



Northeast Florida Regional Council  
Military Installation Readiness Review

# Technical Advisory Committee

February 26, 2026

Jacobs

# Agenda

- 2:00 pm** Welcome and Introductions/Project Status
- 2:10 pm** Task 5 - Mutual Support Agreements Update (*Throve Environmental*)
- 2:40 pm** Adaptation Strategies Planning Approach Overview
- 3:10 pm** White Paper Discussion: A Preparation Strategy for Future Erosion Impacts (*APTIM*)
- 3:45 pm** Next Steps & Questions

## Today's Objectives:

- Review Task 5 – Mutual Support Agreements Update
- Overview of and gain consensus on adaptation strategy framework
- Discuss White Paper: A Preparation Strategy for Future Erosion Impacts

# 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



# Mutual Support Agreements



# NEFRC MIRR Task 5

## *Mutual Support Among Regional Installations and Local Governments*



### **Goals of Task 5:**

- Identify and assesses current MSAs
- Identify gaps and opportunities to meet MIRR recommendations through enhanced mutual support based on vulnerability analysis results
- Conduct a benefits analysis for continued or expanded mutual support

# Approach and Analytical Process



**1.**

## Document Review

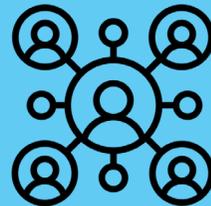
Reviewed relevant planning documents and researched existing mutual support agreements across the region



**2.**

## Stakeholder Outreach

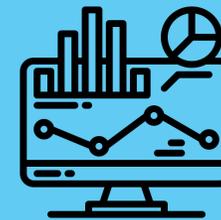
Distributed MSA survey to TAC members and conducted nine individual interviews with installation and local government representatives



**3.**

## Assessment & Analysis

Assessed installation-level vulnerabilities and examined strengths and gaps in regional mutual support



# Mutual Support Agreement Summary



| Focal Area                 | Total     | NAS Jax  | NS Mayport | Camp Blanding | Blount Island |
|----------------------------|-----------|----------|------------|---------------|---------------|
| Fire / Emergency Services  | 12        | 3        | 2          | 3             | 3             |
| Law Enforcement / Security | 8         | 1        | 3          | —             | 5             |
| Land Use & Encroachment    | 4         | 2        | 2          | 1             | —             |
| Resilience & Environmental | 4         | —        | —          | —             | —             |
| Utility O&M                | 2         | 1        | 1          | —             | —             |
| Economic Dev / Education   | 1         | —        | —          | —             | 1             |
| Transportation             | 1         | —        | —          | —             | —             |
| <b>Total</b>               | <b>32</b> | <b>7</b> | <b>8</b>   | <b>4</b>      | <b>9</b>      |

# Assessment Structure



## ■ Installation-Level Assessment

- **Existence:** Does formal or informal coordination exist for a given vulnerability or need?
- **Effectiveness:** Does the existing mutual support arrangement function as intended?
- **Future Conditions:**
  - Is the mutual support arrangement likely to withstand turnover among key partners?
  - Is the arrangement likely to be sufficient for addressing projected vulnerabilities?
- **Efficiency:** Would formalization or expansion of mutual support arrangements produce sufficient resilience benefits to justify the costs? (qualitative analysis)

## ■ Regional Strengths, Weaknesses, Opportunities, and Threats Analysis

- Synthesized patterns and themes across the region

# Regional Strengths

## Emergency Services

Fire protection, emergency service, and law enforcement agreements in place across the region



## Encroachment Protection

Established encroachment protection framework safeguarding military operations



## Regional Collaboration

Strong willingness to engage between local governments and installations throughout the region



# Regional Needs

## Utility Infrastructure Resilience

Power, water, and communications infrastructure redundancy gaps threaten operational continuity

## Housing Affordability & Availability

Insufficient affordable housing near installations strains workforce recruitment and retention

## Informal Nature of Relationships

Many current relationships lack formal agreements, risking continuity through leadership changes



# Questions for Discussion & Additional Input

1. Does the TPO have an opportunity to further address transportation resilience priorities (as highlighted in the VA) across installations through their coordinated planning role?
2. Would there be interest in reactivating regional housing coordination?
3. What opportunities exist to formalize/institutionalize existing informal working relationships across jurisdictional boundaries?
4. Beyond operations and maintenance, are there active, ongoing discussions with utilities (JEA and FPL) on infrastructure resilience or redundancy? Are these at the project scale or the system scale?
5. Discuss opportunities for Army Corps and Duval County shoreline protection efforts coordination informed by installation needs and vulnerability. Is there ongoing coordination? How can it be enhanced based on your experience?



