

Northeast Florida Regional Council
Military Installation Readiness Review



Regional Adaptation Projects, Policies & Partnership Recommendations

SEPTEMBER 2026



Land Use

Land use is among the most direct levers available to regional partners for strengthening installation resilience, because the conditions that determine mission sustainability are largely set beyond the fence line. The compatibility of surrounding development, the health of natural buffers, and the management of shared landscapes all shape whether Northeast Florida's installations can train, operate, and recover from disruption. This section addresses four interrelated land use themes that bear on that resilience: shoreline protection along the region's estuarine and riverine systems, wildfire management across the wildland-urban interface, encroachment pressures near Camp Blanding and NOLF Whitehouse, and conservation of the open lands that buffer installations and sustain regional ecological function.



Shorelines

Overview of the Issue

Shoreline resilience in the Northeast Florida region is influenced by the estuarine and riverine shorelines of the region's coastal installations and by the marsh systems of the St. Johns River watershed. Sea level rise, tidal flooding, and shoreline erosion threaten installation infrastructure and the wetlands that protect it. Additionally, wetlands and marshlands are constrained by land use barriers, where installation boundaries fix the waterward edge of these systems while surrounding urban development fixes the landward edge. This leaves little room for wetlands to migrate inland as seas rise. Absent intervention, shoreline protection projects risk becoming fixed points in a retreating system.

Mission Criticality

Regional shorelines across Northeast Florida are essential natural and engineered assets that directly support the operational readiness and resilience of NAS Jacksonville, MCSF Blount Island, and NS Mayport. These installations are located along the St. Johns River and adjacent coastal environments, where shorelines serve as the first line of defense against coastal hazards such as storm surge, erosion, and flooding. Without these protective features, increased exposure to coastal hazards could disrupt operations, damage assets, and limit installation accessibility.

In addition to their protective function, regional shorelines also play a key role in sustaining navigation and maritime operations that are central to these installations' missions. The St. Johns River channel and associated shoreline systems enable vessel movement, port operations, and logistics activities that support both naval and joint-service missions. Natural shorelines, such as marshes and wetlands, further enhance resilience by providing flood storage, improving water quality, and serving as buffers that reduce the impacts of extreme weather events. Coordinated shoreline management across federal, state, and local jurisdictions is therefore critical to maintaining these protective and operational functions, ensuring that installations remain secure, accessible, and fully mission-capable in the face of increasing coastal risks.

Current Framework and Efforts

Shoreline resilience efforts supporting NS Mayport, Blount Island, and NAS Jacksonville are currently driven by a combination of project-based partnerships and emerging regional coordination initiatives. At Blount Island, collaboration with the U.S. Army Corps of Engineers (USACE) has supported shoreline planning, design, and implementation efforts, including participation in the *Engineering With Nature* program. The installation has also received Environmental Security Technology Certification Program (ESTCP) funding for nature-based coastal resilience projects. More recently, the City of Jacksonville, the University of Georgia's Institute for Resilient Infrastructure Systems (UGA IRIS), and the National Fish and Wildlife Foundation (NFWF) have advanced work on sediment reuse and thin-layer placement, highlighting a growing, multi-stakeholder approach to shoreline stabilization and habitat enhancement.



Across the region, the City of Jacksonville has played a central role in coordinating shoreline protection efforts, often in partnership with USACE, while also integrating nature-based solutions such as living shorelines into resilience planning. A **Navy–UGA resilience Intergovernmental Support Agreement (IGSA)** and the formation of a regional Steering Committee further signal a shift toward more structured, ongoing collaboration. These efforts provide a forum for installations and partners to share data, align priorities, and explore scalable approaches to addressing shoreline change, storm surge impacts, and erosion.

The policy framework supporting these efforts is also strengthening.

- At the state level, Florida SB 302, signed in March 2026 and effective July 1, 2026, promotes a statewide shift toward expanding the use of nature-based solutions and directs FDEP to create a streamlined permitting track for such projects and establish general permits for projects that avoid significant adverse impacts (State of Florida, 2026).
- The City of Jacksonville’s Office of Resilience is developing a geospatial suitability model for more than 300 miles of St. Johns River watershed shoreline, identifying where grey versus green solutions are appropriate (City of Jacksonville, 2025).
- City of Jacksonville 2045 Comprehensive Plan CCME Goal 13 already establishes Adaptation Action Area provisions requiring five-year sea level rise and vulnerability updates and side-by-side evaluation of soft and hard infrastructure options (City of Jacksonville, 2025).
- SJRWMD operates land acquisition and restoration programs targeting floodplain and coastal wetlands as non-structural flood mitigation assets and maintains a five-year acquisition plan (SJRWMD, 2025), and the MIRR’s own adaptation analysis has evaluated adaptation alternatives for the installations (APTIM, 2026).

While these partnerships demonstrate strong engagement and technical progress, they have historically been project-specific rather than programmatic. As a result, shoreline resilience actions have often been tied to discrete funding opportunities rather than guided by a sustained, coordinated strategy. This approach may limit the ability to proactively address long-term vulnerabilities across installations, particularly as sea level rise, storm surge, and erosion intensify and create more immediate operational risks, such as the growing urgency of dredging needs at Blount Island.

Looking ahead, existing partnerships provide a strong foundation for a more integrated, multi-installation approach to shoreline resilience. Leveraging the recently established Steering Committee, along with existing IGSA frameworks and USACE relationships, offers an efficient pathway to advance programmatic coordination. A coordinated shoreline resilience strategy across NS Mayport, Blount Island, and NAS Jacksonville could improve resource alignment, reduce redundancy in effort, and support more consistent application of nature-based and engineered solutions. Such an approach would help transition current efforts from reactive, project-driven initiatives to a sustained, forward-looking resilience program capable of addressing the region’s evolving coastal risks.

Additionally, there are specific policy challenges that if unaddressed could hinder the success of regional shoreline collaboration: the permitting path for larger nature-based projects is still discretionary and slow; there are no pre-positioned migration corridors to give marshes room to retreat as seas rise; and the accommodation strategy identified for NAS Jacksonville outlined in the MIRR’s adaptation analysis is not yet reflected in adopted regional policy.



The recommendations that follow are designed to close that distance, and the timing is favorable: SB 302's rulemaking window, the in-progress suitability model, and the newly established Steering Committee give NEFRC concrete, near-term openings to move shoreline resilience from reactive, project-driven work toward the sustained, coordinated program the region needs.

Recommendations

Strategic Project RS 1. Northside Coastal Shoreline Resilience Partnership and Implementation Strategy

NEFRC can lead the development and coordination of a multilevel partnership strategy focused on enhancing the resilience of continuous shoreline systems extending from the Northside Fuel Depot along the St. Johns River to the Atlantic Ocean. This effort will align local priorities with federal, state, regional, and local expertise, policy frameworks, and funding programs to support a comprehensive, corridor-scale approach to shoreline stabilization, flood risk reduction, and infrastructure protection. By formalizing collaboration across agencies with overlapping responsibilities for coastal management, transportation, port operations, military readiness, and environmental protection, the strategy will ensure that planning and investment decisions reflect best practices and maximize access to resources across all levels of government.

This effort presents a unique opportunity to establish the Northside coastal corridor as a pilot for a connected shoreline resilience approach that integrates natural systems, built infrastructure, and coastal processes across jurisdictional and asset boundaries. By focusing on continuous shoreline conditions from the industrial and military assets along the St. Johns River to the Atlantic coast, the project can demonstrate how coordinated planning and investment can reduce erosion, manage storm surge, and improve system performance across interconnected coastal environments.

The corridor context strengthens this opportunity by linking a range of uses, including port operations, military installations, industrial lands, transportation corridors, and ecological systems such as marshes and tidal wetlands. This diversity enables the application of both traditional engineered solutions and nature-based strategies, such as living shorelines, shoreline stabilization, and marsh restoration, to address varying conditions along the corridor. Larger contiguous shoreline segments and shared exposure to coastal hazards allow for a more integrated and scalable approach compared to site-specific interventions.

Positioning this effort as a pilot enhances its competitiveness for federal and state funding programs that prioritize corridor-scale resilience, nature-based solutions, and multi-benefit outcomes. By aligning the project with national objectives such as climate adaptation, coastal resilience, navigation protection, and military readiness, NEFRC and its partners can pursue funding from programs such as FEMA's Building Resilient Infrastructure and Communities (BRIC) and Hazard Mitigation Grant Program (HMGP), U.S. Army Corps of Engineers coastal and Engineering With Nature initiatives, U.S. Department of Transportation resilience programs, and Department of Defense funding through the Readiness and Environmental Protection Integration (REPI) Program and OLDCC. Demonstrating measurable co-benefits such as reduced erosion, avoided infrastructure damage, habitat enhancement, and improved system reliability will strengthen competitiveness and position the region as a leader in integrated coastal resilience planning.



Together, these characteristics position NEFRC and its partners to demonstrate how a regional, corridor-scale approach to shoreline resilience can align infrastructure protection, ecological restoration, and climate adaptation while supporting economic activity, port operations, and military readiness along one of Northeast Florida's most critical coastal systems.

Potential Project Leads and Partners

- NEFRC/RFC Collaborative Partners
- Northeast Florida Estuarine Restoration Team (NERT)
- Federal Coordination and Strategic Alignment
 - NEFRC can coordinate with federal agencies to align the shoreline resilience strategy with national programs, technical expertise, and funding opportunities. This includes engagement with the U.S. Army Corps of Engineers for coastal engineering, shoreline stabilization, and Engineering With Nature approaches; FEMA for floodplain mapping, coastal hazard mitigation, and programs such as BRIC, HMGP, and CRS; and EPA for water quality and nature-based infrastructure planning.
 - NEFRC can also coordinate with agencies such as NOAA, U.S. Fish and Wildlife Service, and USDA Natural Resources Conservation Service to support habitat restoration, living shoreline implementation, and coastal ecosystem resilience.
 - Given the presence of military and port assets along the corridor, NEFRC can engage Department of Defense–affiliated programs, including OLDCC and the REPI Program, to align shoreline resilience efforts with mission readiness and infrastructure protection priorities.
- State-level Coordination and Policy Alignment
 - NEFRC can coordinate with the Florida Department of Environmental Protection Office of Resilience to align the strategy with statewide coastal resilience priorities, grant programs, and adaptation frameworks.
 - Coordination with the St. Johns River Water Management District can ensure consistency with basin management, shoreline permitting, and regional hydrologic conditions, while providing technical support for tidal, surge, and watershed interactions along the corridor.
- Regional Planning and Cross-jurisdictional Coordination
 - NEFRC can serve as the central coordinating body for aligning shoreline resilience efforts across jurisdictions, including the City of Jacksonville, JAXPORT, and military installations. This includes integrating shoreline strategies with transportation resilience planning, port infrastructure protection, and regional hazard mitigation efforts.
 - NERT can support regional data sharing, shoreline mapping, and stakeholder engagement to ensure a consistent, corridor-wide approach that reflects shared risks and interconnected system performance.
 - SASMI can support partner coordination and sharing of data, best practices, mapping and project alignment.
- Local Government, Port, and Installation Coordination (NEFRC/RFC Collaborative Partners and Local Partners)



- NEFRC can coordinate with partners to align shoreline stabilization efforts with land use planning, capital projects, and operational requirements.
- This coordination will ensure that shoreline improvements are integrated with adjacent infrastructure, including roadways, utilities, port facilities, and military assets, reducing fragmentation and improving overall system resilience.
- Financial, Insurance, and Implementation Alignment (NEFRC/RFC Collaborative Partners and Partners)
 - NEFRC can facilitate engagement with funding entities, insurers, and financing partners to link shoreline resilience investments with measurable risk reduction outcomes.
 - By demonstrating reductions in erosion, flooding impacts, and infrastructure vulnerability, the strategy can support improved insurance ratings, enhanced CRS performance, and access to favorable funding conditions.
 - This approach will help create a framework in which shoreline resilience investments generate both environmental and economic benefits, supporting long-term sustainability of critical coastal infrastructure.

Strategic Project RS 2. Regional Shoreline Coastal Resilience Implementation Plan (SCRIP)

This project establishes a comprehensive Regional Shoreline Coastal Resilience Implementation Plan (SCRIP) focused on the continuous shoreline system extending from the Northside Fuel Depot along the St. Johns River to the Atlantic Ocean. Led by NEFRC in coordination with federal, state, regional, and local partners, the SCRIP will build upon the white paper *Playing the Long Ball: A Preparation Strategy for Future Erosion Impacts* as a foundational framework to develop a unified, corridor-scale understanding of shoreline conditions, vulnerabilities, and opportunities. The effort will move beyond fragmented, site-specific approaches by creating a continuous shoreline profile that integrates industrial, port, military, transportation, and ecological systems into a single, cohesive resilience strategy. The shoreline profile will be developed to capture all typologies present along the corridor, including hardened bulkheads, natural marshes, transitional edges, dredged channels, port facilities, and hybrid systems. This typology-based approach will enable consistent evaluation of shoreline performance, exposure to erosion and flooding, and suitability for adaptation strategies. The plan will build upon existing U.S. Army Corps of Engineers (USACE) work to address gaps in understanding wake and wave energy dynamics, hydrology, and sediment transport processes, ensuring that shoreline responses are evaluated within the context of both natural forces and vessel-generated impacts.

A key component of the SCRIP will be the integration of transportation-level analysis of vessel activity in partnership with JAXPORT. This will include evaluation of vessel types, wake characteristics, draft requirements, channel geometry, and operational patterns to better understand how maritime traffic contributes to shoreline erosion and system stress. By linking navigation dynamics with shoreline performance, the plan will provide a more complete representation of coastal processes influencing infrastructure and natural systems.



The project will also incorporate and build upon ongoing efforts, including the NFTPO Mayport Resiliency Plan and the City of Jacksonville's broader resilience initiatives, ensuring alignment with existing transportation and coastal resilience planning efforts. Once foundational analysis is complete, the SCRIP will evaluate the Jacksonville Living Shoreline Suitability Analysis (LSSM) to identify areas of alignment and opportunity for implementation of nature-based and hybrid shoreline solutions.

Using tools such as ecological valuation frameworks, the project will quantify ecological benefits and co-benefits associated with shoreline interventions, including habitat enhancement, water quality improvement, wave attenuation, and carbon sequestration. These ecological metrics will be combined with community co-benefits such as flood risk reduction, infrastructure protection, public access, and economic resilience to develop a comprehensive solutions matrix.

The SCRIP will culminate in the development of a corridor-wide adaptation vision, crafted collaboratively with all partners, that defines a strategic progression of approaches including protect and defend strategies, direct and conserve approaches, and areas where adaptation or accommodation may be appropriate. This vision will guide the identification of typology-specific solutions and site-level recommendations tailored to ownership, function, and risk conditions.

Finally, the plan will establish a prioritized implementation strategy using evaluation frameworks such as Multi-Objective Decision Analysis (MODA) and Economic Impact (EI) analysis to rank projects based on performance, urgency, cost-benefit, and co-benefits. Where alignment is confirmed, the plan will advance funding and implementation of nature-based systems (NBS) and hybrid solutions identified through the Jacksonville LSSM and supporting analyses, along with strategies for long-term maintenance and lifecycle performance.

Potential Partners and Leads

- NEFRC
- USACE
- JAXPORT
- City of Jacksonville
- NAVFAC, DLA, and installation partners
- FDEP
- SJRWMD
- Northeast Florida Estuarine Restoration Team (NERT)
- South Atlantic Salt Marsh Initiative (SASMI)

Step 1: Shoreline System Mapping and Vision Development (Short-term)

- Comprehensive Shoreline Typology Inventory and Two-dimensional (2D) Hydrodynamic Modeling
 - Partners in coordination with the U.S. Army Corps of Engineers (USACE) and the Northeast Florida Estuarine Restoration Team (NERT), can build upon existing shoreline studies and regional analyses to confirm whether a complete, continuous profile of shoreline conditions has been developed from the Northside Fuel Depot along the St. Johns River to the Atlantic Ocean. This effort should utilize foundational work such as



the Northeast Florida Military Installation Resilience Review (MIRR) white paper *“Playing the Long Ball: A Preparation Strategy for Future Erosion Impacts”* as a key starting point, along with other available datasets and studies.

