roosevelt Blvd	FDOT	West of base	Primary	Congestion, lack of redundancy	High	Immediate	NAS Jax
103rd St / Timuquana Rd	FDOT	Access to Whitehouse	Primary	Rainfall flooding, SLR	Medium	Near-term	NAS Jax
Buckman Bridge and Roosevelt / 295 Interchange	FDOT	Entire bridge and interchange	Primary	Congestion	Medium	Near-term	NAS Jax

Ongoing Efforts: Utility Resilience

Vulnerable Assets

Asset Type and Name	Asset Owner	Extent	Mission-Criticality	Relevant Shocks/ Stresses	Risk to Mission	Level of Urgency	Installation
Electric Supply Facility	JEA	Mayport Substation; South of base	Primary	Storm surge, Rainfall flooding	High	Immediate	NS Mayport
Electric supply	JEA	Substation	Primary	Storm surge, Lack of redundancy	Medium	Immediate	Blount Island
Railways/ Railroad Bridge	JAXPORT	Railways supplying the base.	Primary	Lack of redundancy	High	Near-term	Blount Island
Potable Water Systems	JEA	Water supply line from mainland to base	Secondary	Lack of redundancy	Medium	Near-term	Blount Island
Communications Lines	AT&T	TBD	Primary	Lack of redundancy	High	Immediate	Blount Island
Electric Facilities: Substation	FPL	North of base	Primary	Lack of redundancy, wildfire	High	Near-term	Camp Blanding
Railways	CSX	Surrounding Installation	Primary	Rainfall flooding, extreme heat	High	Near-term	Camp Blanding
Stormwater Systems	Various	Areas around base	Primary	Rainfall flooding	Medium*	Near to Mid-term	Camp Blanding
Wastewater System	N/A	N/A	Secondary	Lack of redundancy/ interconnection with other systems, regulatory requirements	Medium	Near-term	Camp Blanding
Natural Gas	Florida Gas, Southern Natural Gas	Regional	Primary	N/A	Low	Long-term	NAS Jax
Electric Substation	JEA	North of base	Primary	Lack of redundancy	Medium	Immediate	NAS Jax
Wastewater System	N/A	N/A	Secondary	Lack of redundancy, regulatory requirements	Medium	Near-term	NAS Jax

Utility Providers

- Ongoing discussions with CCUA
- Ongoing discussions with JEA (Water/Wastewater & Electric)
- Railway owners – CSX, JAX Port

Next Steps & Questions

Next Steps & Questions

- All-Call for potential MIRR resilience projects (existing project documents, CIP lists, LMS lists, other project lists, etc.)
- Adaptation Strategy Draft Project Sheets
- Next TAC Meeting – April 23rd
- Emergency Management Exercise – July (*details forthcoming*)

Northeast Florida Regional Council
Military Installation Readiness Review

Thank You

Comments / Feedback please email:
Tanya.Gallagher@Jacobs.com

Jacobs