# Adaptation Strategies



# APPROACH



## STEP 01

Start with the **MISSION CRITICAL RISK** that needs to be mitigated



## STEP 02

Understand the **CURRENT EFFORTS** that are working toward this



## STEP 03

Develop a **COMPREHENSIVE PROJECT** built on the **RRAP GOALS**



## STEP 04

Layer the **BUILT, NATURAL, SOCIAL, and ECONOMIC INFRASTRUCTURE** improvements





### STEP 05

Review current planning documents for **POLICY UPDATES**



### STEP 06

Identify opportunities to **COORDINATE ACROSS THE FENCELINE**



### STEP 07

Utilize a series of custom **METRICS FOR FEASIBILITY & RISK MITIGATION**



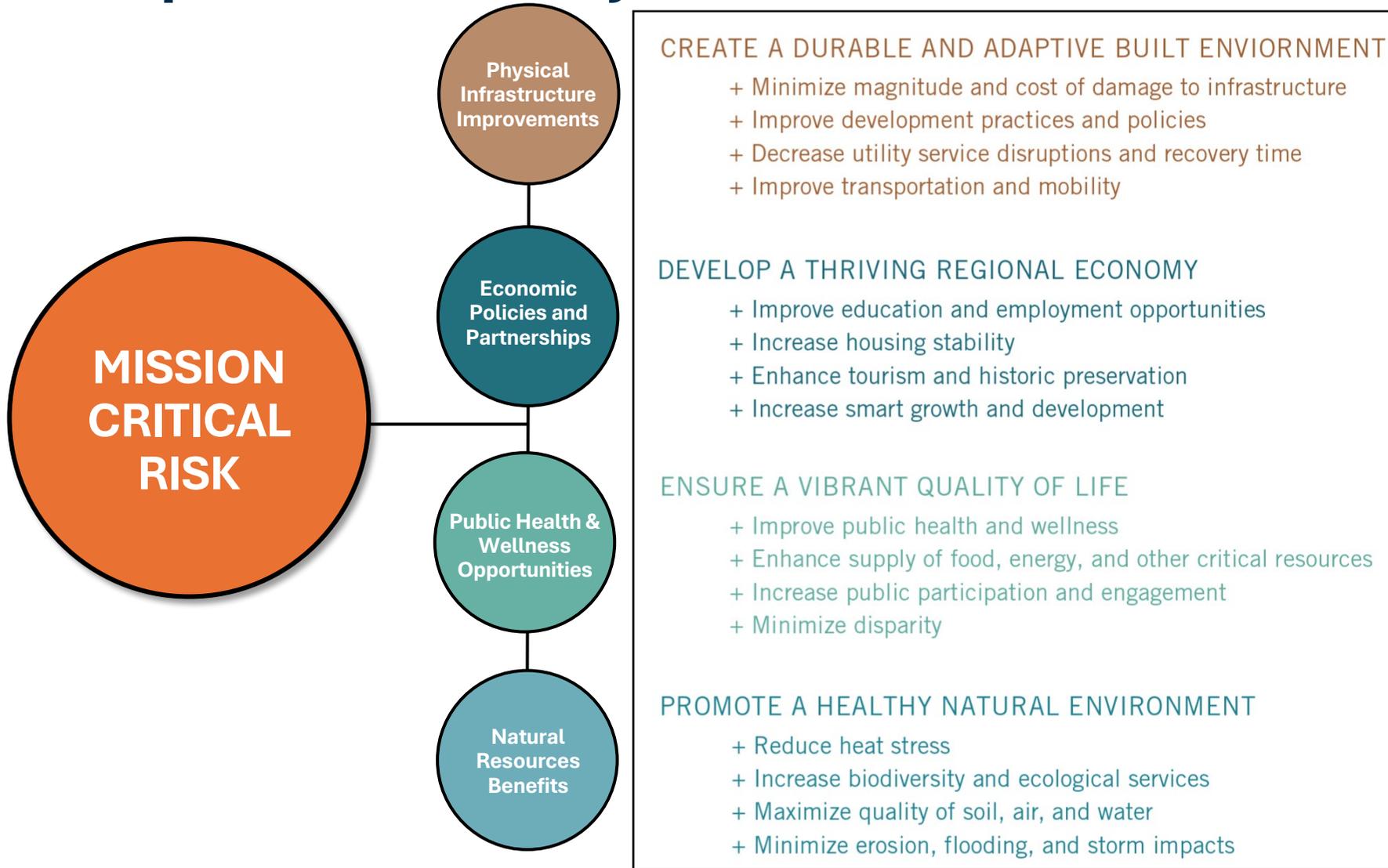
### STEP 08

Develop Implementation **TIMELINE AND FUNDING & FINANCING TOOLKIT**

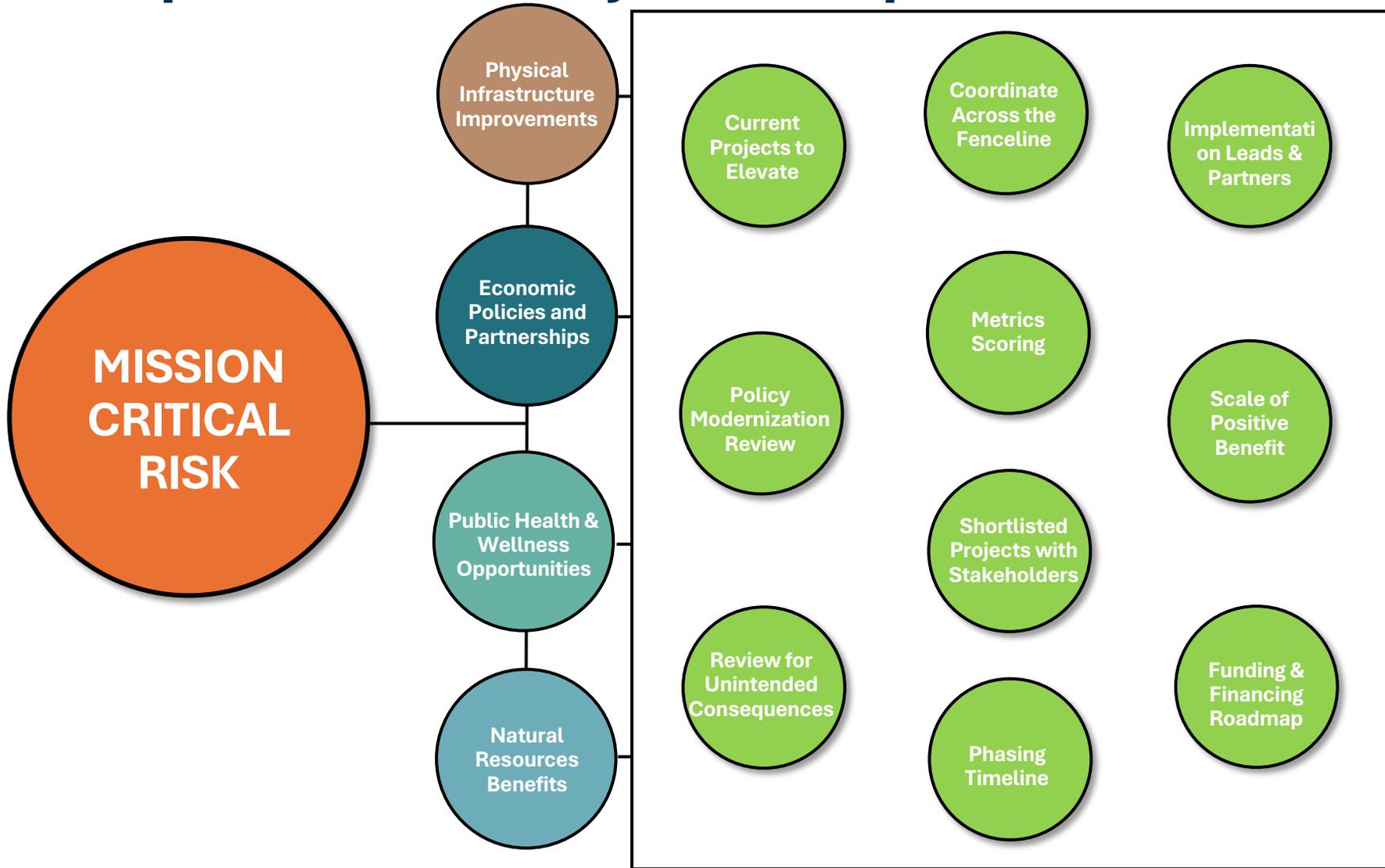
## *Desired* **OUTCOMES**

- ❑ A series of implementable projects that mitigate risk and benefit the community
- ❑ Defined roadmaps that are fundable and uplift current efforts

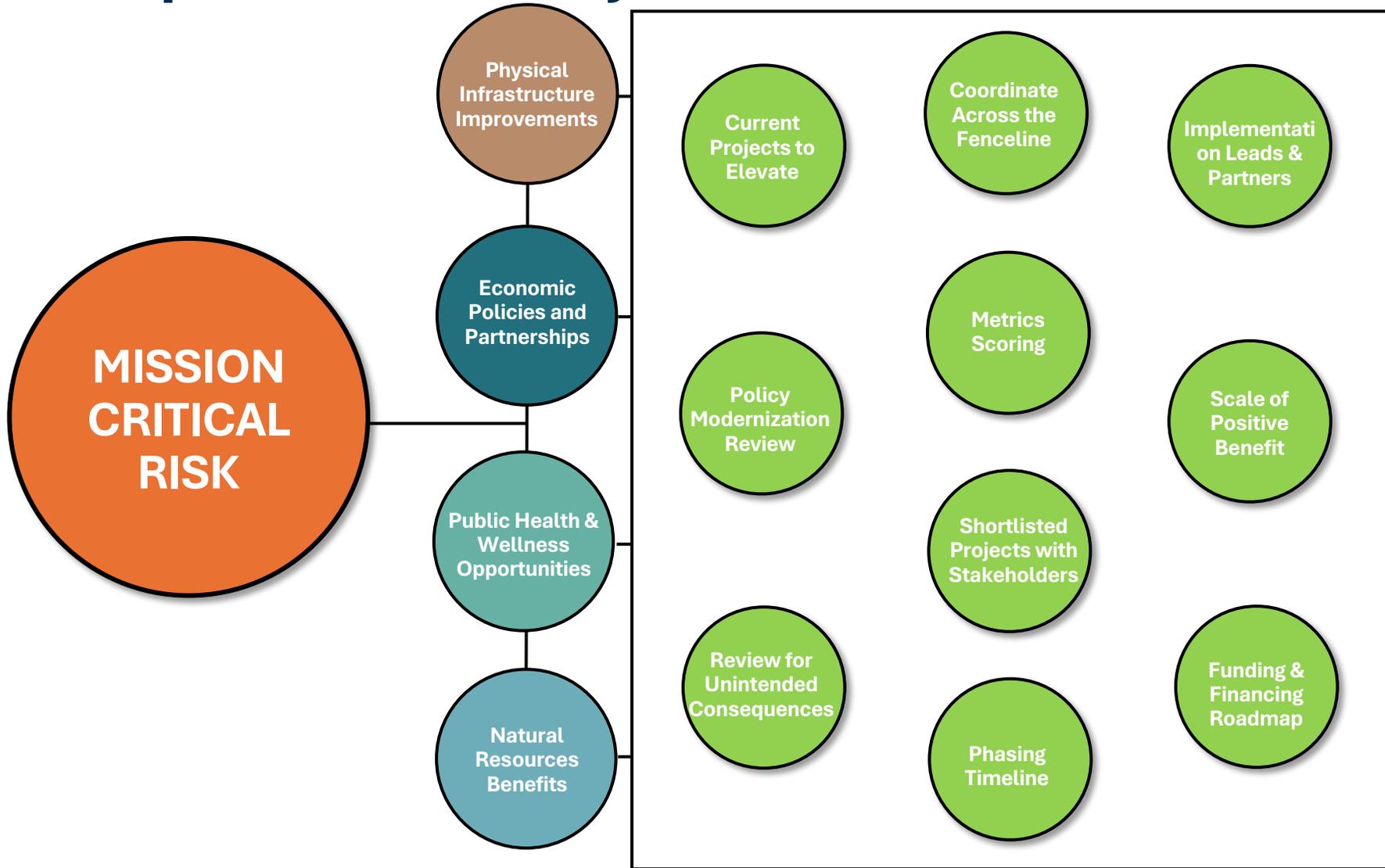
# Comprehensive Project Pillars: RRAP Goals