- The effort should document all shoreline typologies, including hardened bulkheads, revetments, marshes, beaches, transitional edges, and hybrid systems that combine engineered and natural features. If gaps exist, partners can develop a comprehensive shoreline inventory and perform two-dimensional hydrodynamic and hydraulic modeling of coastal processes across the corridor.
- This baseline model should simulate tidal exchange, storm surge, wave action, vessel wake energy, and overland flooding interactions under both current and future conditions, integrating both structural and nature-based system performance. The effort can incorporate climate-informed inputs such as sea level rise, increased storm intensity, and changing precipitation patterns to ensure the shoreline system is understood as a dynamic, interconnected network influenced by both natural processes and human activity.
- Coastal Hydrology, Sediment Dynamics, and Comprehensive Shoreline Mapping
 - Partners can map both historical and current coastal and riverine processes to understand how shoreline conditions and sediment regimes have evolved over time. Using an integrated coastal systems approach, partners can develop a Comprehensive Shoreline Map that links tidal flows, wave climate, sediment transport pathways, shoreline typologies, and ecological systems such as marshes and wetlands. This mapping effort provides a foundational understanding of how physical processes shape shoreline performance across the corridor and how different segments interact as part of a continuous coastal system.
 - As part of this effort, partners can incorporate a methodology to correlate shoreline conditions and flood exposure with financial and infrastructure risk. This can include integrating FEMA floodplain data, storm surge modeling, erosion risk zones, and elevation data with land use, critical infrastructure, and asset inventories along the shoreline. By overlaying these datasets, partners can identify areas where shoreline vulnerability translates into higher flood exposure, increased maintenance costs, and greater risk to public and private assets.
 - Partners can also evaluate how shoreline change, erosion rates, flood frequency, and inundation depth influence risk to infrastructure and economic activity. By linking modeled shoreline and flood conditions to damage costs, operational disruptions, and insurance risk indicators, partners can quantify how coastal processes translate into financial risk and identify priority shoreline segments where targeted interventions could reduce both physical vulnerability and long-term economic impacts.
- Wake, Wave Energy, and Navigation Impact Gap Analysis
 - In coordination with USACE and JAXPORT, partners should conduct a focused analysis to address gaps in understanding vessel-induced wake energy, wave dynamics, and navigation-related impacts on shoreline stability. Building on existing USACE studies, this effort should evaluate vessel types, draft requirements, channel geometry, and operational patterns to quantify how maritime traffic contributes to shoreline erosion, sediment displacement, and infrastructure stress. The analysis should distinguish between natural wave climate and vessel-generated energy, establishing clearer



cause-and-effect relationships that influence shoreline degradation along industrial and navigational corridors. This focused effort will provide critical inputs to ensure that shoreline management strategies account for both hydrodynamic forces and operational maritime conditions.

- Citywide Shoreline and Coastal Resilience Vision
 - Regional partners can develop an adaptation strategy for each shoreline typology. This vision can articulate desired outcomes such as reduced erosion, improved flood protection, enhanced ecological function, sustained navigation efficiency, and climate adaptability. This vision should categorize shoreline segments based on function, exposure, and condition, and assign appropriate strategies including protect and defend for critical infrastructure and high-value assets, direct and conserve for natural and transitional systems where ecological function can be preserved or enhanced and accept and adapt for areas where long-term change or migration is necessary. By linking shoreline typologies directly to adaptation pathways, the vision will provide a clear, actionable framework for decision-making and investment.
 - As part of this visioning process, partners can incorporate and align with updated FEMA floodplain mapping, USACE coastal studies, the NFTPO Mayport Resiliency Plan, and the Jacksonville LSSM to ensure consistency with the most current data and planning efforts. This vision will guide decision-making and ensure that shoreline investments align with broader transportation, port operations, environmental, and community resilience goals while supporting a coordinated, corridor-scale approach to coastal system management.

Step 2: Development of the Shoreline Coastal Resilience Implementation Plan (SCRIP) (Short-term)

- SCRIP Integration and Plan Development
 - Partners can translate the Step 1 shoreline system mapping, typology framework, and adaptation vision into a formal Shoreline Coastal Resilience Implementation Plan (SCRIP) that integrates shoreline infrastructure, natural systems, navigation influences, and long-term climate adaptation into a unified strategy. This effort should align engineered shoreline protection, port and transportation infrastructure, and ecological systems within a single planning framework that reflects a systems-based coastal approach and supports long-term resilience, operational continuity, and environmental performance.
- Climate-informed Shoreline System Health Analysis and Predictive Modeling
 - Using the 2D hydrodynamic and shoreline modeling developed in Step 1, partners can evaluate overall shoreline system health under both current and future conditions. This analysis should incorporate sea level rise, storm surge intensification, wave energy, and vessel wake impacts to assess how shoreline segments are expected to perform over time. Predictive analytics can identify shoreline typologies, assets, and infrastructure segments that are most vulnerable to erosion, overtopping, or failure, enabling proactive investment strategies and targeted interventions before system degradation occurs.
- Identification of Shoreline Issues and Root Cause Analysis
 - Using the Comprehensive Shoreline Map, partners can identify segments experiencing erosion, instability, flooding, habitat degradation, or reduced system performance.



This analysis should evaluate root causes such as vessel wake energy, altered sediment transport, hardened shoreline constraints, and loss of natural buffering systems.

The approach should recognize that shoreline issues are driven by interconnected coastal, hydrodynamic, and operational factors rather than isolated site conditions, allowing systemwide drivers of degradation to be addressed.

- Development of Shoreline Solutions Matrix and Co-benefits Framework
 - Guided by the Citywide Shoreline Resilience Vision, partners can develop a comprehensive solutions matrix that identifies context-appropriate shoreline strategies based on typology, exposure, and function. This matrix should incorporate traditional gray infrastructure, nature-based solutions (NBS), and hybrid approaches, while integrating screening tools for environmental and ecosystem benefits or similar frameworks to quantify ecological benefits including habitat creation, wave attenuation, water quality improvement, and carbon sequestration.
 - The matrix should also incorporate community co-benefits such as flood risk reduction, infrastructure protection, economic resilience, and potential public access improvements. By evaluating tradeoffs and synergies between solution types, the matrix will enable selection of strategies that optimize both engineering performance and ecological outcomes across the shoreline system.
- Evaluation and Implementation Alignment of NBS and Hybrid Solutions
 - Partners can evaluate the Jacksonville LSSM against the shoreline typology framework and solutions matrix to identify where recommended nature-based and hybrid solutions align with site conditions and resilience objectives. Where alignment is confirmed, the City and partners can advance funding and implementation of these solutions, ensuring that validated, site-appropriate strategies move efficiently into design and construction. This step ensures that prior planning efforts are operationalized within a broader, corridor-scale implementation framework.
- Development of Adaptation Strategies, Typology-based Solutions, and Prioritization
 - Partners can develop adaptation strategies that translate the typology-based vision into actionable solutions assigned by shoreline type, site condition, and ownership, including municipal, port, and military assets. Using structured evaluation methods such as Multi-Objective Decision Analysis (MODA) and environmental impact analysis, partners can prioritize projects based on risk, urgency, cost-benefit, and co-benefits. This process will create a clear, defensible prioritization of projects that balances protection of critical infrastructure with conservation of natural systems and strategic adaptation where necessary.
- Development of Integrated Alternatives and Innovation Opportunities
 - Partners can develop and evaluate alternative shoreline strategies that combine engineered protection, nature-based restoration, and innovative approaches tailored to different typologies and ownership contexts. These alternatives should assess lifecycle performance, durability, and cost efficiency while also evaluating how solutions reduce flood exposure, erosion risk, and operational disruptions. The analysis should also consider impacts on insurance risk, potential reductions in damage and maintenance costs, and alignment with broader resilience and economic objectives, enabling selection of solutions that deliver both physical and financial benefits.



- Financing, Funding, and Long-term Maintenance Strategy
 - Partners can develop a comprehensive framework for financing, funding, and sustaining shoreline resilience investments. This includes identifying funding sources such as federal resilience programs (e.g., USACE, FEMA, USDOT), state programs, and local capital planning, as well as engaging insurers and financing entities to recognize risk-reduction benefits. The strategy should define pathways for implementation, as well as long-term maintenance, monitoring, and adaptive management to ensure continued performance of shoreline interventions. By linking project outcomes to measurable reductions in risk and improved system performance, partners can strengthen the business case for investment and ensure long-term sustainability of shoreline resilience efforts.



Wildfire Management

Overview of the Issue

Northeast Florida exists within a fire-dependent longleaf pine landscape in which prescribed fire is the primary tool for managing hazardous fuels. The wildfire management challenge in the region has several reinforcing layers: a contracting federal fuels-treatment capacity, the absence of a regional structure to coordinate fuels management across jurisdictions, and a community perception of smoke that actively suppresses the region's most important fuels tool.

Wildfire risk is a direct readiness concern for the region's installations. At Camp Blanding, wildfire is identified as a major operational risk along the installation's forested western boundary, where uncontrolled fire threatens training lands, range access, and the continuity of live-fire and maneuver operations and extends to adjacent conservation lands and critical infrastructure. Because prescribed fire is the primary tool for managing hazardous fuels in this longleaf pine landscape, the region's ability to conduct controlled burns is itself mission-critical: where smoke perception or coordination gaps suppress burning, fuels accumulate and catastrophic-fire risk to installation operations rises. The same dynamic applies at NOLF Whitehouse, which sits within a wildland-urban interface where the forested buffer that protects installation operations is also fuel-accumulating.

Mission Criticality

Wildfire management is a mission-critical regional function supporting the operational readiness and resilience of the four installations included in the Northeast Florida Military Installation Readiness Review, Naval Air Station Jacksonville, Marine Corps Support Facility Blount Island, Camp Blanding Joint Training Center, and Naval Station Mayport. Large portions of the region, particularly around Camp Blanding and other training areas such as NOLF Whitehouse, are characterized by fire-adapted ecosystems – the presence of stresses such as extreme heat and drought amplifies existing wildfire risk in these systems, requiring active management to reduce fuel loads and prevent uncontrolled wildfires. Without coordinated prescribed burning and land management practices, the risk of severe wildfire events increases, threatening on-base infrastructure, limiting access to training areas, disrupting mission-essential activities, and impacting public health.

Effective wildfire management also plays a critical role in maintaining compatible land use and environmental conditions that support ongoing military operations. Prescribed fire programs not only reduce hazardous fuel buildup but also sustain natural landscapes that serve as buffers against encroachment and preserve airspace and training capacity. Additionally, regional coordination among federal, state, and local land managers ensures that wildfire risks are mitigated across jurisdictional boundaries, reducing the potential for off-base fires to impact installation operations. Collectively, proactive wildfire management enhances resilience, protects critical assets, and ensures the safe and uninterrupted execution of training and operational missions across Northeast Florida installations.



Current Framework and Efforts

Ongoing wildfire events and management efforts in Northeast Florida reflect a growing recognition of the need for coordinated, region-wide approaches to reducing wildfire risk and supporting both community resilience and military readiness. Local, state, and federal partners, including land management agencies and installation stakeholders, continue to implement prescribed burning programs, fuel reduction strategies, and cross-boundary coordination practices to manage fire-adapted ecosystems and minimize the risk of uncontrolled wildfire events. These efforts are particularly important in areas surrounding Camp Blanding and other installations where training lands and adjacent natural areas require active management to maintain safe and functional conditions.

Federal Context

The federal wildfire management landscape has shifted significantly since 2025. The Department of the Interior established a new U.S. Wildland Fire Service (USWFS) in January 2026 (U.S. Department of the Interior, 2026), consolidating the fire programs of the Bureau of Land Management, National Park Service, Bureau of Indian Affairs, and Fish and Wildlife Service under a single agency with fire suppression as its stated primary mission. A planned merger of USDA Forest Service wildfire programs into the USWFS has not yet been finalized, and Congress declined to fund the new agency in FY2026 appropriations, leaving its operational capacity uncertain (Colorado Public Radio, 2026). Across both USDA and DOI, significant workforce reductions have followed; the Forest Service alone lost roughly 3,400 positions, and a May 2026 analysis by the Center for Western Priorities found that the agency treated 35% fewer acres for wildfire risk nationally in 2025 than in prior years (Center for Western Priorities, 2026).

The effects of this capacity reduction in Florida are measurable. Florida routinely leads the nation in prescribed fire acreage, a reflection of both the longleaf pine ecosystem's fire dependence and the strength of the state's certified-burner program. In 2025, however, Florida's USFS prescribed fire acreage dropped 68%, from approximately 385,000 acres to 124,000 acres, with early 2026 data tracking similarly below the historical average (Center for Western Priorities, 2026). The Florida Forest Service, as a state agency, is not directly subject to federal workforce reductions and remains the primary operational partner for wildland fire in Northeast Florida. But the reduction in federal capacity for fuels treatment on National Forest lands means that landscape-scale fuels management cannot be assumed to flow from federal programs at the pace the region's fire ecology requires. This context makes the case for a durable regional coordination structure more urgent. Fuels are accumulating, federal treatment capacity is constrained, and the organizational window for federal partners to lead coordination has narrowed. **A regional partnership built around the Florida Forest Service, Camp Blanding, and NEFRC, with federal agencies as participants rather than anchors, can be structurally more resilient.**

Existing Regional Framework in Florida

Three existing state-level structures informed the recommended regional wildfire management efforts that follow. The first offers a model to emulate, and the latter two provide a partnership foundation to build on in Northeast Florida.



Gulf Coast Plain Ecosystem Partnership (GCPEP). Established under a 1996 multi-party MOU among Eglin AFB, The Nature Conservancy, and several state and federal land managers, GCPEP has grown to 11 partners including U.S. Department of Defense (NAS Whiting Field and Eglin), FDEP, the Florida Forest Service, FWC, the Longleaf Alliance, the National Park Service, the Northwest Florida Water Management District, the National Forests in Alabama, The Nature Conservancy, Nokuse Plantation, and Westervelt Ecological Services. Partners collectively manage more than one million acres and conduct prescribed burns on 200,000–250,000 acres per year. The partnership is governed via a coordinator role, working groups, and shared annual treatment targets (Cooperative Conservation, n.d.; Longleaf Leader, 2021).

Florida's three Prescribed Fire Councils. The state operates three Prescribed Fire Councils (North, Central, and South Florida) coordinated through the Florida Forest Service. The North Florida Prescribed Fire Council was established in 1989 with an inclusive federal/state/private model. Councils meet one to two times annually, share practice and continuing-education credits, and convene practitioners, but do not operate as cross-jurisdictional treatment-priority bodies (FDACS, n.d.).

Ocala-to-Osceola (O2O) Wildlife Corridor Partnership. The O2O Partnership is an established 21-partner conservation coalition spanning approximately 1.6 million acres of public and private forested land between the Ocala and Osceola National Forests, with Camp Blanding as a central hub (NFLT, n.d.). O2O does not currently operate as a fuels-management coordinating body, but its partnership structure, geographic footprint, and partner roster overlap substantially with what a Northeast Florida fuels partnership would need, and its coordinator is hosted by North Florida Land Trust (NFLT) which also serves as the Readiness and Environmental Protection Integration (REPI) program transactional partner for Camp Blanding buffer acquisitions. This makes O2O a solid foundation to build on.

Camp Blanding and Clay County

Wildfire is identified as a major operational risk on Camp Blanding's forested boundary, and community perception of burn smoke is a significant secondary challenge for the installation's prescribed fire program. Several programs and agreements are already in place. Camp Blanding's Integrated Natural Resources Management Plan, which drives the installation's fuels program, has been updated and approved by USFWS and FWC, and a formal agreement with FWC designates portions of installation lands as a State Wildlife Management Area which serves as the legal vehicle for cooperative ecosystem management. An active but informal working relationship with the Florida Forest Service supports wildland fire on the installation and is viewed positively by both parties. This agreement has been flagged as a priority for formalization by the installation and in Technical Memorandum #7 of this MIRR.

On the buffer side, the Sikes Act authorizes the National Guard Bureau to fund habitat management on adjacent lands, and REPI funds Camp Blanding-adjacent acquisitions managed through North Florida Land Trust. These acquisitions include a 2022 157-acre Putnam County acquisition funded jointly through REPI, the Florida Defense Support Task Force, and the Clay County Development Authority (U.S. DoD, 2023). REPI can pursue buffer parcels from willing-sellers only, a constraint flagged by installation representatives. At the county level, a \$300–350 million Public Safety Complex (EOC, fleet center, fire/sheriff administration, regional warehouse) is being pursued by Clay County using BRIC, DCIP, P3, and state appropriations, and is building burn-training facilities at the Adventure Park (Motes, 2026).



Several constraints temper this foundation. Smoke impacts on adjacent communities are an active concern requiring county support for disclosure to property owners near training areas (Camp Blanding site visit, 2026). Coordination with Bradford County is weaker than with Clay, and installation staff have expressed interest in extending the planning and zoning coordination model west even though development pressure there is lower (Corby interview, 2026). Wildfire risk in conservation lands and at the FPL substation is an additional vulnerability identified through the MIRR vulnerability assessment (NEFRC, 2026).

Duval County and NOLF Whitehouse

City of Jacksonville recently launched its Community Wildfire Protection Plan (CWPP) process for Duval County, which provides the near-term vehicle for coordinating wildfire risk reduction across the county. NAS Jacksonville and NOLF Whitehouse sit within the county's wildland-urban interface, where the forested buffer lands that protect installation operations, including segments of the O2O corridor and REPI-eligible parcels, are also fuel-accumulating landscapes. Prescribed fire, however, is infrequently used in Duval County, and when burns do occur, air-quality complaints from residents who mistake smoke for wildfire have led to burns being shut down. The result is that the county's primary fuels tool is underused at precisely the WUI edges where installation operations and residential growth meet, and installation operations are not yet reflected in the county's wildfire risk planning.

Case Studies and Policy Tools for Wildfire Management

Colorado Wildfire Resiliency Code (2025). On July 1, 2025, Colorado enacted the Colorado Wildfire Resiliency Code (CWRC), the first statewide minimum building code for wildland-urban interface (WUI) construction in the country. All jurisdictions with WUI-designated areas were required to adopt the code by April 1, 2026, with full implementation by July 1, 2026 (Colorado Division of Fire Prevention and Control, 2025). The code establishes three fire-intensity tiers (Low, Moderate, High) with escalating requirements for roof class, ember-resistant venting, tempered glass, and ignition-resistant siding. It is forward-looking, applying to new construction and change-of-use as opposed to retrofits.

Oregon Prescribed Burn Associations. Following the 2020 Labor Day wildfires, the Oregon Legislature created a Certified Burn Manager program to reduce legal and procedural barriers to prescribed fire. A parallel structure, Prescribed Burn Associations (PBAs), landowner cooperatives whose members pool labor, equipment, and knowledge to conduct burns on each other's properties, has grown from zero to 10 active associations as of January 2026 (OSU Extension, n.d.; Capital Press, 2026). The certified-burner program provides technical certification and legal cover while the PBA provides the volunteer workforce. The state backstops liability through a \$5 million fund, with individual claims up to \$1 million per incident for certified burns that follow program rules (OSU Extension, n.d.).

Regional Recommendations

WF-1: Establish a Northeast Florida Fuels Management Partnership

No formal coordinated wildfire fuels management effort exists in the Northeast Florida region. While informal relationships support wildfire response, and project-specific fuels treatments occur, there is no formal regional framework to coordinate across jurisdictions.



- Modeled after the Gulf Coast Plain Ecosystem Partnership, a northeast Florida fuels management effort could build upon the existing O2O Wildlife Corridor Partnership structure, bringing together existing collaborators, including Camp Blanding, NAS Jacksonville/NOLF Whitehouse, the Florida Forest Service, FWC, SJRWMD, NFLT, NEFRC, and Duval and Clay Counties to:
 - Identify interjurisdictional treatment opportunities
 - Prioritize areas of shared risk
 - Align existing programs and resources, including shared staffing, to support more consistent implementation over time
- The partnership could also explore a regional shared-equipment and mutual-aid framework for fuels treatment across Duval and Clay Counties.

WF-2: Establish a Prescribed Fire Notification and Public Education Program

- Prescribed fire is infrequently used in Duval County. As a result, when they do occur, stakeholders have noted that air quality complaints have led to burns being shut down, as residents who see smoke often assume a wildfire has occurred. This misperception inadvertently, though actively, suppresses the primary fuels management tool available in the longleaf pine landscape. Camp Blanding faces the same challenge at installation scale, where smoke from training burns generates community complaints in adjacent Clay County neighborhoods.
- NEFRC is well-positioned to spearhead a regional prescribed fire education and notification framework. Specific actions NEFRC could lead in coordination with Duval County, Clay County, the Florida Forest Service, and Camp Blanding:
 - Develop a regional prescribed burn notification protocol with a defined advance-notice window, a shared public-facing smoke forecast tool, and coordination with FDEP's Air Resources Management Program. Existing alert systems such as AlertJax or Alert Clay could potentially be leveraged.
 - Launch a joint community education campaign on the role of prescribed fire in local forest and watershed health, targeting audiences in both Duval and Clay Counties and timed to Duval's August 2026 CWPP stakeholder outreach round

County Recommendations

WF-3: Embed Installation Operations into Regional Wildfire Planning

- Regional planning processes should ensure that NAS Jacksonville, OLF Whitehouse, MCSF Blount Island, and NS Mayport operations (including flight paths, communications equipment, access, utility services, critical infrastructure, etc.) are reflected in risk assessments to minimize disruptions to installation operations.



WF-4: Develop Prioritized Fuels Treatment Areas through the Jacksonville CWPP

- Community Wildfire Defense Grant (CWDG) Program implementation requires that funded work be tied to treatment areas identified in an adopted plan, with named implementation leads and preferred treatment methods. Regional planning documents should include a prioritized treatment map identifying specific landscape units for prescribed fire and mechanical thinning, covering:
 - Installation-adjacent buffer parcels eligible for REPI and Sikes Act-funded acquisition
 - High-priority wildland-urban interface (WUI) neighborhoods identified in the risk assessment
 - Roadside fuel loads along primary evacuation corridors

WF-5: Integrate Wildfire Risk into Comprehensive Plan Policy

- A CWPP without a link to adopted land use policy has limited regulatory force. The strongest CWPP implementations are anchored by comprehensive plan language that gives the plan's risk framework direct bearing on development approvals.
- Jacksonville should integrate wildfire as a named natural hazard in its Comprehensive Plan and Emergency Management All Hazards plan, with provisions tying new development approvals in WUI zones to risk tiers developed through the planned CCWP.
- Clay County's Conservation Element already commits to prescribed fire on public conservation lands but includes no WUI development standards. The County should consider updating their Conservation Element to include language that restricts new development in high risk WUI zones.

WF-6: Adopt Wildfire-Resilient Construction Standards for New Development in High-Risk Zones

- Local governments should consider a WUI overlay district in the County's development code modeled after the Colorado Wildfire Resilience Code, requiring the following for new construction in mapped high-risk WUI zones:
 - Class A minimum roofing
 - Ember-resistant venting
 - Tempered glass windows
 - Non-combustible or ignition-resistant exterior siding
- Local government planning departments could spearhead adoption of such policies.
- Clay County should also consider the adoption of wildfire disclosure requirements for new residential development within a defined buffer of Camp Blanding's training perimeter, notifying buyers of smoke, noise, and active fuel management



Encroachment Mitigation with Natural Resources Management

Overview of the Issue

Encroachment from private development on historically vacant buffer lands surrounding the region's military installations poses a long-term operational challenge. Over time, incremental development decisions change the character and function of the surrounding landscape. When buffer lands are converted to housing or other more intensive uses, the resulting pattern of buildings, roads, utilities, lighting, and general property expectations make it more difficult to maintain conditions that support installation readiness. This is particularly true of Camp Blanding and NOLF Whitehouse.

Camp Blanding

Camp Blanding relies on large areas of open and compatible land to support its training activities, including live-fire training. The lands around the installation also provide community and environmental benefits. Growth pressure in surrounding Clay County is increasing, notably near Middleburg and along transportation corridors. The First Coast Expressway is expected to drive additional growth, as is expansion of the Keystone Heights water line. These pose risks that land currently functioning as a compatible buffer may face increasing pressure for residential or other higher-intensity conversion over time.

Clay County has an existing framework for addressing land use compatibility with Camp Blanding. The County's comprehensive plan calls for cooperation with Camp Blanding to encourage compatible land uses, prevent incompatible encroachment, and facilitate the continued operation of the installation. That framework is implemented through the Camp Blanding Overlay Impact Area Map, an area within which the county endeavors to minimize negative impacts to the installation's mission. Within the overlay area, development applications are referred to Camp Blanding for review for potential impacts. This provides an important foundation. However, the current policies are based on dated information, including a 2009 noise consultation, a 2009 peak noise memo, and a 2000 base Corridor and Routing System Map. Encroachment pressures have evolved and grown, warranting review and perhaps updates focused on contemporary pressures.

Encroachment is also mitigated through material conservation efforts at Camp Blanding. The U.S. Department of Defense's Readiness and Environmental Protection Integration (REPI) Program, prior Army Compatible Use Buffer (ACUB) efforts, North Florida Land Trust acquisitions and conservation easements, and the Ocala-to-Osceola (O2O) Wildlife Corridor have all contributed to land protection supporting Camp Blanding's mission, as well as natural system function. A challenge is aligning those tools for maximum effect. Because these efforts involve different entities and program structures, continued coordination is important to maintain a shared strategy for conserving priority parcels and pursuing funding opportunities. A second challenge is that fee and conservation easement acquisitions cannot address every parcel; there are not sufficient public or philanthropic resources to meet all conservation needs.



NOLF Whitehouse

At NOLF Whitehouse, a central encroachment concern is maintaining dark-sky conditions for aviation operations. The installation supports night flights, including simulations of night landings on aircraft carriers, requiring low-light conditions. The City of Jacksonville's airport/adjacent-lands zoning regulations support this ongoing need through the NOLF Whitehouse Lighting Regulation Zone, which restricts light pollution.

Much of the landscape surrounding NOLF Whitehouse still functions as a compatible buffer for the installation. The undeveloped lands around the outlying field form a connected system of pine flatwoods, mixed hardwood forests, forested wetlands, timber lands, conservation lands, and locally regulated lands across western Duval County. These lands provide substantial environmental services and ecological function, such as absorbing stormwater, supporting groundwater recharge, filtering runoff, mitigating aviation noise, improving air quality, and reducing localized heat. Large portions remain undeveloped because of Navy compatibility buffers, timber ownership, conservation priorities, and wetland and floodplain constraints. The City of Jacksonville's dark-sky lighting requirements and the 2022 Encroachment Protection Agreement among Jacksonville, U.S. Department of Defense, and North Florida Land Trust all aim to limit encroachment.

Nonetheless, the landscape is also facing growth pressure. Jacksonville's expansion along US 90, I-10, and Chaffee Road promotes development of lands that currently help preserve the low-light, low-intensity conditions needed for NOLF Whitehouse operations. Housing and other more intensive land uses could weaken dark-sky conditions and fragment areas of contiguous buffer.

Camp Blanding and NOLF Whitehouse therefore present the same core encroachment issue in different operational settings. In both places, compatible land use conditions still presently exist, but growth pressures are changing development patterns around the installations. The need is to bolster existing policy and encroachment mitigation activities before those patterns become harder to change. This may come through a combination of maintaining and refining local compatibility frameworks, preserving priority buffer lands, giving private landowners workable alternatives to incompatible conversion, and guiding future growth toward areas where it can occur without eroding long-term installation readiness.

Recommendations

Camp Blanding - Surrounding Parcels

CB-1: Update and Expand Clay County's Camp Blanding Overlay Impact Area

- Clay County should initiate a comprehensive policy update in coordination with Camp Blanding to:
 - Update the overlay footprint to reflect current and anticipated future encroachment risk from the First Coast Expressway growth corridor, expanding beyond historical noise/flight path impacts.



- Add explicit use restrictions tied to the modern U.S. Department of Defense encroachment definition: residential density caps, lighting standards, incompatible uses (hospitals, schools, noise-sensitive assembly), and required disclosure.
- Establish a minimum buffer width standard tied to current Army training noise levels.
- Require that any parcels within the overlay that are proposed for rezoning to higher-intensity uses trigger automatic review and comment by Camp Blanding before Planning Commission action.

CB-2: Formally Coordinate Clay County FFCLP with NFLT/REPI Priority Parcel Lists

- The Forests and Farms Conservation Lands Program (FFCLP) was established in 2024 but operates on separate nomination and evaluation tracks from NFLT's REPI/ACUB acquisition pipeline. To bolster this, Clay County should:
 - Establish a formal data-sharing and joint prioritization protocol (e.g., through a partnership agreement) between the Clay County Land Conservation Committee and NFLT's conservation planning staff.
 - Direct the Land Conservation Committee to give weighted scoring priority to parcels falling within or adjacent to the REPI three-mile buffer zone around Camp Blanding.
 - Coordinate FFCLP acquisition timing with REPI funding cycles so county funds can serve as match for federal REPI dollars, increasing total protection leverage.
 - Annually report on the combined FFCLP/REPI/ACUB parcel protection progress relative to identified priority areas, as a standing agenda item for the Clay County-Camp Blanding Joint Planning Table.

CB-3: Establish a Transfer of Development Rights (TDR) Program in the Overlay Impact Area

- To further reduce development pressure on parcels close to the installation, Clay County should explore TDR program feasibility. Potential parameters or a program may include:
 - Sending zones: Parcels within the Land Use Planning Zone and Corridor and Routing System (CARS) map overlay where development would conflict with training operations.
 - Receiving zones: Designated growth nodes in Middleburg, the Orange Park corridor, and areas proximate to First Coast Expressway interchanges with existing or planned utility infrastructure and public service capacity
- This is a direct complement to REPI. For parcels where fee-simple acquisition or easements are not feasible or cost-effective, TDR preserves the land in low-intensity use without requiring public purchase.

CB-4: Add Mandatory Disclosure Requirements for Properties in the Overlay Impact Area

- Jacksonville requires disclosure to prospective owners/lessees within Military and Civilian Influence Zones (Duval FLUE Policy 2.6.14). Clay County has no equivalent requirement.



- Clay County should adopt a similar disclosure ordinance requiring that any sale, lease, or development approval within the Camp Blanding Overlay Impact Area include a formal notice describing:
 - Proximity to active military training (noise, vibration, airspace)
 - Lighting restrictions within CARS
 - Limitations on allowable uses and building heights
 - The installation’s priority review rights over land use applications
- Such a requirement does not restrict use; rather, it would establish informed consent and likely reduce future conflict from buyers unaware of training impacts.

CB-5: Develop a Smart Growth Strategy for the First Coast Expressway Corridor

- Clay County, Camp Blanding, NEFRC, and regional partners should proactively plan for First Coast Expressway-driven growth in a way that routes density away from the installation. Elements that could be considered include:
 - Promote growth nodes at or near expressway interchanges with existing and sufficient water/sewer infrastructure for current and anticipated future populations. Development incentives in these areas could prioritize compact development.
 - Establish conservation subdivision standards for any residential development within the Overlay Impact Area, requiring clustering and open space minimums.
 - Incorporate Wildland-Urban Interface (WUI) resilience standards into growth corridor design, such as code requirements for defensible space, fire-resistant materials, vegetation management.

NAS JAX - NOLF Whitehouse

NW-1: Consider Updating and Expanding Jacksonville Zoning

- The current County zoning policies restrict density and uses in coordination with U.S. Navy OPNAV Instruction 11010.36.B in relation to County by-right development standards from 2007. Duval County should initiate a comprehensive update in coordination with NASJAX to:
 - Strengthen zoning restrictions to reflect current and anticipated future encroachment risk from the I-10 Corridor.
 - Add explicit use restrictions tied to the modern U.S. Department of Defense encroachment definition, including residential density caps, lighting standards, incompatible uses (hospitals, schools, noise-sensitive assembly), and required disclosure
- Require that any parcels within the overlay that are proposed for rezoning to higher-intensity uses trigger automatic review and comment by NASJAX before Planning Commission action



NW-2: Continue Advancing Sentinel Landscape Designation and Building a Coordinated Priority Parcel Pipeline

Building upon existing efforts to advance a Sentinel Landscape designation for the NOLF Whitehouse buffer areas, NASJAX, the State of Florida, Duval County, the City of Jacksonville, the North Florida Land Trust, and other O2O and relevant conservation partners should continue advancing a coordinated process to:

- Increase interest in and support around a formal Sentinel Landscape designation.
- Use O2O Wildlife Corridor mapping to support justification for a REPI Sentinel Landscape designation.
- Coordinate local, state, nonprofit, and federal land protection resources so local or state funds can serve as match for REPI, where appropriate.
- Prioritize parcels within and adjacent to the NOLF Whitehouse buffer area that protect dark-sky conditions, prevent incompatible residential growth, preserve operational flexibility, and maintain ecological corridor value.
- Report annually on progress toward protecting priority buffer lands around NOLF Whitehouse.

NW-3: Establish a Transfer of Development Rights (TDR) Program for the NOLF Whitehouse Buffer Area

To reduce development pressure on parcels close to NOLF Whitehouse, Duval County should explore the feasibility of a TDR program tied to the NOLF Whitehouse buffer area. The program could include:

- Sending zones: Parcels within the Military Influence Zone, Lighting Regulation Zone, APZs, high-noise areas, airport height/hazard areas, and Ocala-to-Osceola (O2O)/REPI-priority buffer lands where development would conflict with NOLF Whitehouse operations.
- Receiving zones: Designated I-10 corridor growth nodes or other locations with existing or planned utility infrastructure and public service capacity where additional density would not increase encroachment risk to NOLF Whitehouse.

This is a direct complement to REPI. For parcels where fee-simple acquisition or easements are not feasible, TDR preserves the land in low-intensity use without requiring public purchase.

NW-4: Strengthen NOLF Whitehouse-Specific Disclosure Requirements

Strengthen existing Duval County disclosure requirements to require that any sale, lease, rezoning, subdivision, or development approval within the broader NOLF Whitehouse buffer area include a formal notice describing:

- Proximity to NASJAX/NOLF Whitehouse military aviation operations, including nighttime operations.
- Dark-sky requirements and applicable lighting restrictions.
- Noise, overflight, and safety considerations/limitations.

Such a requirement does not restrict use; rather, it would establish informed consent and likely reduce future conflict from buyers unaware of installation operations impacts.