# Comprehensive Project Components



# Comprehensive Project Results



- CIP Infrastructure Projects
- Economic Policy Updates
- Public Health Policy Updates
- Environmental Policy Updates
- Coordination Partnerships
- Recommendations to the Installation



# Planning Practices for Qualitative Components

## Smart City Growth Strategies

A smart city is an urban area that uses digital technology to collect data and operate services, aiming to improve the quality of life for residents, sustainability of development, and efficiency of city operations. Key technologies include Information and Communication Technologies (ICT) and the Internet of Things (IoT).

### Key Characteristics of a Smart City

- **Technology-Based Infrastructure:** Smart cities rely on interconnected digital technologies, including the Internet of Things (IoT), to manage various aspects of urban life.
- **Data-Driven Decision Making:** Real-time data collected through sensors and other devices is analyzed to inform decisions and improve city services.
- **Improved Efficiency and Sustainability:** Smart city initiatives aim to optimize resource management, reduce energy consumption, and enhance environmental sustainability.
- **Enhanced Citizen Engagement and Services:** Smart cities prioritize citizen participation and strive to provide accessible and efficient government services.

#### Water

Smart Metering System  
IoT Systems for Flood and Emergency Response



*Benchmark example: Barcelona Smart Water Management System*

#### Transport

Micromobility Hubs  
Demand Responsive Transport  
Drone Deliveries  
Smart Logistics and Deliveries



*Benchmark example: Bus-on-demand Dubai, Berlin Mobility Hub*

#### Energy

Smart Grid System  
IoT Energy Monitoring and Automated Management



*Benchmark example: Smart Grid City Project, Boulder Colorado USA*

#### Waste

Smart Waste Management System (IoT Sensors, Automation, Responsive Transport System)



*Benchmark example: Smart Waste Management, San Francisco*

#### Security

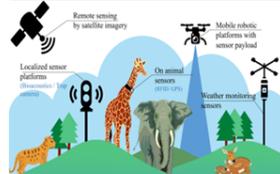
Biometric Access Building Management Systems  
Crowd Safety Management  
Integrated Command & Control Centres



*Benchmark example: Seoul Emergency Operations Centre, South Korea*

#### Net Zero & Sustainability

Biodiversity Monitoring  
Carbon Stock and Emissions Monitoring  
Digital Twins for Climate adaptation