NW-5: Develop a Smart Growth Strategy for the I-10 Corridor to Direct Growth Away from NOLF Whitehouse

Rather than reacting parcel by parcel to development proposals, Jacksonville, NASJAX, NEFRC, and regional partners should proactively plan for I-10 corridor growth in a way that routes density away from the installations. Elements could include:

- Promote growth nodes along the I-10 corridor with existing and sufficient water/sewer infrastructure capacity to support current and anticipated future growth. Development incentives could prioritize compact development.
- Establishing conservation subdivision or clustering standards for residential development within the compatibility area where development is otherwise permitted.
- Applying enhanced lighting standards to prevent cumulative light pollution that could degrade FCLP operations.
- Coordinating housing, transportation, and utility planning so new development does not create long-term infrastructure dependencies in areas where operational flexibility and dark-sky conditions need to be preserved.



Airspace Encroachment

Mission Criticality

Airspace should be considered a mission-critical regional asset in the same manner as transportation corridors, utilities, communications systems, shorelines, and other systems supporting Northeast Florida's military installations. NAS Jacksonville, NS Mayport, and NOLF Whitehouse require reliable access not only to airspace immediately surrounding their airfields, but also to the larger network of routes, corridors, training areas, and operating areas necessary to execute their missions.

For military aviation, the operational value of an airfield is therefore partially dependent upon the ability to move efficiently between the installation and the locations where training and operational missions occur. Restrictions or inefficiencies affecting those connections can have consequences well beyond the geographic location in which a constraint originates.

Northeast Florida is particularly sensitive to this issue because its military aviation requirements exist within a broader **high-demand aviation environment**. Navy fixed- and rotary-wing activity, training requirements, Jacksonville International Airport traffic, general aviation, Cecil Airport and Spaceport, federal aviation missions, aerospace manufacturing and testing, and future emerging aviation uses all draw upon portions of the same interconnected airspace system.

Airspace encroachment can stress systems incrementally. Additional routing, reductions in available altitude or lateral maneuvering space, incompatible development, obstructions, additional aviation activities, RF interference, or scheduling conflicts may individually impose relatively small burdens. Collectively, however, these constraints can increase transit time and fuel requirements, reduce training windows, increase air traffic control and coordination workload, complicate mission scheduling, limit realistic training profiles, and reduce flexibility to accommodate new aircraft, weapons, sensors, operating concepts, or missions.

At the same time, protection of military capability should not be equated with constraining regional aviation or aerospace growth. Cecil Airport and Spaceport, and the broader Northeast Florida aviation and defense ecosystem, are themselves significant strategic and economic assets. **The objective should instead be a more deliberate regional airspace architecture that allows military mission growth and civilian aerospace growth to coexist, identifies potential conflicts earlier, and helps the FAA and all operational stakeholders use available airspace safely and more efficiently.**

The FAA recently demonstrated that airspace architecture and procedures can be modified to create additional effective capacity in the region. In 2025, the FAA implemented new ultra-high-altitude sectors over Jacksonville Center to distribute traffic among additional controller sectors, improve traffic flow, accommodate additional aircraft, and reduce congestion and delays. This illustrates an important principle for Northeast Florida: **mission assurance should involve not only protecting today's airspace configuration from encroachment, but also identifying opportunities for improved architecture, scheduling, procedures, technology, and utilization.**



Relationship to Existing FAA–DoD Airspace and Range Coordination Processes

The recommended Northeast Florida and statewide initiatives should be structured explicitly to build upon, rather than duplicate, existing FAA–DoD airspace coordination mechanisms.

At the national level, DoD Directive 5030.19 establishes the **DoD Policy Board on Federal Aviation (PBFA)** and assigns significant responsibilities for DoD interaction with the FAA concerning air traffic control, airspace management, the NAS, and future NAS design. The current directive also identifies the PBFA working group as a mechanism for addressing medium- to long-term user and interoperability requirements planning for the NAS.

The FAA and DoD also maintain formal processes for coordination of **Special Use Airspace actions**. The FAA–DoD Memorandum of Understanding incorporated into FAA airspace guidance establishes working-level coordination and a defined escalation structure extending through FAA leadership and the DoD PBFA when disagreements involving proposed Special Use Airspace actions cannot be resolved at lower levels.

Regional military mechanisms provide an additional level of coordination. Air Force airspace-management guidance has used **regional Airspace/Range Councils (ARCs)** as preliminary review and coordination forums through which military stakeholders can develop and vet airspace and range issues, identify shortfalls, discuss proposed concepts, and improve coordination before or during interaction with the FAA and other agencies. Such mechanisms demonstrate that the concept of bringing operational users together to develop issues prior to formal airspace action is already well established within military airspace management.

Florida has also previously used periodic range and airspace forums to advance broader strategic objectives. On November 3, 2016, the Florida Defense Support Task Force sponsored the Southeast Range Conference in Orlando as part of the **Southeast Range Complex Improvement Initiative**. The conference brought together representatives from OSD, the Navy, Air Force, Army, test and training communities, National Guard, and Space Florida to examine whether ranges throughout the Southeast (many located in Florida) could be treated more effectively as an interconnected range complex capable of meeting increasingly demanding military test and training requirements. The resulting discussion highlighted both the value of cross-organizational coordination and the fact that stakeholders with closely related requirements did not always have routine opportunities to interact.

More recently, development of the **Florida Advanced Training Range (FATR)** concept provides a direct example of a Florida-generated initiative entering an established regional airspace coordination process. The FATR Phase 1A report identifies presentation of the FATR airspace proposal at the Eastern Airspace/Range Conference as part of the project's FAA key-leader engagement strategy. This illustrates an important model for the Northeast Florida recommendations: regional and state stakeholders can develop requirements and technically informed concepts, while existing FAA and DoD processes provide the appropriate channels for professional review, coordination, and ultimately federal action where required.



The Northeast Florida initiative should therefore not be conceived as another Airspace/Range Council, another FAA decision body, or another layer of airspace regulation. Its primary value would be as a persistent **regional requirements-development, analysis, and pre-coordination capability supporting those existing mechanisms**. In general, the process flow would be:

Regional stakeholders identify emerging requirements and potential incompatibilities →

Northeast Florida develops the regional operating picture and potential alternatives →

FDOT coordinates with statewide priorities →

Existing DoD/FAA airspace forums and processes provide professional review and coordination →

FAA exercises its authority over changes to the National Airspace System.

The process would not necessarily be strictly sequential. FAA, DoD, FDOT, installations, airports, and other operational stakeholders should participate throughout as appropriate.

The model is instead intended to clarify roles: the regional and state structures improve the quality, maturity, continuity, and coordination of issues entering existing federal processes, rather than creating a parallel approval process.

This is particularly important because periodic airspace and range conferences are valuable forums for resolving and advancing operational issues, but they do not themselves provide Northeast Florida with a standing regional planning capability. The MIRR recommendations can fill that gap by maintaining data, monitoring emerging demand, integrating non-traditional aviation and local government stakeholders, conducting cumulative analysis, and developing potential alternatives between formal federal and military engagements.

Current Framework and Efforts

Recommendations

Addressing airspace encroachment in Northeast Florida requires more than preventing incompatible development. It requires coordinated **governance**, deliberate **modernization** of the regional airspace architecture, and **long-term management** of emerging aviation and aerospace demand.

The two strategic recommendations below should operate as complementary elements of one regional airspace mission-assurance strategy:

AE-1: Coordinate: establish the regional/state/federal coordination architecture.

AE-2: Design and Optimize: understand existing and future demand and identify opportunities to improve airspace capacity and utilization.



Strategic Recommendation AE-1. Northeast Florida Regional Airspace Coordination and Statewide Alignment

Establish a sustained regional framework for identifying Northeast Florida airspace requirements, developing issues sufficiently for meaningful technical consideration, and connecting those requirements to existing DoD and FAA coordination processes and emerging statewide Florida airspace modernization efforts.

The regional approach should recognize a clear division of responsibility: FAA remains the federal authority over the National Airspace System; DoD and the Military Services maintain established mechanisms for developing and coordinating military airspace requirements; the State of Florida can facilitate statewide stakeholder coordination and priorities; and Northeast Florida can provide regional requirements, data, analysis, and pre-coordination supporting those processes.

AE-1.1: Establish a Northeast Florida Regional Airspace Coordination and Pre-Coordination Forum

The Northeast Florida Regional Planning Council (NEFRC) should facilitate a standing Northeast Florida Regional Airspace Coordination and Pre-Coordination Forum designed specifically to complement existing FAA–DoD Airspace/Range Councils, conferences, FAA coordination processes, and military airspace management mechanisms.

The forum should not possess airspace decision authority, duplicate an Airspace/Range Council, or substitute for direct FAA–DoD coordination. Instead, it should provide continuity between periodic federal, military, state, and regional engagements by:

- identifying emerging regional requirements;
- assembling relevant stakeholders before issues become mature conflicts;
- maintaining a common regional operating picture;
- identifying data and analytical gaps;
- developing a shared understanding of potential incompatibilities;
- ensuring compatibility with any national air defense or counter-drone systems;
- distinguishing local, state, military, and FAA equities;
- developing potential alternatives for further technical evaluation; and
- preparing sufficiently mature issues for consideration through appropriate FDOT, DoD, and FAA mechanisms.

Potential Partners and Leads

- FAA Jacksonville Center and relevant terminal air traffic control organizations;
- NAS Jacksonville;
- NOLF Whitehouse;
- NS Mayport;



- Fleet Area Control and Surveillance Facility (FACSFAC) Jacksonville and other applicable Navy airspace/range organizations;
- U.S. Coast Guard (USCG);
- Florida Air National Guard (FANG);
- Camp Blanding, Florida National Guard;
- U.S. Customs and Border Protection (CBP) and other federal aviation users;
- Jacksonville Aviation Authority (JAA);
- Jacksonville International Airport;
- Cecil Airport and Spaceport;
- Florida Department of Transportation (FDOT) aviation representatives;
- Florida Department of Law Enforcement (FDLE);
- Space Florida;
- City of Jacksonville and other affected local governments;
- commercial and general aviation representatives;
- aerospace manufacturers and flight-test organizations;
- UAS stakeholders;
- AAM stakeholders;
- commercial space stakeholders; and
- other airspace stakeholders who may later be identified.

The 2016 Southeast Range Conference and subsequent FATR engagement with the Eastern Airspace/Range Conference demonstrate the value of developing Florida requirements collaboratively and then bringing those requirements into established military and FAA coordination structures.

A Northeast Florida pilot should also extend that model by incorporating a wider range of civilian, commercial, local-government, UAS, AAM, aerospace, and space stakeholders upstream in the requirements-development process.

AE-1.2. Use Northeast Florida as a Regional Pilot to Support the Establishment of a Statewide Florida Strategic Airspace Coordination Framework for Statewide Airspace Modernization

Northeast Florida should be considered as an early pilot program or regional demonstration area under a future statewide Florida strategic airspace initiative.

The region's combination of NAS Jacksonville, NOLF Whitehouse, NS Mayport, Jacksonville International Airport, Cecil Airport and Spaceport, military training access, federal aviation activity, aerospace manufacturing and testing, commercial space growth, and emerging aviation technologies provides an unusually useful environment in which to demonstrate a collaborative approach to airspace planning.



The pilot program should intentionally build upon the approach demonstrated by earlier Florida efforts. The Southeast Range Conference used a broader regional perspective to identify common military test and training requirements, while the FATR initiative subsequently developed a Florida-specific operational concept and presented its airspace proposal through the Eastern Airspace/Range Conference as part of FAA engagement.

NEFRC and regional partners should support the establishment of a **Florida Strategic Airspace Coordination Framework** effort that facilitates coordination among Florida's military, commercial, general aviation, aerospace, space, UAS, AAM, and other emerging aviation stakeholders.

The **objective** should be to **strengthen Florida's ability to provide the FAA and DoD with coordinated requirements, better analytical information, and stakeholder-informed alternatives** that support more effective NAS planning and decision-making – not to establish any state control over airspace.

While preserving FAA authority, the state framework can support coordination, stakeholder workshops, recommendations, and early liaison with federal agencies. It should also recognize and use existing FAA–DoD processes rather than develop a separate federal engagement system. Matters involving military airspace requirements should flow through applicable Service, regional airspace/range, PBFA, and FAA channels depending upon the nature and maturity of the issue.

AE-1.3. Create a Regional-to-State-to-Federal Airspace Requirements and Recommendations Pipeline

Establish a formal process for transmitting regional findings and requirements to FDOT and, where appropriate, into existing military and FAA coordination mechanisms.

Recommendations should distinguish among:

1. Local actions that can be implemented through land-use, airport, vertiport, infrastructure, development, or local coordination decisions;
2. State actions involving planning, funding, infrastructure, policy, technical support, or inter-regional coordination;
3. Military/DoD actions requiring consideration through Service airspace organizations, regional Airspace/Range forums, PBFA-related mechanisms, or other DoD processes;
4. FAA actions involving NAS architecture, routes, procedures, airspace designation, traffic management, or other matters within FAA authority; and
5. Joint actions requiring coordinated implementation among multiple governmental and operational stakeholders.

The pipeline should not bypass existing military or federal processes. Its purpose should be to ensure that issues reaching those processes are better defined, supported by regional data, and accompanied by clearer stakeholder requirements and potential alternatives.



Strategic Recommendation AE-2. Northeast Florida Airspace Architecture, Capacity, and Modernization Study

Conduct a comprehensive regional technical study to establish a common understanding of existing and future airspace requirements and identify opportunities to improve the design, capacity, efficiency, flexibility, and utilization of Northeast Florida airspace while preserving military mission capability.

AE-2 should provide the principal analytical foundation supporting AE-1 and should create products that can be taken into existing FAA–DoD airspace forums as mature technical inputs rather than general expressions of regional concern.

AE-2.1. Develop a Regional Three-Dimensional Airspace Baseline and Future Demand Model

Develop a common three-dimensional representation of the principal operational, regulatory, and physical elements affecting Northeast Florida airspace. The baseline should include all airspace-related details as information availability, classification, and operational-security considerations permit.

The baseline model would then be available for stakeholders to more easily assess future military, commercial, general aviation, aerospace, UAS, AAM, and space-demand forecasts to identify locations where cumulative demand could create future constraints, incompatibilities, or alternatively identify new areas for operational use.

The intent should be to create a persistent regional analytical product that can support, rather than replicate, existing FAA and DoD airspace processes.

AE-2.2. Conduct an FAA-Supported Regional Airspace Architecture Optimization Study

Using the regional baseline and demand model, FAA, DoD, FDOT, JAA, NEFRC, and participating stakeholders should evaluate opportunities to improve the regional airspace architecture. The study should develop pre-decisional alternatives, not attempt to redesign the NAS independently of the FAA.

Potential alternatives involving military airspace should be presented through applicable military airspace organizations and regional airspace/range mechanisms for professional review before or as part of subsequent FAA coordination. The historical role of Airspace/Range Councils in reviewing emerging concepts and airspace requirements, and the FATR project's presentation at the Eastern Airspace/Range Conference, provide useful precedents for this approach.

FAA would remain responsible for determining whether and how proposed changes are incorporated into the NAS.



AE-2.3. Advance Planning, Scheduling, and Dynamic Airspace Utilization

A central objective should be to determine whether greater operational capacity can be obtained from existing airspace through improved planning, coordination, and utilization before assuming design changes, additional permanent segregation, or restrictions are required. This concept is consistent with existing military emphasis on releasing joint-use airspace when it is not required for military operations.

This action also creates a direct interface with existing airspace/range coordination forums. Instead of bringing a general concern that Northeast Florida airspace is becoming congested, the regional initiative could provide those forums with specific analytical findings; for example, identified conflict locations, forecasted demand, utilization patterns, operational requirements, and evaluated alternatives.

The long-term objective should be to help the FAA, DoD, and other users obtain greater effective capacity and operational flexibility from the finite airspace resource already available.

AE-2.4. Develop an Airspace Modernization Implementation and Investment Strategy

Translate study findings into an implementation strategy that identifies the infrastructure, technologies, analytical capabilities, and investments necessary to support recommended improvements. The strategy should distinguish among investments that can be undertaken at the regional or state level, investments requiring military participation, and those dependent upon FAA-approved NAS changes.

Where existing FAA–DoD forums validate a significant operational requirement or identify a promising alternative, the statewide framework envisioned under AE-1 could help develop the funding, technical support, interagency agreements, or infrastructure investments needed to move that requirement toward implementation.

Regional Implementation Approach

The two strategic recommendations should be implemented as an **integrated sequence** rather than as independent initiatives.

AE-1 establishes the **coordination architecture** necessary for regional military, civilian, state, and federal stakeholders to identify requirements, develop shared priorities, and connect Northeast Florida issues to existing FAA–DoD processes.

AE-2 establishes the **technical foundation** needed to understand existing and future demand, quantify constraints, evaluate alternatives, and provide useful analytical products to the FAA, DoD, FDOT, military Airspace/Range forums, and other decision-makers.

In combination, these enable the better protection and adaptation of the resulting architecture by identifying future development, multi-faceted operations at Cecil, UAS/AAM activity, aerospace testing, commercial-space activity, and other emerging demands sufficiently early to permit compatible solutions.



The regional initiative should therefore be viewed neither as another airspace authority nor simply as another periodic stakeholder meeting. Its value lies in creating the persistent connective tissue between local development, regional aviation growth, statewide planning, military requirements, established FAA–DoD airspace forums, and the FAA's ultimate NAS responsibilities.

The 2016 Southeast Range Conference demonstrated the value of assembling military stakeholders around common regional range requirements. The FATR initiative subsequently demonstrated that a Florida-generated concept could be developed and then advanced into an established Eastern Airspace/Range Conference as part of FAA engagement. **The Northeast Florida MIRR provides a logical regional location in which to demonstrate and refine an airspace coordination framework.** Ultimately, that model could be adapted across other regions to institutionalize and broaden the approach while remaining consistent with FAA authority over the NAS.

Together, these actions would move Northeast Florida from a primarily reactive model of airspace encroachment mitigation toward a proactive model of airspace mission assurance and modernization.

The objective is not to reserve airspace exclusively for military use, establish state control of airspace, or alter the FAA's authority over the National Airspace System. Rather, Northeast Florida and Florida should develop the institutional and analytical capacity to provide the FAA and DoD with better-defined requirements, earlier stakeholder coordination, more complete regional data, technically evaluated alternatives, and greater continuity between periodic coordination forums.

Such an approach can help protect critical military capabilities while simultaneously supporting the safer, more efficient design and utilization of Florida's airspace as military aviation, commercial aviation, aerospace manufacturing and testing, UAS, AAM, and commercial space requirements continue to evolve.



Regional Airports

Current Framework and Efforts

Ongoing efforts across the Northeast Florida region highlight the important role that regional airports play in supporting military readiness and operational flexibility for installations included in the NEFL MIRR, particularly Naval Air Station Jacksonville and Camp Blanding Joint Training Center. Cecil Airport and Cecil Commerce Center continue to serve as a key aviation asset for military training and support activities, providing additional runway capacity and operational space that complement NAS Jacksonville. The airport's history as a former naval air station and its continued compatibility with military aviation operations make it well-suited to accommodate training exercises, transient aircraft, and mission support functions. Local stakeholders have emphasized maintaining this compatibility while advancing economic development and aviation-related uses, ensuring the facility remains a valuable dual-use asset for both military and civilian purposes.

Similarly, Keystone Heights Airport plays a critical supporting role for Camp Blanding by facilitating the movement of personnel, equipment, and supplies during training exercises and mobilization events. Ongoing coordination between local officials, airport operators, and military partners focuses on maintaining and enhancing the airport's infrastructure and operational capabilities to support these functions. Across the region, there is a shared emphasis on preserving airspace compatibility, preventing encroachment, and sustaining infrastructure investments at these airports to ensure they continue to provide reliable access and operational support. Collectively, these efforts reinforce the importance of regional aviation assets as an integrated component of the broader mission support network for Northeast Florida installations.

Mission Criticality

Regional airports play a vital role in supporting the operational readiness and mobility of installations included in the Northeast Florida Military Installation Readiness Review, including Naval Air Station Jacksonville, Marine Corps Support Facility Blount Island, Camp Blanding Joint Training Center, and Naval Station Mayport. Facilities such as Jacksonville International Airport (JAX), Cecil Airport and Cecil Commerce Center, and Keystone Heights Airport provide critical infrastructure for the movement of personnel, equipment, and supplies that support both day-to-day operations and surge or contingency activities. Jacksonville International Airport serves as a primary commercial gateway for military personnel and official travel, while also supporting logistics and coordination with national and global transportation networks.

Cecil Airport is particularly significant as an extension of military aviation operations, supporting training activities conducted by Naval Air Station Jacksonville and providing additional airfield capacity that enhances operational flexibility and redundancy. Similarly, Keystone Heights Airport plays a key role in supporting Camp Blanding by facilitating the movement of personnel and goods into and out of the training center, particularly during large-scale exercises and mobilization events. Together, these regional aviation assets form an integrated support network that expands operational reach, improves logistical efficiency, and ensures that installations across Northeast Florida remain responsive, connected, and mission-ready.



Recommendations

RA-1: Strengthen and Formalize Partnerships between Regional Airports and Military Installations

- Strengthen and formalize military–civilian coordination agreements at regional airports, particularly at Cecil Airport and Keystone Heights Airport, to ensure long-term compatibility with military operations. This would include developing Memoranda of Understanding (MOUs) or use agreements that outline roles, priorities, and communication protocols for training activities, surge operations, and contingency missions. Enhancing coordination with Naval Air Station Jacksonville and Camp Blanding would help preserve operational flexibility while aligning civilian airport development with military mission needs.

RA-2: Invest in targeted infrastructure improvements at Cecil and Keystone airports to enhance their capacity to support military training, logistics, and emergency operations.

- At Cecil Airport, this may include runway and taxiway upgrades, apron expansions, and hangar development to accommodate transient and training aircraft associated with NAS Jacksonville.
- At Keystone Heights Airport, investments could focus on runway strengthening, lighting, and support facilities that enable more reliable movement of personnel and equipment during major training exercises at Camp Blanding. These improvements would increase redundancy and ensure these facilities can effectively serve as auxiliary military support nodes.

RA-3: Advance land use and encroachment mitigation strategies around regional airports to preserve compatible airspace and operational conditions.

- This includes working with local governments to implement zoning overlays, height restrictions, and noise compatibility measures that prevent incompatible development near flight paths. Protecting the operational integrity of Cecil and Keystone airports is critical to maintaining their viability as military support assets, particularly as regional growth continues to place pressure on surrounding land use.

RA-4: Develop a regional aviation resilience and continuity plan that integrates NEFL's regional airports as part of a coordinated support network for military operations.

- This effort would focus on maintaining operational continuity during extreme weather events, disasters, or other disruptions by identifying redundancy in airfield capacity and establishing protocols for shared use and rapid response. By treating these airports as an interconnected system, the region can better support mission continuity and ensure that installations remain operationally connected under all conditions



Conservation

Overview of the Issue

Timucuan Ecological and Historic Preserve, at 46,000 acres, is one of the largest remaining salt marsh estuary systems in the southeastern United States. Amongst other environmental services, it borders NS Mayport and helps protect the installation from coastal flooding, erosion, storm surge, and wave energy. If the marsh buffer were to degrade or lessen, the installation's exposure to natural hazards would increase. Consequently, salt marsh conservation and continued function is directly connected to the installation's long-term mission readiness.

A primary challenge is, as sea levels rise, salt marsh vegetation naturally shifts inland. Where those inland areas are open and connected, the marsh will likely adjust over time. Where inland areas are developed, have hardened shorelines, or are crossed with roads and other impervious surfaces, the migration pathway can be blocked, eroding marsh health and extent.

Existing restoration projects are already helping protect sensitive areas, such as living shoreline work across from Gate 5 and at Helen Floyd Cooper Park and oyster reef restoration projects in erosion-prone areas of the Preserve by the University of North Florida, the National Park Foundation, Groundwork Jacksonville, and Stericycle (Resilient Jacksonville, p. 115). These projects are important, but they do not by themselves resolve the landward migration issue. A living shoreline can protect a marsh edge, but if the upland transition area behind that marsh is developed or hardened, the marsh may still lose the space it needs to adapt over time as sea levels rise. Jacksonville likewise has supportive land use policies and plans. For example, its 2045 comprehensive plan contains a Conservation/Coastal Management Element (CCME) containing policies to protect wetlands and limit land use impacts on the St. Johns River. It also employs such tools as a Conservation Zoning District, clustered development provisions, and others aimed at limiting impacts to sensitive lands. These are useful, impactful tools. However, the Timucuan Preserve marsh buffer presents a nuanced planning problem: some of the lands most important to long-term marsh conservation may be upland transition areas that are not marsh today.

A salt marsh migration strategy must anticipate where future marsh is expected to migrate over time, limit actions that would block that movement, and create workable options for property owners whose land may become transitional in the future.

Another challenge to expanding the Timucuan Preserve marsh buffer is it involves multiple jurisdictions and agencies with different interests and authorities: NS Mayport, the National Park Service, the City of Jacksonville/Duval County, U.S. Army Corps of Engineers, and Florida Department of Environmental Protection, amongst others. Without a durable coordination structure, individual projects may proceed on different timelines, compete for funding, or otherwise fail to support a shared marsh-buffer strategy.

A third challenge is landowner awareness and trust. Landowners may not understand or appreciate why an upland parcel could become important to the future marsh system, how sea level rise could change their property, or what voluntary conservation program options are available. If salt marsh conservation is introduced only through the lens of land use and development regulations, opportunities for conservation or trust-building may be lost.



A Preserve conservation effort must, amongst other things, address these three connected challenges.

1. The marsh migration issue needs to be made visible in local policy so that future transition areas are considered before development or shoreline hardening blocks them.
2. The suite of partners promoting salt marsh buffer needs a formal coordination structure.
3. Landowners and community partners need to be engaged early enough to understand how private lands may contribute to the long-term resilience of the Preserve and, in turn, NS Mayport. Together, these actions frame conservation as both a resilience and a mission-based strategy.

Recommendations

TP-1: Jacksonville County Comprehensive Plan Amendment — Marsh Migration Overlay

- Jacksonville can amend the Comprehensive Plan CCME to establish a Marsh Migration Overlay Zone within and immediately adjacent to the Timucuan Preserve boundary. The overlay would:
 - Restrict new impervious surface and hardened shoreline structures within identified inland migration corridors that are defined by the future anticipated marsh footprint.
 - Adopt a transfer of residential density program that permits increased development density through clustering while requiring perpetual conservation easements on undeveloped land, preserving environmentally sensitive areas.
 - Reference sea level rise projections and USGS Nassau–Duval wetland migration analysis (Enwright et. al., 2024) as the technical basis for overlay boundaries, updated on a five-year cycle aligned with CCME Policy 13.5.2’s AAA review requirement.

TP-2: Formalize an MOU among NS Mayport, NPS, the City of Jacksonville, and NEFRC for Marsh Buffer Coordination

NS Mayport, NPS, and the City of Jacksonville can execute a coordination MOU committing the parties to sustained joint management of the Timucuan Preserve marsh buffer. The MOU would be the formalized, durable commitment to such efforts, and an associated standing working group would be the vehicle that carries out the MOU. Under the MOU, the parties would commit to:

- Shared data protocols for shoreline change monitoring, sediment budgets, and marsh elevation surveys.
- Coordinated capital improvement schedules, to avoid any possible conflicts with adjacent living shoreline investments. Likewise, coordinated grant application processes to align schedules, funding pathways, and timelines.



The working group's core function would be to adaptively manage efforts to protect the marsh buffer. It should set measurable monitoring triggers that activate the next phase of intervention, rather than treating marsh protection as a static management task. Triggers may include:

- Shoreline retreat exceeding a defined rate → escalate from living shorelines to thin layer placement
- Marsh elevation below a set threshold (relative to mean higher high water) → sediment enhancement
- Vegetation health index below a set value → expanded marsh migration study

NEFRC's primary role would be as a convener, given its regional relationship with all parties and leadership on the MIRR. Core members to the MOU could include NPS, NS Mayport, and the City of Jacksonville; additional parties may include USACE and/or Florida Department of Environmental Protection. Per the MOU, the working group could meet regularly to advance efforts on marsh health monitoring, project status, permitting coordination, and the conservation easement pipeline.

TP-3: Establish a Partner-Led Landowner Education and Outreach Program for Marsh Migration and Buffer Protection

NEFRC, the City of Jacksonville, NFLT, and other conservation or community-based partners can jointly establish a landowner education and outreach program focused on marsh migration, upland transition-zone protection, and voluntary participation in the Timucuan Preserve marsh buffer strategy.

- The program should function as a coordinated outreach partnership that leverages each entity's respective strengths. For example, NEFRC could support regional coordination, meeting facilitation, translation of technical concepts, and alignment with MIRR and regional resilience priorities; and NFLT and other NGOs could facilitate conversations with landowners, build trust, and support parcel-level conversation through easements, stewardship, and acquisition.
- The purpose of the program would be to build landowner awareness and trust alongside the use of regulatory, land protection, and incentive tools. Many landowners, particularly those that are not immediately adjacent to the current coastline, may not understand how sea level rise will affect the larger Timucuan marsh system, what upland transition zones are or why they matter, or how private lands may contribute to long-term marsh migration and NS Mayport resilience. A proactive outreach effort would help landowners understand the issue, evaluate voluntary options, and engage early in the process rather than encountering marsh protection efforts for the first time through permitting, development review, or acquisition discussions.
- The outreach partnership should develop plain-language materials and consistent messaging, create maps showing potential future marsh migration areas and conservation opportunities, and host workshops focused on voluntary participation options and to answer landowner questions.
- The partnership could also lead outreach efforts to stakeholder groups, such as real estate professionals, developers, homeowners' associations, and large landowners so that marsh migration and buffer protection are understood before land changes hands or development proposals are submitted.



Figure 1. New Strategies for Salt Marsh Conservation

The Nature Conservancy's Resilient Protection Frameworks (2023). Between 2022 and 2023, The Nature Conservancy's Maryland/DC Chapter and Throwe Environmental developed the Resilient Protection Frameworks as a proposed approach for addressing sea level rise, tidal marsh migration, and landowner participation on Maryland's Eastern Shore (Throwe Environmental 2023). The framework is not an adopted regulatory program or implemented salt marsh easement program. Rather, it is a planning, financing, and incentive model built around Coastal Resilience Easements and Coastal Resilience Management Plans. These tools are intended to help facilitate the landward migration of tidal habitats while giving landowners practical options for responding to changing landscape conditions.

The key innovation is that salt marsh conservation must account for where marshes will need to move over time, not only where marshes exist today. The framework pairs land protection with management planning, long-term financing, and landowner compensation. A financing analysis found that traditional conservation easements alone are insufficient because they usually pay for a one-time land restriction, while marsh migration may require later actions that actively help the landscape adapt as sea levels rise. Those actions could include nature-based best management practices identified in a Coastal Resilience Management Plan, such as removing or avoiding hard barriers, restoring or managing vegetation, adding sediment, maintaining living shoreline features, or otherwise keeping upland transition areas available for future marsh movement. It also distinguishes between one-time compensation for permanent land protection and ongoing compensation for stewardship or adaptation activities.



One Water

Overview of the Issue

As a concept, One Water integrates drinking water, wastewater, stormwater, and groundwater management into a single, cohesive policy framework, rather than treating them as separate systems. This approach has the potential to improve efficiency, enhance system resilience and redundancy, and ensure sustainable water resource management amid growing demand, environmental pressures, and regulatory constraints. One Water exists not as a single, far-reaching solution to water management that jeopardizes autonomy or water rights. Rather, One Water is a spectrum of collaborative strategies that can enhance outcomes, resilience, and cost-efficiency across communities at a regional scale in a manner that reflects the priorities of those parties collaborating on water resource management.

For the region's military installations, water system resilience is a key mission assurance issue, positioning regional water systems as mission critical assets. These points were underscored in meetings and site visits with stakeholders from each installation. NAS Jacksonville's needs related to wastewater capacity and drinking water interconnections for redundancy demonstrate how installation growth and emergency readiness depend on sufficient and reliable connections with JEA and broader regional systems. Similar issues arise at Blount Island, where redundant water supply upgrades are being explored to support JAXPORT, Blount Island, and adjacent communities, and at NS Mayport, where privately maintained on-base water and wastewater systems create a different but related need for backup interconnections and coordinated planning. Camp Blanding operates its own water and wastewater systems, but aging stormwater infrastructure and evolving regulations have created a need for and interest in on-base solutions and, perhaps, an opportunity for regional coordination.

Together, these installation-specific efforts and the existing provider, regulatory, and county efforts above provide an important foundation for integrated water resource coordination. However, the mission criticality of regional water systems still requires more formal coordination and planning in the form of feasibility studies, evaluation of interconnection opportunities, and expansion of beneficial reuse recharge projects. When approached in synchronization, the regional One Water recommendations below have the potential to serve installation readiness and regional water resource goals, increase cost efficiency, and address complex challenges complicated by a rapidly changing region.

Current Framework and Efforts

While there are varying degrees of collaboration on water resource management throughout Northeast Florida and across the state, an integrated One Water approach is not currently the dominant framework. Meanwhile, military installations and surrounding communities face ongoing challenges in growth management, infrastructure resilience, and resource allocation, as described below.

- **Multiple Service Areas and Providers.** Regional water resource management operates through a patchwork of utility service areas and provider responsibilities. Water, wastewater, and reclaimed-water services are provided by entities such as JEA, CCUA, and Green Cove Springs. Electric utilities, such as JEA, Clay Electric, and FPL, are also important to



water-system resilience, as water and wastewater operations depend on reliable power. SJRWMD provides regional coordination through consumptive use permitting and regional water supply planning, while FDEP-led BMAPs provide a water quality restoration framework for impaired waters. Despite these regional frameworks, project-level planning and implementation often occur on a utility- or jurisdiction-specific basis, with limited coordination across system types (NEFRC, 2025).