*Benchmark example: Internet of Things for Biodiversity in Singapore*

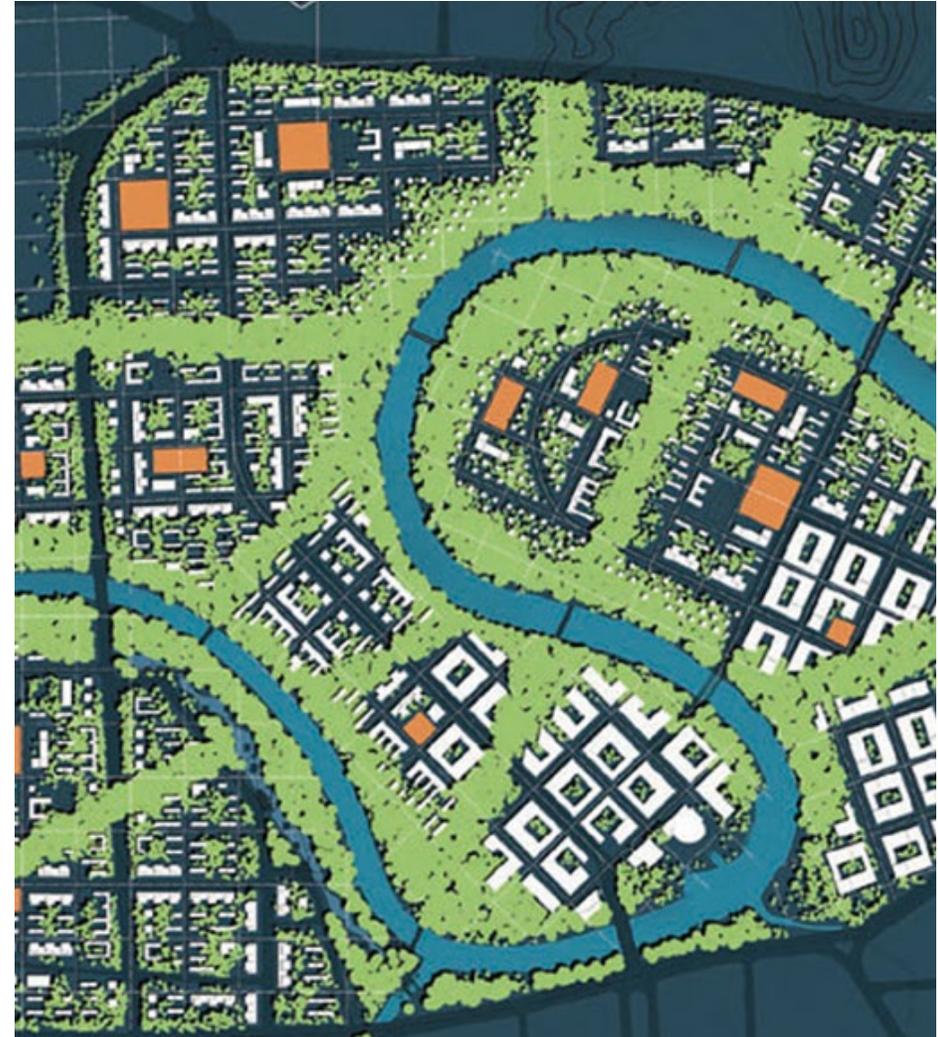


# Planning Practices for Qualitative Components

## Sponge City Design Guidelines

### Planning Guidelines that Enable Smart City Growth

- **Preserve and Restore Natural Waterways:** Maintain and restore rivers, lakes, and wetlands to enhance their natural flood-control capacity.
- **Green Spaces:** Incorporate parks, green roofs, and urban forests to absorb rainwater and reduce runoff.
- **Retention Basins:** Create basins to store excess rainwater for reuse in irrigation and other non-potable applications
- **Constructed Wetlands:** Develop wetlands to treat and purify stormwater naturally.
- **Low-Impact Development:** Minimize Impervious Surfaces: Reduce the amount of concrete and asphalt to allow natural water absorption.
- **Sustainable Building Practices:** Implement eco-friendly construction methods that protect the environment.



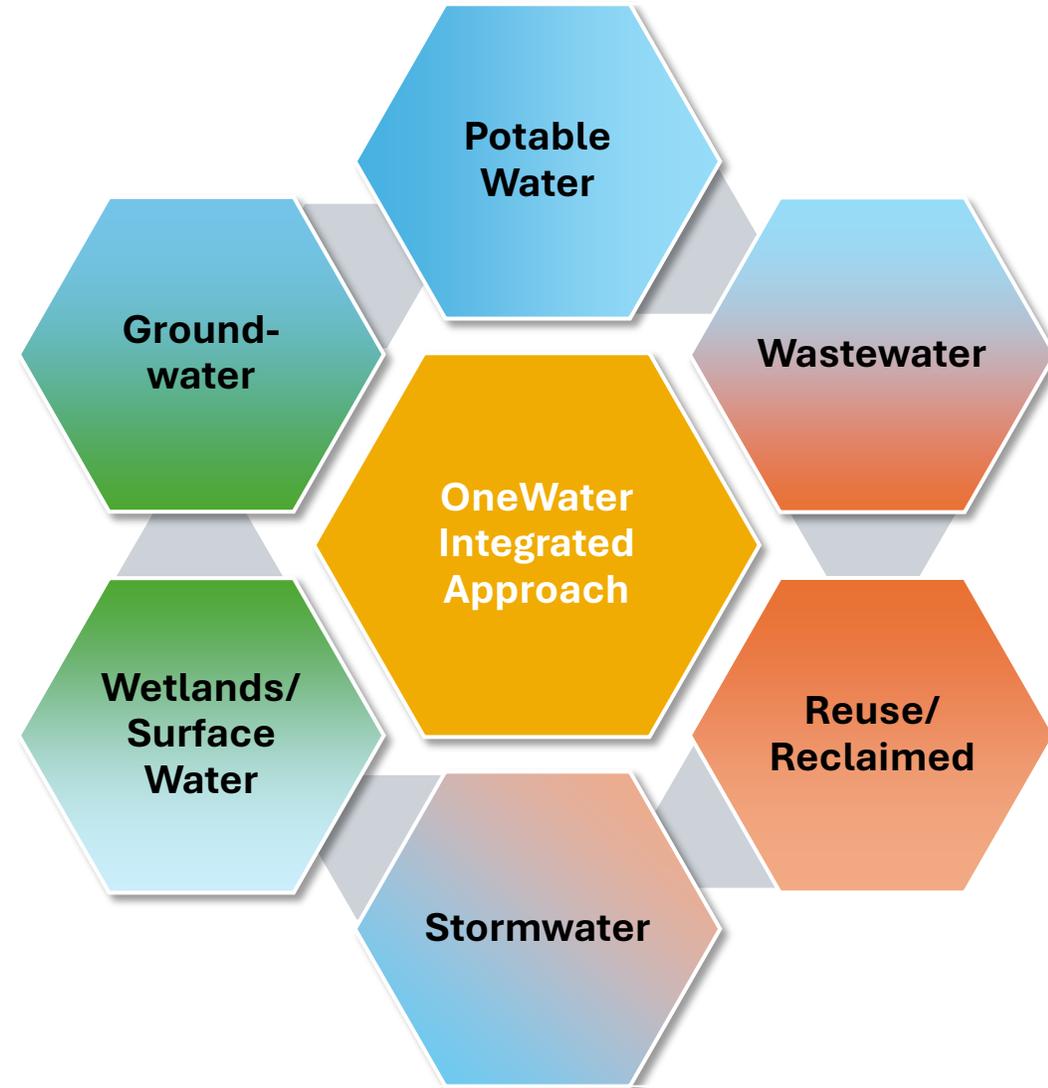
# Planning Practices for Qualitative Components