- **Aging Infrastructure.** Water systems with outdated infrastructure are facing system failure concerns compounded by pressures from extreme weather events, rapid growth and development, and rising construction costs. These complicating factors make it more difficult to ensure adequate capacity for multiple uses and redundancy for emergencies. As infrastructure ages, it also poses a direct threat to overall system health. For example, the NEFRC Regional Resilience Action Plan (RRAP) identifies aging septic systems as a significant regional threat to water quality; additionally, saltwater intrusion into aging drinking water systems poses concerns about potability and upgrade costs.
- **Increasing Growth and Demand.** Rapid population growth, new development, and increasing industrial activity are all straining water utilities, thus limiting availability and reliability for military installations. Competing uses and rising extraction rates are impacting groundwater levels, reducing overall groundwater reliability. This is a particular concern in areas with high susceptibility to saltwater intrusion and/or other contamination issues.

From water service providers to state/regional regulators and county governments, stakeholders across the region are already taking action to increase groundwater recharge, limit development impacts, improve water quality, and upgrade infrastructure systems. As mentioned above, water providers are enhancing system resilience by expanding reclamation and reuse programs and evaluating redundant interconnections that improve reliability while reducing pressure on source water. Also mentioned above, state and regional regulators oversee regional supply planning, permitting, and restoration efforts in areas with degraded water quality.

At the county and local levels, policies are aimed at improving water quality, converting septic systems, and recharging source water. Through the Jacksonville 2045 Comprehensive Plan CCME, the county requires continuous water quality monitoring, operates a Groundwater Recharge Area Protection Program for the Floridan Aquifer, and prohibits hazardous industrial activities within designated aquifer recharge areas (City of Jacksonville, 2025). The county also requires proper disposal of wastewater and is phasing out septic systems in coordination with JEA and in accordance with the Jacksonville Master Stormwater Management Plan. Additionally, *Resilient Jacksonville* commits the City to managing wastewater overflow risk and to integrating green stormwater infrastructure into capital programming, with the Office of Resilience developing a decision-making process for prioritizing green infrastructure projects based on the compound flood model (City of Jacksonville, 2025).

Similar efforts are underway in Clay County. The Clay County Comprehensive Plan Conservation Element designates and protects high recharge areas and potable water supply wells, prohibits certain wastewater residuals and injection wells, requires decadal coordination with water system providers to understand projected water use trends, and encourages beneficial reuse (Clay County, n.d.). Across Duval and Clay Counties, these existing policies serve as the foundation for enhanced coordination and a One Water framework across the region.



Recommendations

Regional Coordination

OW-1: Explore Opportunities for Enhanced Collaboration on Water Resources Management Among Military and Regional Stakeholders

There are numerous opportunities to formalize, enhance, or develop new pathways for coordination between military and regional stakeholders. These include the following recommendations, which build upon findings from NEFRC Regional Resilience Action Plan (NEFRC, 2025).

- Encourage multi-directional participation in regional One Water planning initiatives among installations, counties, municipalities, and utilities to inform each other's budgets and plans. These stakeholders should coordinate capital projects and ensure that military water needs are aligned with municipal and regional infrastructure investments, and vice versa. This coordination effort could help leverage funds, investments and the sequencing of projects regionally. Efforts could be facilitated by regional organizations with demonstrated records of success on water infrastructure and planning projects, such as the St. Johns River Water Management District and/or the Northeast Florida Regional Council/RFC Partners.
- Leverage the existing successes of the North Florida Regional Water Supply Plan (SJRWMD, 2023) to form a new (or empower an existing) organizational body to carry out the recommended actions included in the Plan.
 - *Note: This would also build upon and further advance the “North Florida RWSP Project Conceptualization Partnership” recommendation from the Clay County Water Supply Facilities Work Plan (p.21, Table 7) that proposes a multi-entity partnership to “develop a list of feasible, conceptual regional projects or programs for the NFRWSP . . . [including] 1. collection and review of utility . . . discharge records; 2. individual utility conceptual project ideas review; 3. identification and screening of projects for further conceptual development and 4. project list refinement and prioritization (Clay County, 2025).”*
- Develop formal MSAs (e.g., MOAs) between military bases and municipal/regional water authorities to integrate shared water needs into long-term supply, stormwater, and wastewater treatment planning. This may include formalizing existing relationships that are not yet formally established or creating new formal pathways for collaboration. NEFRC may consider being party to these agreements to advance shared regional planning priorities.
- Establish municipal policies to formally require coordination between governments and utilities related to current and projected sustainable water sources and uses. Where such policies do exist, such as Policy 1.3.7 of the Conservation Element of Clay County's Comprehensive Plan, which requires decadal coordination among the County, CCUA, and SJRWMD, consider requiring more frequent coordination, perhaps every five years.



OW-2: Improve Regional Coordination for Water Quality and Watershed Protection

- Consider forming regional watershed protection agreements that include military installations, counties, municipalities, and water utilities to protect shared water resources from saltwater intrusion, contamination, over-extraction, and degradation.
- Expand data-sharing protocols (e.g., through MSAs) between military and civilian water agencies to ensure real-time water quality monitoring and contaminant detection across shared water systems.
- Encourage military bases to incorporate water quality protection strategies into regional watershed management plans, ensuring that both on-base and off-base water security are addressed in a coordinated manner.
- Where possible, expand local policies and programs that increase the implementation of low-impact best management practices on public property and incentivize/promote such practices on private property.
- Where necessary, complete septic vulnerability assessments across the region to account for current and anticipated future impacts to water quality and advance septic-to-sewer conversions at a regional scale. Assessments from St. Augustine and Jacksonville can serve as models (NEFRC, 2025).

Water Infrastructure Resilience

OW-3: Modernize Water Infrastructure to Support an Integrated One Water System

- Explore upgrading aging and/or undersized drinking water, wastewater, and stormwater infrastructure (both on military installations and across counties, municipalities, and utilities) to align with regional One Water priorities. For example, a feasibility study to evaluate the capacity expansion requirements for a proposed forced main connection from NASJAX to an off-base JEA plant could increase installation capacity and enhance overall system sufficiency.
- Where possible, pursue formal (e.g., partnering on a project) or informal teaming (e.g., providing letters of support) to demonstrate existing coordination efforts and increase competitiveness for infrastructure funding.
- Implement smart water management technologies to optimize water efficiency, detect leaks, and improve resource allocation across military and civilian systems.

Stormwater and Flood Resilience

OW-4: Align Watershed-Based Stormwater and Flood Control Strategies

- At the installation, county, municipal, and utility levels, align stormwater management plans with shared flood mitigation and resilience efforts, ensuring consistent flood control strategies across jurisdictions.
- Implement multi-benefit stormwater infrastructure projects, such as green stormwater systems, permeable pavement, and retention wetlands, that provide both flood protection and water quality improvements. Where possible, partner on these projects and/or bundle projects together to enhance competitiveness.



- Strengthen regional floodplain management policies that incorporate military base vulnerabilities into state, municipal, and utility flood control investments.

Water Supply and Demand Management

OW-5: Increase Water Efficiency and Resilience

- Implement water efficiency retrofits across jurisdictions, including leak detection, high-efficiency fixtures, and optimized irrigation systems to reduce overall consumption.
- Synchronize water conservation plans among military installations, counties, municipal, and utility stakeholders to advance shared regional water sustainability goals.
- Expand reuse and recycling programs for treated effluent (e.g., from NAS JAX to JEA, as part of larger 6B pipeline) for non-potable water applications (e.g., cooling systems, vehicle washing, and landscaping) to reduce demand on potable water supplies (see Figure 2). Where possible, connect infrastructure investments for reuse with existing infrastructure projects to minimize costs and leverage efficiencies.
- Assess opportunities for the construction of intentionally redundant water infrastructure (i.e., interconnections, secondary systems) to enhance system resiliency. For example, a potable water interconnection is being established between NS Mayport and the City of Atlantic Beach, which could serve as a model for future NS Mayport interconnections with other entities, such as JEA. As another example, a feasibility study that investigates the suitability of recommissioning JEA's White Shell Cove treatment plant as a secondary/backup water line for JAXPORT and/or MCSF Blount Island could explore opportunities for system redundancies.



Figure 2. Innovative Water Reuse and Recycling in East Central Florida

The [East Central Florida MIRR](#), completed between 2024-2025, serves as a useful One Water example, as stakeholders explored whether reclaimed water, treated effluent, or captured stormwater could support launch deluge needs at military space facilities along the Space Coast.

Rocket launch deluge systems require large volumes of water for mission-critical operations. The region's water supplies already face pressures from rapid development and population growth similar to the challenges facing Northeast Florida. Whereas launch activity (be it from military or commercial launches) requires a substantial amount of water for deluge purposes, East Central Florida's water systems were facing additional pressure from now routine space activity that, in some cases, draws directly from limited potable water sources.

Among its recommendations, the East Central Florida MIRR recommended that, where possible, deluge water should be sourced from treated/recycled water, as opposed to potable water supplies. By evaluating whether treated effluent can be redirected into this specialized use, the region explored how to apply a One Water principle — i.e., treating the byproduct of one infrastructure system as a sustainable input for another.

While Northeast Florida does not have an equivalent launch deluge demand, the underlying approach is directly relevant. This example from East Central Florida presents a transferable logic to rethink treated wastewater as a regional resource across multiple water systems, rather than a disposal challenge limited to a single system. In the NEFL context, relevant end uses may include irrigation, cooling, industrial processes, fire suppression, or groundwater recharge, among other uses. Regardless of the specific application, the broader takeaway is that reuse projects should be explored and pursued where there is value across multiple systems, such as pairing available non-potable water supplies with operational, municipal, or industrial demands that would otherwise rely on regionally limited potable water.

OW-6: Ensure Emergency Water Security Through Regional Coordination

- Strengthen backup water storage capacity, both at military installations and off-base, to ensure continued critical operations (both military and civilian) during infrastructure failures, emergencies, or supply disruptions.
- Develop emergency water supply contingency agreements between military installations and counties, municipalities, and local water utilities to facilitate rapid response during fires, droughts, contamination events, or system failures. Agreements should list prioritized uses (e.g., critical operations) and improve military-civilian coordination on emergency water distribution strategies, ensuring access to alternative water sources during crisis events.



Social

Beyond the physical and natural systems that sustain installation operations, the resilience of Northeast Florida's military communities also depends on quality-of-life conditions that determine whether installations can attract and retain the personnel they rely on. Access to childcare and to affordable, available housing are persistent constraints for military families in the region, and both function as documented readiness issues rather than amenities alone. While on-installation capacity is federally managed, regional partners hold meaningful influence over the community-side supply of care and housing and the nonprofit infrastructure that connects families to it. This section examines childcare and housing in turn, identifying where continued regional advocacy and coordination bring attention to these issues and point to models from comparable military communities.

Childcare

Overview of the Issue

Childcare accessibility is a noted concern among military families in Northeast Florida, especially as the region's population continues to grow. Jacksonville has experienced 24% growth since 2010 (World Population Review, n.d.), and high demand for childcare services has led to longer waitlists and higher costs across the region. The Economic Policy Institute reports that the average annual cost of infant care in Florida is approximately \$13,000, roughly 18% of median household income in Jacksonville (EPI 2025). These costs are significant for military families, particularly those with multiple young children or in single-income households where a spouse cannot work due to the unavailability of childcare.

Long waitlists and high cost burdens are documented attraction and retention issues for installation personnel, and a constraint on military readiness that the region has an opportunity to address. GAO's May 2024 review of military childcare staffing reported FY2022 child development center (CDC) employee turnover rates of 34% to 50% across the services, with staffing shortfalls cited as the primary driver of waitlists (GAO, 2024). RAND's research synthesis estimates that roughly 24% of active-duty service members or their spouses who needed childcare missed nine or more days of work in a year because care was unavailable (Moini 2007), and survey data consistently put childcare among the top barriers to military-spouse employment.

Workforce shortages within childcare systems, both on and off installations, have compounded these challenges. A 2024 U.S. Government Accountability Office (GAO) review found that Department of Defense Child Development Centers experienced employee turnover rates ranging from 34% to 50% in fiscal year 2022, with staffing shortages identified as a primary driver of persistent waitlists (GAO, 2024). These shortages directly limit available childcare capacity and reduce system reliability for military families.

While on-installation childcare capacity is managed at the federal level, regional conditions play a critical role in supplementing available care. Local childcare providers, nonprofit organizations, and community-based networks serve as essential extensions of the system, helping connect military families with off-base care options. Given these dynamics, there is a clear opportunity for regional partners to strengthen childcare capacity, improve access, and support military families through coordinated, community-based solutions that enhance overall readiness and resilience across the four installations.



Two models from comparable military communities offer potential templates to learn from:

- **Spouse-Led In-Home Care Networks (Emerald Coast / Eglin AFB)**
 - In November 2024, Operation Child Care Project (OCCP) launched its HomeFront Help pilot at Eglin AFB. OCCP is a nonprofit that recruits military spouses, training them via a weekend training cohort with online modules that meet or exceed U.S. Department of Defense in-home child-care standards, paying each “Helper” a \$250 stipend on completion, and then plugging the vetted Helpers into the local community as private caregivers for Eglin and Hurlburt families on an emergency, ad-hoc, or part-time basis. The pilot was funded with a \$5,000 AFA grant and, in its first phase, supported 150+ families, delivering 550+ days of care. OCCP has since expanded to Colorado Springs and is scouting additional Air Force and Space Force installations (AFA 2024; OCC Project n.d.).
 - This is a model that could be explored for replication in Northeast Florida. It requires no construction, no federal CDC dollars, and no state quality rating infrastructure; a community nonprofit with modest seed funding can implement it. For NAS Jax and Mayport, a potential organizational fit could be the ASYMCA Jacksonville chapter or a comparable nonprofit working through installation Family Readiness offices.
- **U.S. Department of Defense-Funded Community CDCs (Hampton Roads)**
 - Hampton Roads carried a combined 2,000-plus child waitlist across Norfolk-area installations before the U.S. Department of Defense awarded the Armed Services YMCA (ASYMCA) a contract in March 2024 to design, build, and operate three new off-installation Child Development Centers exclusively for military families. The Norfolk center (216 licensed spaces, NAEYC-accredited) opened in May 2025 and reached 100% capacity on opening day. A Virginia Beach center followed in Spring 2026 (ASYMCA 2025).
 - Each center enrolls 200-plus children, with the Norfolk facility licensed for 216 spaces for infants through age five and accredited by the National Association for the Education of Young Children (NAEYC) (ASYMCA 2025).
 - Navy leadership broke ground in January 2026 on the new Virginia Beach CDC, located on installation at Joint Expeditionary Base Little Creek-Fort Story. This facility will be the largest CDC in Hampton Roads at completion, supporting care for 300 children, eight infant rooms, seven pre-toddler rooms, six toddler rooms, and four preschool rooms, with five age-appropriate playgrounds. The \$52 million project is structured as a Defense Innovation Unit (DIU) Other Transactional Authority (OTA) pilot using a progressive design-build approach with prefabricated, industrialized construction techniques to compress the timeline. Final completion is scheduled for 2028 (NAVFAC 2026).

Mission Criticality

Childcare availability is a mission-critical factor influencing readiness, workforce stability, and quality of life across all four installations included in the Northeast Florida Military Installation Readiness Review, Naval Air Station Jacksonville, Marine Corps Support Facility Blount Island, Camp Blanding Joint Training Center, and Naval Station Mayport. Reliable access to affordable childcare directly supports service members’ ability to report for duty, maintain consistent work schedules, and deploy without disruption.



Barriers to childcare, such as long waitlists, high costs, and limited availability, affect service members across all ranks, with particularly acute impacts on junior enlisted personnel and single-income households. These challenges can constrain spousal employment, increase financial strain, and contribute to broader recruitment and retention concerns. The Department of Defense and supporting research organizations consistently identify childcare as a key readiness issue, noting that insufficient access can result in missed duty time, reduced workforce participation, and increased stress for military families (Moini et al., 2007).

When unmet, childcare needs have measurable operational impacts, including workforce absenteeism and reduced focus on mission requirements, underscoring the importance of childcare as a foundational component of military readiness.

Recommendations

CH-1: Establish a Regional Military Spouse In-Home Childcare Network

Establishing a regional military spouse in-home childcare network would provide a flexible, scalable solution to childcare gaps across Northeast Florida installations. This initiative would involve developing a pilot program to recruit, train, and deploy military spouses as vetted in-home childcare providers, modeled on the Operation Child Care Project (OCCP) HomeFront Help program. Implementation would be led by a regional nonprofit, such as ASYMCA Jacksonville or a comparable organization, in coordination with installation Family Readiness offices to manage recruitment, deliver standardized training aligned with Department of Defense expectations, and maintain a centralized registry of qualified caregivers.

This network would provide military families with access to flexible childcare options, including short-term, emergency, evening, and part-time care that is not typically met by traditional child development centers. The model can be deployed relatively quickly and cost-effectively, as it does not require new facility construction and instead leverages the existing military spouse workforce. By expanding access to supplemental childcare and reducing gaps associated with long waitlists, this approach would directly support spouse employment, improve family stability, and enhance overall mission readiness across Naval Air Station Jacksonville, Naval Station Mayport, Marine Corps Support Facility Blount Island, and Camp Blanding Joint Training Center.

CH-2: Advance Public-Private Partnerships for Off-Installation Child Development Centers (CDCs)

Advancing public-private partnerships to develop off-installation Child Development Centers (CDCs) would provide a scalable, long-term solution to childcare shortages in Northeast Florida. Building on the Hampton Roads ASYMCA model, this approach would involve collaboration among the Department of Defense, Naval Facilities Engineering Systems Command (NAVFAC), local governments, and nonprofit providers to plan, fund, and operate strategically located childcare facilities near major installations. These centers would deliver high-quality care at scale—serving 200 or more children per site—with priority enrollment for military families. By expanding geographically distributed capacity outside installation gates, this model would significantly reduce waitlists, increase access to reliable full-time care, and strengthen the region's childcare infrastructure, ultimately supporting sustained mission readiness across all four installations.



CH-3: Expand Community-Based Childcare Capacity Through Targeted Incentives

Expanding community-based childcare capacity through targeted regional incentives would help address persistent gaps in childcare availability for military families. This approach would involve providing grants, subsidies, and workforce development incentives to local childcare providers that are willing to expand their services or prioritize enrollment for military-connected households. By strengthening the off-installation childcare market, this strategy would improve access to affordable, high-quality care options beyond installation gates, particularly in areas where on-base capacity is limited. Ultimately, this effort would help build a more resilient and diversified childcare ecosystem that supports both military and civilian populations while alleviating pressure on Department of Defense-managed facilities.

CH-4: Strengthen Regional Childcare Coordination and Referral Systems

Strengthening regional childcare coordination and referral systems would improve how military families access and navigate available childcare resources across Northeast Florida. This would involve establishing a centralized coordination network or platform—potentially led by a regional nonprofit such as ASYMCA or supported through installation Family Readiness offices—to connect families with both on- and off-installation childcare options, including in-home providers, Child Development Centers, and community-based programs. By improving transparency and streamlining referrals, this effort would reduce administrative barriers, increase awareness of available services, and accelerate placement timelines. As a result, it would enhance utilization of existing childcare capacity and significantly improve the overall user experience for military families.

CH-5: Support Childcare Workforce Development and Retention

Supporting childcare workforce development and retention is critical to addressing one of the primary constraints on childcare availability: staffing shortages. This recommendation focuses on building a sustainable pipeline of qualified early childhood educators through partnerships with local colleges, workforce development boards, and training providers. Efforts could include offering tuition assistance, stipends, certification programs, and defined career pathways to attract and retain workers in the childcare sector. By increasing the number of trained and available providers across both on-base and community settings, this strategy would improve service reliability and expand overall system capacity. Over time, it would help stabilize the regional childcare workforce and ensure long-term support for military families and installation readiness.

Housing

Overview of the Issue

Affordable and accessible housing is a mission-critical factor influencing readiness, workforce stability, and quality of life across all installations included in the Northeast Florida MIRR. Access to safe, affordable housing directly affects the ability of service members and their families to live within reasonable proximity to installations, maintain reliable commutes, and respond effectively to operational demands. Housing constraints (e.g., rising costs, limited inventory, and increased competition in growing regional markets) can place financial strain on



military households (particularly among junior enlisted personnel) and negatively impact recruitment and retention. For example, a junior enlisted sailor at NS Mayport with Basic Allowance for Housing (BAH) at the Jacksonville rate (roughly \$2,067/month for an E-4 with dependents in FY2026) would be priced into a two-bedroom rental near the high end of Fair Market Rate (FMR) and with little margin for utilities and other standard expenses (Defense Travel Management Office. n.d).

Importantly, housing challenges are not confined to individual installations but reflect broader regional and statewide market conditions. For example, 34% of Florida households are cost-burdened, while 16% are severely cost-burdened; 64% of low-income, cost-burdened renters live in nine large counties statewide, with Duval County being the ninth of those counties (University of Florida, 2025; Sylvestri, 2025; Siniavskaia, 2025). Population growth, development pressures, and housing supply constraints across Northeast Florida have intensified affordability issues, making it increasingly difficult for military families to secure adequate housing (Florida Housing Coalition, 2025). Because on-base housing capacity is limited and cannot fully meet demand, the availability of off-base housing options is essential to sustaining the military workforce at the region's installations. Addressing these challenges will require coordinated action across regional and state partners, including local governments, housing authorities, and private developers, to expand supply, improve affordability, and ensure that housing conditions support long-term mission readiness and community resilience.

Current Framework and Efforts

Affordable and attainable housing is a consistent, cross-cutting challenge affecting NS Mayport, Blount Island, Camp Blanding, and NAS Jacksonville. Yet no formalized regional partnership currently exists to address it. Housing affordability and availability were raised in discussions with all installations and local government stakeholders, with personnel at some locations commuting over an hour each way due to limited housing options near duty stations. These conditions contribute to workforce instability, hiring difficulties, and increased operational strain.

While installations maintain informal connections with local governments and housing entities (e.g., the City of Jacksonville's community planning office and the Jacksonville Housing Authority), these relationships have not yet evolved into a coordinated, implementation-oriented framework focused on installation-related housing needs. Past regional efforts, including the Northeast Florida Regional Council's (NEFRC) Affordable Housing Strategy (2022) and its convening of an affordable housing committee, demonstrate recognition of the issue; however, there remains a need for a sustained regional effort to address workforce housing challenges specific to military and civilian personnel.

The need for additional regional attention is evidenced by high demand for on-base housing, long commute distances, and recruitment and retention challenges across installations. At Camp Blanding, the rural setting further constrains housing supply, though potential opportunities exist to coordinate with Clay County and focus growth in nearby areas, such as Middleburg. Across the region, increasing population growth, rising housing costs, and the expansion of short-term rentals are expected to further exacerbate affordability challenges over time. Looking ahead, a lingering need for coordinated action suggests that housing-related vulnerabilities may continue to grow, with direct implications for mission readiness and workforce stability. However, existing institutional structures provide a strong foundation for improvement.



From an efficiency standpoint, formalizing existing informal partnerships (i.e., those between local governments, housing authorities, and regional organizations, such as NEFRC) represents a practical and low-effort path forward. Establishing a shared commitment to regional housing coordination, and perhaps a plan to advance such efforts, could help align housing development, transportation planning, and workforce needs across installations. A coordinated, multi-installation approach would position the region well to address shared challenges, reduce commute burdens, and support long-term operational readiness.

Mission Criticality

Affordable and available housing is a mission-critical factor influencing readiness, workforce stability, and quality of life across all installations included in the Northeast Florida Military Installation Readiness Review. Access to safe, affordable housing directly affects the ability of service members and their families to live within reasonable proximity to installations, maintain reliable commutes, and respond effectively to operational demands. Housing constraints—such as rising costs, limited inventory, and increased competition in growing regional markets—can place financial strain on military households, particularly among junior enlisted personnel, and negatively impact recruitment and retention.

Importantly, housing challenges are not confined to individual installations but reflect broader regional and statewide market conditions. Population growth, development pressures, and housing supply constraints across Northeast Florida have intensified affordability issues, making it increasingly difficult for military families to secure adequate housing. Because on-base housing capacity is limited and cannot fully meet demand, the availability of off-base housing options is essential to sustaining the military workforce. Addressing these challenges will require coordinated action across regional and state partners, including local governments, housing authorities, and private developers, to expand supply, improve affordability, and ensure that housing conditions support long-term mission readiness and community resilience.

Recommendations

H-1: Coordinate Planning Across Installations, Counties, Municipalities, and NGOs

Enhanced, formal coordination among regional installations, counties, municipalities, and NGOs has the potential to better align housing planning and construction efforts across stakeholders, ensuring shared goals are advanced every step of the way. Recommended actions include:

- Establish a shared commitment (likely structured as a Letter of Intent [LOI], Memorandum of Understanding [MOU] or Memorandum of Agreement [MOA]) to bring attention to the issue and increase affordable and accessible housing opportunities for military personnel and defense workers. Parties may include, but should not be limited to, regional installations, county and local governments, public housing and finance authorities, and regional NGOs (e.g., the Florida Housing Coalition, Northeast Florida Builders Association, and Northeast Florida Association of Realtors).
- To advance the commitment established in the MSA, conduct a multi-stakeholder military housing study (similar to the study recommended by the Emerald Coast MIRR, p. 310) to better understand the regional challenges and opportunities related to, and action strategies



for, housing for military personnel and defense workers. This study should use tools developed by the Florida Housing Coalition (e.g., toolkits, Home Matters dashboard, etc.), study the regional housing situation to assess current conditions, and better understand needs and opportunities.

- Where possible, pursue joint grant funding opportunities to enhance competitiveness (see Figure 3) and secure dollars where eligibility requirements necessitate partnerships.

Note: As it pertains to funding, this recommendation will be explored further in Tech Memo #10.

Figure 3. Case Study: Tyndall AFB, Bay County, and Coordinated Efforts for Affordable Housing

Coordination between military and county-level stakeholders has the potential to not only advance planning, but also increase projects' competitiveness for grant funding. For example, following the devastation caused by Hurricane Michael in 2018, Bay County, FL and Tyndall Air Force Base (AFB) worked closely together to rapidly advance new housing development projects in a manner aimed specifically at securing eligible grant funds. Leveraging relationships with other regional stakeholders (e.g., Florida Housing Coalition, Emerald Coast Regional Council), Tyndall AFB and Bay County worked together to prioritize a resilient workforce housing development on a flood-safe, County-owned parcel within commuting distance from the installation. The collaborative effort positioned the project well to receive funding through the Live Local Act and SAIL program, as the project aligned with state priorities that incentivize workforce housing within a 10-mile radius of military installations.

While specific funding and financing recommendations for this MIRR will be explored further in Technical Memo #10, maintaining a funding-informed strategy should be considered a best practice for policies and partnerships. Coordinated efforts and formal partnerships are often attractive project attributes sought after by grant officers. Whereas affordable housing is an intrinsically regional issue, it behooves the region's installations, governments, and NGOs to collaborate on projects in order to increase the likelihood of receiving project funding.

H-2: Streamline Permitting Processes for Military-Adjacent Housing

Reducing permitting barriers can accelerate the development of affordable housing for military personnel. Recommended actions may include:

- Fast-tracking permitting for developments that meet military-affordable housing criteria.
- Reducing impact fees for military workforce housing projects, lowering costs for developers.
- Establishing permit review timelines to expedite approval processes for housing projects near installations.

H-3: Expand Public-Private Partnerships (P3s) for Military Housing

Increasing the supply of military-affiliated housing requires attention among government agencies, private developers, and military stakeholders. Individual stakeholders often cannot solve this problem alone. To support housing development:

- Expand military housing P3 programs (e.g., between local and county governments and private developers) to incentivize private investment in workforce housing projects and keep home prices at/below market rates. Note: Related funding, recommendations can be found in Tech Memo #10 at the MIRR story map in the NEFRC website.



- Offer long-term ground leases on government-owned land for affordable housing developments.
- Use federal tax credits and low-interest loans to support private-sector-led workforce housing initiatives. *Note: Related funding, recommendations can be found in Tech Memo #10 at the MIRR story map in the NEFRC website.*

H-4: Consider Expanding Community Land Trusts to Benefit Military Personnel and Defense Workers

Community Land Trusts offer an innovative model to ensure long-term accessibility and affordability of housing. CLTs function as a partnership between the nonprofit CLT and private homeowners; homeowners buy and own their homes as they normally would, while the CLT owns and leases land under the house, ensuring it remains in use as affordable and accessible housing in perpetuity. Strategies related to CLTs range from:

- Forming a new CLT targeted specifically at fostering affordable and accessible home-ownership amongst military personnel. CLTs across the country are structured to benefit a variety of population groups, such as first-time home-buyers or low-income families. This model could be adopted for a new CLT that specifically benefits military families by limiting/prioritizing access to military personnel.
- Partnering with existing CLTs to expand ownership priority for military personnel, families, and defense workers. Existing CLTs in the region, such as the [Northeast Florida Community Land Trust \(NEFCLT\)](#) and the [Jacksonville Community Land Trust \(JCLT\)](#), already exist within the Northeast Florida region. Further, NEFCLT already “[focuses] on building stability through homeownership—especially for veterans, essential workers, and long-time residents],” while JCLT “[creates] a pathway to homeownership for families who might otherwise be priced out of the housing market.” These existing entities already prioritize veterans and low-income families and may offer a partnership opportunity to expand their focus to more deliberately benefit active military families and/or civilian defense workers.

H-5: Encourage Zoning Reforms to Allow Greater Housing Density

Based on the results of the housing study, local governments could modify zoning codes to promote mixed-use developments, higher-density residential areas, and transit-oriented housing near military installations, but still outside any buffer zones to limit encroachment concerns. Strategies include:

- Amending zoning ordinances to permit multi-family and workforce housing developments.
- Implementing density bonuses and incentives for developers constructing military-affiliated affordable housing. Set to take effect on July 1, 2026, Florida H.B. 1389 will allow local governments to offer density bonus incentives to developers that donate land for affordable housing for military families.
- Prioritizing high-density housing in areas with transit access to military facilities, reducing commute times for personnel.
- Establishing military housing overlay zones that encourage the development of military-affiliated workforce housing.



H-6: Explore Renter/Short-Term Rental Policies

In communities across the country, rental markets— both long-term rentals in areas of high desirability, and short-term rentals in areas with tourist economies — can put pressure on the housing supply and affect the affordability and accessibility of military housing. Policies to address these impacts include:

- Implementing rent stabilization agreements in designated areas to cap excessive rental price increases for military personnel.
- Restricting excessive short-term rental conversions near installations to ensure housing stability for military families.
- Create rental assistance programs tailored to military families facing high housing costs in competitive rental markets.



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Appendix A. Policy Recommendations



Table A-1. Policy Recommendations

Strategy	Issue(s)	Relevant Parties	Description	Current Policies	Policy Change	Notes/Links
Shorelines						
S-1: Pursue a Formalized Living Shoreline Permitting Pathway	Coastal Hazards Erosion Permitting	NEFRC FDEP Installations	Convene and advocate for a clear, streamlined FDEP permitting pathway for living shorelines in the Lower St. Johns Basin, including projects exceeding 500 linear feet, rather than relying on case-by-case executive discretion.	FDEP permitting is a major implementation barrier: living shorelines over 500 linear feet have historically required executive discretion rather than a clear regulatory pathway (the Floridatown permit took ~2 years; similar delays are ongoing in Jacksonville). Florida SB 302, signed March 2026 and effective July 1, 2026, promotes nature-based solutions and directs FDEP to create a streamlined permitting track and general permits for projects that avoid significant adverse impacts.	NEFRC coordinates a regional ask to FDEP for (1) a clear way to demonstrate no water quality or environmental impacts for living shorelines in the Lower St. Johns Basin, and (2) a formal permitting pathway for projects exceeding 500 feet. NEFRC and the installations engage in the SB 302 rulemaking window to advocate for Lower St. Johns Basin-specific guidance and to prioritize expansion of the s. 373.4131 general permit.	SB 302 - State of Florida, 2026: https://www.flsenate.gov/Session/Bill/2026/302/BillText/c1/HTML
S-2: Pursue Conservation Easements Along Wetland Migration Corridors	Coastal Hazards Conservation Sea Level Rise Marsh Migration	NEFRC SJRWMD City of Jacksonville Installations	Work with SJRWMD to identify and prioritize parcels adjacent to installation-adjacent wetland systems where acquisition or conservation easements would create inland marsh migration corridors.	Installation boundaries define the waterward edge while surrounding development defines the landward edge, leaving no room for marsh migration; without easements, living shoreline projects become fixed points in a retreating system. SJRWMD already operates land acquisition and restoration programs targeting floodplain and coastal wetlands as non-structural flood mitigation and maintains a five-year land acquisition plan.	NEFRC facilitates conversations among SJRWMD, the City of Jacksonville, and the installations to pre-position easements along priority reaches (e.g., the Blount Island living shoreline initiative area and Mayport's estuarine shoreline), shortening project development timelines if FDEP permitting improves (see S-1).	SJRWMD 2026-2030 Strategic Plan: https://aws.sjrwmd.com/SJRWMD/plans/SJRWMD-Strategic-Plan-2026-2030.pdf
S-3: Integrate Military Shoreline Vulnerability into Jacksonville's Suitability Model and Adaptation Plan	Coastal Hazards Erosion Data/Planning Gap	City of Jacksonville Installation Federal	Incorporate military installation shorelines - particularly federally owned segments at NS Mayport and NAS Jacksonville that share boundaries with city-managed areas - into the City of Jacksonville Office of Resilience's geospatial suitability model.	The City's Office of Resilience is developing a geospatial suitability model for more than 300 miles of St. Johns River watershed shoreline, identifying where grey versus green solutions are appropriate.	Ensure federally owned installation shorelines are included in the analysis rather than treated as outside the City's scope, which would create an artificial boundary that does not reflect how water moves across jurisdictional lines. The A1A corridor and the airfield boundary at Mayport are the most concrete shared-boundary examples.	City of Jacksonville 2045 Comprehensive Plan (CCME), 2025: https://www.jacksonville.gov/departments/planning-department/community-planning-division/comprehensive-plan-elements
S-4: Adopt an Accommodation Strategy for NAS Jacksonville Low-Criticality Areas	Coastal Hazards Stormwater Sea Level Rise	NEFRC City of Jacksonville NAS Jacksonville	Support incorporating accommodation - rather than uniform hardening - as a shoreline hazard mitigation strategy for NAS Jacksonville's low-criticality areas into regional planning documents.	The NEFL MIRR Adaptation Strategies white paper concluded that NAS Jacksonville's strongest long-term strategy is accommodation: allowing controlled flooding of low-critical open space, increasing stormwater retention capacity, improving drainage flexibility, and adapting operations around predictable tidal flood conditions. City of Jacksonville's Comprehensive Plan CCME Goal 13 already establishes Adaptation Action Area provisions requiring five-year sea level rise and vulnerability updates and side-by-side evaluation of soft and hard infrastructure options.	NEFRC and City of Jacksonville extend the CCME Goal 13 Adaptation Action Area approach explicitly to installation-adjacent areas, reinforcing accommodation as an adopted regional shoreline hazard mitigation strategy.	APTIM, 2026 (NE MIRR adaptation white paper). Duval County CCME Goal 13 - City of Jacksonville, 2025: https://www.jacksonville.gov/departments/planning-department/community-planning-division/comprehensive-plan-elements