## One Water Framework

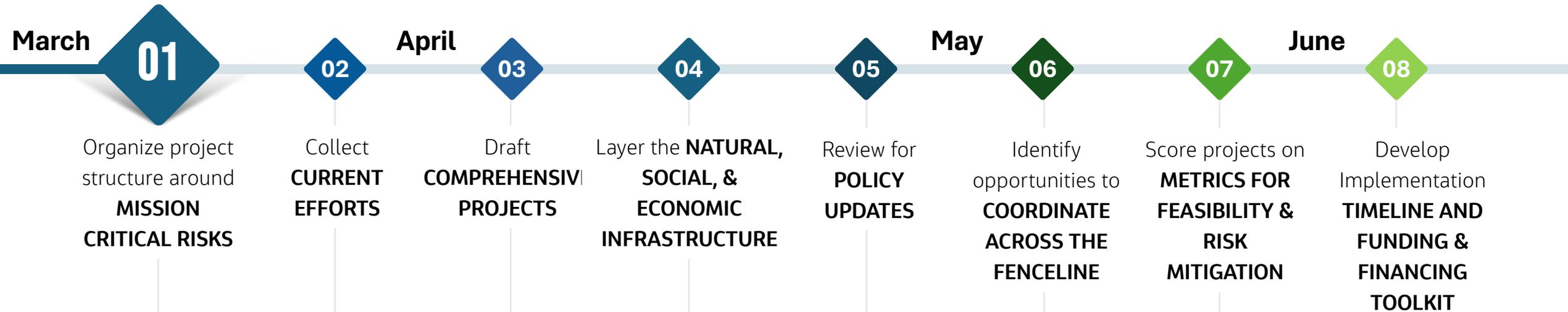
The OneWater Integrated Approach to resilient water systems involves considering the interconnected nature of the systems, identifying root cause vs failure chain vs side effect issues, and addressing constraints associated with current and future demands.

**OneWater is about both the water supplies and demands.**

The DOD missions, space industry, and population growth are all factors in the demand, rely on the resilience of these systems, and benefit from them functioning at high levels of performance. These pressures affect streams, oceans, wetlands, groundwater, rainfall, and aquifers.



# Adaptation Timeline



# White Paper



# Introduction



- Importance of Beach and Inland Shorelines
  - Defense against overtopping from surge and tides
  - Dissipate wave energy before reaching facilities and roads
  - Support water access for supplies and logistics



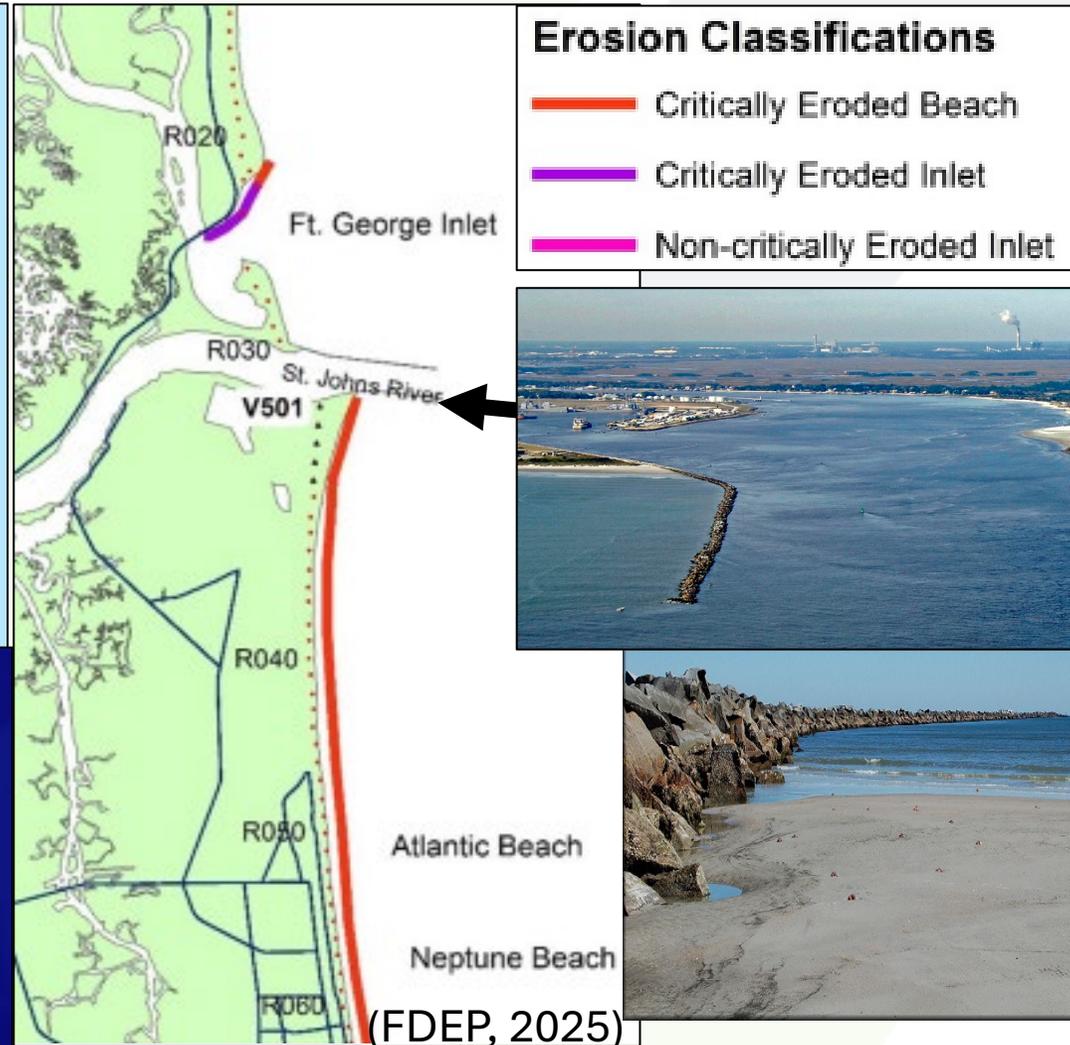
- Feasibility for Mitigation
  - Targeted rather than uniform shoreline protection
    - Elevate and protect specific critical segments
    - Adapt land use to accommodate flooding or block discrete flowpaths



- Discussion of projected shoreline inundation, shoreline types and conditions, existing mitigation and strategies for resilience



# Current State of Shoreline Vulnerability



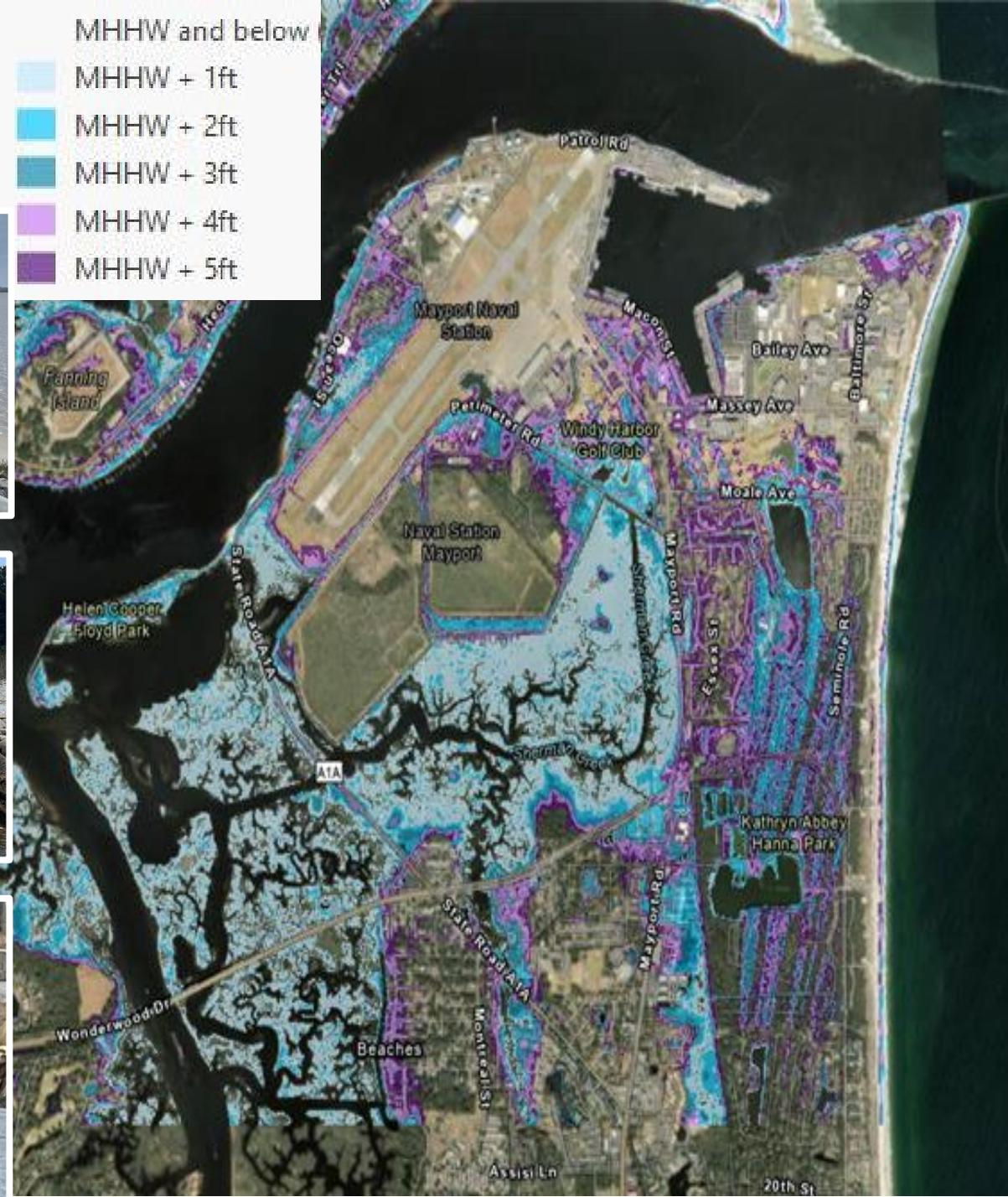
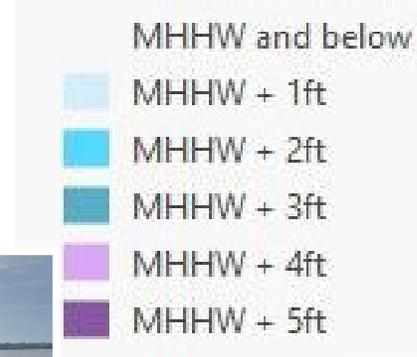
## Oceanfront Beach Erosion



# Highest Risk Assets

## 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



# High Risk Asset

## Shorelines

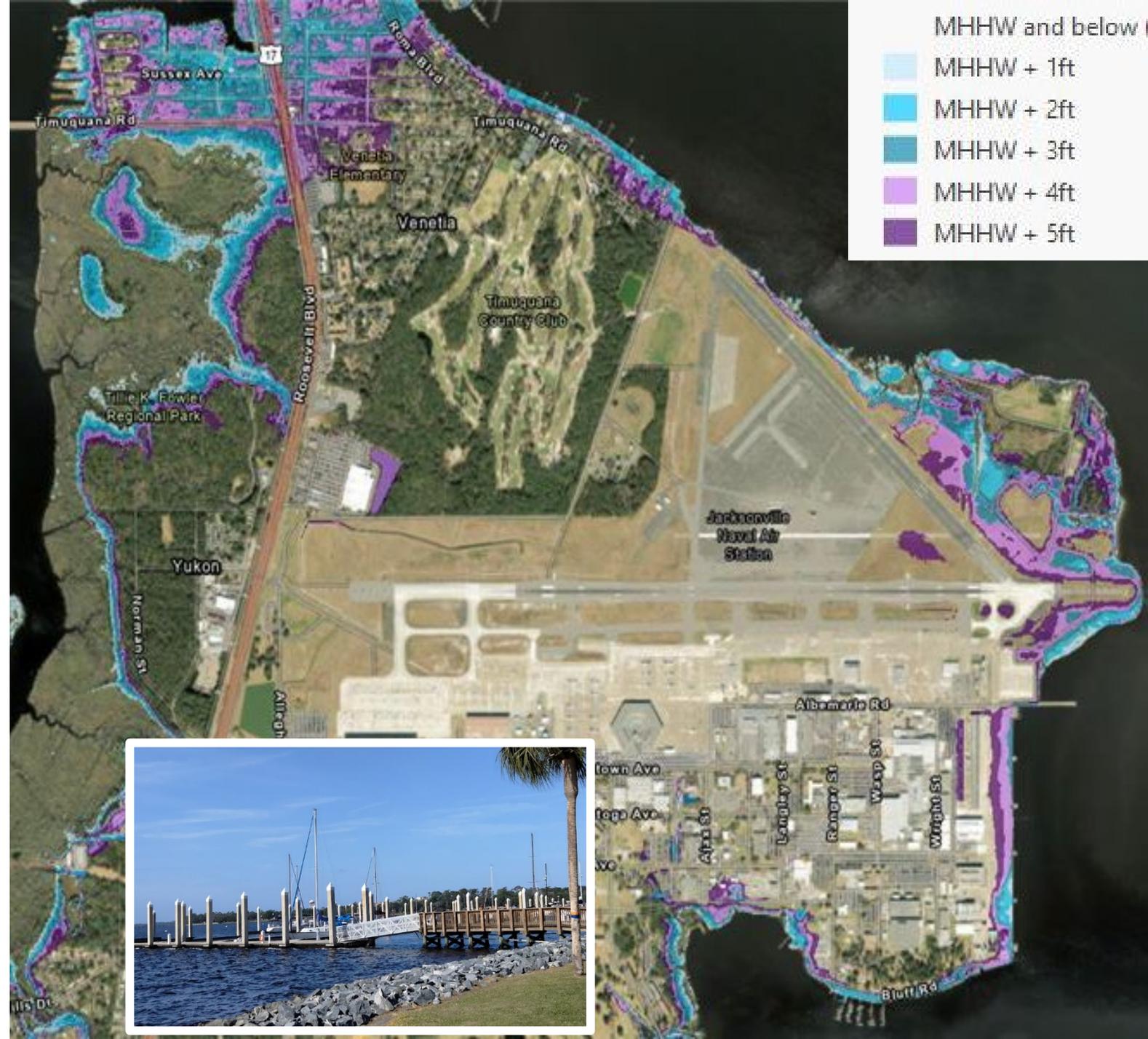
- Short-term
  - Wetland inundation
  - Canal propagation
- Mid-term
  - Lower dock overtopping
- Long-term
  - Seawall adaptation
- Adaptation strategies
  - Asset maintenance
  - Bridge elevation
  - Tide gate



# High Risk Asset

## 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



# Strategies for Shoreline Resilience

- **Adaptation Strategies**
  - Continue beach nourishment and sediment management
  - Stabilize select shorelines (seawalls, revetments, groins) near critical infrastructure or constraints
  - Expand nature-based solutions
    - Dune restoration with native vegetation
    - Living shorelines (marsh plantings, oyster reefs, hybrid sills)
  - Support decisions with monitoring and adaptive management
    - Shoreline mapping, sediment budget analysis, post-project performance tracking
- **Potential Mitigation Projects**
  - Jetty tightening and elevation
  - Stemwall/ levee around Mayport airfield
  - Seawall adaptation near southeast border NAS JAX
  - Reinforced berm along north jetty (riverfront Mayport)
  - Tide gates near Perimeter Road in Mayport or central canal at Blount Island
- **Planning and Policy Approaches**
  - Integrate with regional plans (consider federal/city/ private ownership along A1A)



# Conclusion

- Priority shorelines at risk and critical flowpaths:
  - NS Mayport- canal along Perimeter Road, flow beneath Mayport Road, shoreline segments protecting facilities north of Access Road, and protection of airfield-support areas
  - Blount Island- northwest armored shoreline, lower dock elevations, and the central canal that governs interior flooding
  - NAS JAX- scour risk at the Roosevelt Boulevard bridge and overtopping along the southeastern seawall
- Acknowledge need for phased adaptation based on monitored thresholds and note future projects in long term plans
- Maintain formal coordination with regional partners including shoreline owners
- Confirm elevations, drainage and erosion issues at priority sites

# Discussion Questions

- How does the current state of shoreline vulnerability indicated in the paper correspond with your knowledge?
- Does the paper provide adequate information about projected erosion and aging infrastructure?
- Does the paper capture all relevant existing mitigation efforts? Should they be called mitigation or adaptation efforts?
- Does the paper cover the full suite of relevant adaptation strategies?
- Should the City of Jacksonville's Living Shoreline Suitability model and other similar efforts be leveraged or incorporated into this paper?
- What are your thoughts about the potential mitigation projects and planning and policy approaches?
- Do you agree with the tiered prioritization framework proposed?
- Do the next steps provide enough information for taking action? How can we build upon this in the next phase of the MIRR?

# Next Steps & Questions



# Next Steps & Questions

- Mutual Support Agreements Feedback and Comments
- Adaptation Strategies Feedback and Comments
- Next TAC Meeting – March 26<sup>th</sup> (*Tentative*)
- Emergency Management Exercise – May 2026





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Military Installation Readiness Review

# Thank You



Comments / Feedback please email:  
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