Table A-1. Policy Recommendations

Strategy	Issue(s)	Relevant Parties	Description	Current Policies	Policy Change	Notes/Links
One Water						
OW-1: Explore Opportunities for Enhanced Collaboration on Water Resources Management Among Military and Regional Stakeholders	Water Supply Water Infrastructure Regional Coordination	Installations Clay County City of Jacksonville NEFRC SJRWMD Utilities	Formalize, enhance, or develop new coordination pathways among military and regional stakeholders on water resource management, building on the NEFRC Regional Resilience Action Plan (p.44-45).	Regional water management operates through a patchwork of utility service areas and providers (JEA, CCUA, Green Cove Springs); SJRWMD coordinates via consumptive use permitting and regional supply planning; project-level planning often occurs on a utility- or jurisdiction-specific basis with limited cross-system coordination. The North Florida Regional Water Supply Plan (SJRWMD, 2023) and Clay County Water Supply Facilities Work Plan provide existing structures. Clay County Conservation Element Policy 1.3.7 requires decadal coordination among the County, CCUA, and SJRWMD.	Encourage multi-directional participation in regional One Water planning; empower a body to carry out the North Florida RWSP recommendations; develop formal MSAs/MOAs between installations and water authorities (with NEFRC potentially a party); and establish county/local policies requiring more frequent (e.g., every five years) coordination on sustainable water sources and uses.	NEFRC RRAP, 2025: https://www.nefrc.org/ North Florida RWSP - SJRWMD, 2023: https://aws.sjrwmd.com/NFWSP/water_supplyplan/documents/final/2023_NFRWSP_and_Associated_Appendices_Final_20230212.pdf Clay County Water Supply Facilities Work Plan, 2025: https://www.claycountygov.com/Home/ShowDocument?id=7032
OW-2: Improve Regional Coordination for Water Quality and Watershed Protection	Water Quality Conservation Regional Coordination	Installations Clay County City of Jacksonville NEFRC SJRWMD Utilities	Form regional watershed protection agreements and expand data-sharing to protect shared water resources from saltwater intrusion, contamination, over-extraction, and degradation.	FDEP-led BMAPs provide a water quality restoration framework for impaired waters. The RRAP (p.45) identifies aging septic systems as a significant regional threat to water quality; septic vulnerability assessments from St. Augustine and Jacksonville can serve as models.	Form regional watershed protection agreements including installations, counties, municipalities, and utilities; expand data-sharing protocols (e.g., via MSAs) for real-time monitoring; incorporate water quality protection into regional watershed management plans; expand low-impact BMPs on public and private property; and complete regional septic vulnerability assessments to advance septic-to-sewer conversions.	NEFRC RRAP, 2025: https://www.nefrc.org/
OW-3: Modernize Water Infrastructure to Support an Integrated One Water System	Water Infrastructure Aging Infrastructure	Installations Clay County City of Jacksonville NEFRC SJRWMD Utilities	Upgrade aging or undersized drinking water, wastewater, and stormwater infrastructure - on installations and across counties, municipalities, and utilities - to align with regional One Water priorities.	Water systems with outdated infrastructure face failure concerns compounded by extreme weather, rapid growth, and rising construction costs. NAS Jacksonville has documented wastewater capacity and drinking water interconnection/redundancy needs.	Explore upgrades such as a feasibility study for a proposed forced main connection from NASJAX to an off-base JEA plant; pursue formal (project partnering) or informal (letters of support) teaming to increase funding competitiveness; and implement smart water management technologies for efficiency, leak detection, and resource allocation.	Source: RRAP (p.45-52); installation site visits.
OW-4: Align Watershed-Based Stormwater and Flood Control Strategies	Stormwater Coastal Hazards Flood Resilience	Installations Clay County City of Jacksonville NEFRC SJRWMD Utilities	Align stormwater management plans across installation, county, municipal, and utility levels with shared flood mitigation and resilience efforts.	Resilient Jacksonville commits the City to managing wastewater overflow risk and integrating green stormwater infrastructure into capital programming, with the Office of Resilience developing a green infrastructure prioritization process based on the compound flood model.	Align stormwater plans for consistent cross-jurisdictional flood control; implement multi-benefit stormwater infrastructure (green systems, permeable pavement, retention wetlands), bundling or partnering to enhance competitiveness; and strengthen regional floodplain management policies that incorporate military base vulnerabilities.	Resilient Jacksonville, 2023: https://www.jacksonville.gov/getContentAsset/39f2833a-030e-4006-bedc-226f67abc3fb/135b97c9-84fa-4e82-b956-0fbccec4aa1f/ResilientJacksonville_Oct2023_PAGES.pdf?language=en



Table A-1. Policy Recommendations

Strategy	Issue(s)	Relevant Parties	Description	Current Policies	Policy Change	Notes/Links
OW-5: Increase Water Efficiency and Resilience	Water Supply Water Demand Water Infrastructure	Installations Clay County City of Jacksonville NEFRC SJRWMD Utilities	Implement water efficiency retrofits, synchronize conservation plans, expand reuse/recycling, and assess redundant water infrastructure across military and civilian systems.	Rapid population growth, new development, and industrial activity are straining utilities and reducing groundwater reliability, with particular concern in areas susceptible to saltwater intrusion. A potable water interconnection is being established between NS Mayport and the City of Atlantic Beach.	Implement efficiency retrofits (leak detection, high-efficiency fixtures, optimized irrigation); synchronize conservation plans across stakeholders; expand reuse of treated effluent (e.g., NAS JAX to JEA via the 6B pipeline) for non-potable uses; and assess redundant infrastructure (e.g., the Mayport-Atlantic Beach interconnection as a model; a feasibility study to recommission JEA's White Shell Cove plant as backup for JAXPORT/MCSF Blount Island).	
OW-6: Ensure Emergency Water Security Through Regional Coordination	Water Supply Emergency Preparedness	Installations Clay County City of Jacksonville NEFRC SJRWMD Utilities	Strengthen backup water storage and develop emergency water supply contingency agreements between installations and local utilities.	Installations and communities depend on reliable interconnections; NS Mayport's privately maintained on-base water and wastewater systems create a need for backup interconnections and coordinated planning.	Strengthen backup water storage on- and off-base; and develop emergency water supply contingency agreements listing prioritized uses (e.g., critical operations) to facilitate rapid response during fires, droughts, contamination events, or system failures.	
Childcare						
CC-1: Explore a Spouse-Led In-Home Care Network (Emerald Coast / Eglin AFB Model)	Childcare Readiness Workforce Retention	Installations NGOs NEFRC	Explore replicating Operation Child Care Project's HomeFront Help model - a nonprofit that recruits and trains military spouses to DoD in-home childcare standards, pays a completion stipend, and plugs vetted 'Helpers' into the community as private caregivers on an emergency, ad-hoc, or part-time basis.	On-installation CDC capacity is federally managed and constrained by staffing shortfalls (FY2022 CDC turnover of 34-50% across services). Regional partners can influence the community-side supply of care. In November 2024, OCCP launched HomeFront Help at Eglin AFB with a \$5,000 AFA grant, supporting 150+ families and delivering 550+ days of care; it has since expanded to Colorado Springs.	Replicate the model in Northeast Florida - it requires no construction, no federal CDC dollars, and no state quality-rating infrastructure; a community nonprofit with modest seed funding can implement it. A potential organizational fit for NAS Jax and Mayport is the ASYMCA Jacksonville chapter or a comparable nonprofit working through installation Family Readiness offices.	OCCP HomeFront Help: https://www.occproject.org/homefront/help AFA, 2024: https://www.afa.org/afa-f2-grant-delivers-child-care-solutions-for-eglin-families/ GAO-24-106524: https://www.gao.gov/products/gao-24-106524 RAND RB-9218: https://www.rand.org/pubs/research_briefs/RB9218.html
CC-2: Explore DoD-Funded Community Child Development Centers (Hampton Roads Model)	Childcare Readiness Workforce Retention	DoD Installations NGOs	Explore the DoD-funded, nonprofit-operated off-installation CDC model in which the Armed Services YMCA designs, builds, and operates community CDCs exclusively for military families.	Hampton Roads carried a combined 2,000+ child waitlist before DoD awarded ASYMCA a March 2024 contract to build and operate three off-installation CDCs for military families; the Norfolk center (216 licensed spaces, NAEYC-accredited) opened May 2025 at 100% capacity, with a Virginia Beach center following. Florida's average annual infant-care cost is ~\$13,000 (~18% of Duval median household income).	Explore a comparable DoD- or nonprofit-operated community CDC arrangement for the region's installations, potentially structured through models like the Defense Innovation Unit Other Transactional Authority progressive design-build approach used for the \$52M Virginia Beach CDC.	ASYMCA, 2025: https://asymca.org/blog/dod-partners-with-asymca-to-expand-child-care/ NAVFAC, 2026: https://www.dvidshub.net/news/555769/ EPI, 2025: https://www.epi.org/child-care-costs-in-the-united-states/#/FL



Table A-1. Policy Recommendations

Strategy	Issue(s)	Relevant Parties	Description	Current Policies	Policy Change	Notes/Links
Housing						
H-1: Coordinate Planning Across Installations, Counties, Municipalities, and NGOs	Affordable Housing Readiness Regional Coordination Workforce Housing	Installations Clay County City of Jacksonville NEFRC NGOs	Establish formal coordination to align housing planning and construction across regional stakeholders, anchored by a Mutual Support Agreement and a multi-stakeholder military housing study.	No formalized regional partnership currently exists to address installation-related housing needs, though installations maintain informal connections with local governments and housing entities. Past efforts include NEFRC's Affordable Housing Strategy (2022) and convening of an affordable housing committee.	Form an MSA (LOI/MOU/MOA) among installations, county and local governments, public housing/finance authorities, and regional NGOs (e.g., Florida Housing Coalition, NE FL Builders Association, NE FL Association of Realtors); conduct a multi-stakeholder military housing study (modeled on the Emerald Coast MIRR, p.310) using Florida Housing Coalition tools (Home Matters dashboard); and pursue joint grant funding.	Emerald Coast MIRR, 2024: https://files.ecrc.org/document_center/Programs/MIRR/Documents/EmeraldCoastMIRRReport.pdf Florida Housing Coalition Home Matters, 2025: https://flhousing.org/wp-content/uploads/2025/09/Home-Matters-Report-2025-V5-DIGITAL.pdf (Funding explored further in Tech Memo #10)
H-2: Streamline Permitting Processes for Military-Adjacent Housing	Affordable Housing Permitting	City of Jacksonville Clay County	Reduce permitting barriers to accelerate development of affordable housing for military personnel.	Permitting timelines and impact fees are current barriers to affordable housing development near installations.	Fast-track permitting for developments meeting military-affordable housing criteria; reduce impact fees for military workforce housing projects; and establish permit review timelines to expedite approvals for housing projects near installations.	
H-3: Expand Public-Private Partnerships (P3s) for Military Housing	Affordable Housing Workforce Housing	County Municipality Installation Private Sector	Expand collaboration among government agencies, private developers, and military stakeholders to increase the supply of military-affiliated housing.	Individual stakeholders often cannot solve the housing supply problem alone; existing informal partnerships provide a foundation to build on.	Expand military housing P3 programs to incentivize private investment and keep prices at or below market; offer long-term ground leases on government-owned land for affordable housing; and use federal tax credits and low-interest loans to support private-sector-led workforce housing.	
H-4: Consider Expanding Community Land Trusts to Benefit Military Personnel and Defense Workers	Affordable Housing	NGOs (NEFCLT, JCLT) City of Jacksonville Clay County Installations	Use the Community Land Trust model - where a nonprofit owns and leases the land under owner-occupied homes to keep them affordable in perpetuity - to support military-affiliated homeownership.	Existing regional CLTs include the Northeast Florida Community Land Trust (NEFCLT), which focuses on stability through homeownership for veterans, essential workers, and long-time residents, and the Jacksonville Community Land Trust (JCLT), which creates homeownership pathways for families otherwise priced out.	Form a new CLT specifically prioritizing military personnel, or partner with existing CLTs (NEFCLT, JCLT) to expand ownership priority for military personnel, families, and civilian defense workers.	
H-5: Encourage Zoning Reforms to Allow Greater Housing Density	Affordable Housing Growth/Sprawl Encroachment	City of Jacksonville Clay County	Modify zoning codes to promote mixed-use, higher-density, and transit-oriented housing near installations - but outside buffer zones to limit encroachment.	Florida H.B. 1389, effective July 1, 2026, allows local governments to offer density bonus incentives to developers that donate land for affordable housing for military families.	Amend zoning ordinances to permit multi-family and workforce housing; implement density bonuses and incentives (leveraging H.B. 1389); prioritize high-density housing with transit access to installations; and establish military housing overlay zones - all sited outside buffer zones to avoid encroachment.	Florida HB 1389 (2026): https://www.flsenate.gov/Session/Bill/2026/1389



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H-6: Explore Renter/Short-Term Rental Policies	Affordable Housing Rental Market	City of Jacksonville Clay County	Address long-term and short-term rental market pressures that affect the affordability and availability of military housing.	Across the region, rising housing costs and the expansion of short-term rentals are expected to further exacerbate affordability challenges; 34% of Florida households are cost-burdened (16% severely), with Duval among the nine large counties housing most low-income cost-burdened renters.	Implement rent stabilization agreements in designated areas; restrict excessive short-term rental conversions near installations; and create rental assistance programs tailored to military families in competitive rental markets.	Shimberg Center 2025 Rental Market Study: https://shimberg.ufl.edu/publications/2025_rental_market_study.pdf Florida Housing Coalition Home Matters, 2025: https://flhousing.org/wp-content/uploads/2025/09/Home-Matters-Report-2025-V5-DIGITAL.pdf
Wildfire Management						
WF-1: Establish a Northeast Florida Fuels Management Partnership	Wildfire Regional Coordination Conservation	Installations (Camp Blanding, NAS JAX, NOLF Whitehouse) FFS FWC NEFRC SJRWMD) Clay County City of Jacksonville NFLT	Establish a formal regional fuels-management partnership, modeled on the Gulf Coast Plain Ecosystem Partnership and building on the existing Ocala-to-Osceola (O2O) Wildlife Corridor Partnership structure.	No formal coordinated wildfire fuels management effort exists in the region; informal relationships support response and project-specific treatments occur. GCPEP (11 partners, 1M+ acres, 200,000-250,000 acres burned/yr) offers a model to emulate; the O2O Partnership (21 partners, ~1.6M acres, Camp Blanding as a hub, coordinator hosted by NFLT) offers a foundation to build on.	Bring together Camp Blanding, NAS Jacksonville/NOLF Whitehouse, the Florida Forest Service, FWC, SJRWMD, NFLT, NEFRC, and Duval and Clay Counties to identify interjurisdictional treatment opportunities, prioritize shared-risk areas, align programs and resources (including shared staffing), and explore a regional shared-equipment and mutual-aid framework.	GCPEP - Cooperative Conservation, n.d.: https://www.cooperativeconservation.org/viewproject.aspx?id=544 O2O - NFLT, n.d.: https://nflt.org/ocala-to-osceola-wildlife-corridor/
WF-2: Establish a Prescribed Fire Notification and Public Education Program	Wildfire Prescribed Fire Public Perception	NEFRC Clay County City of Jacksonville FFS Installations	Lead a regional prescribed fire education and notification framework to counter smoke-related complaints that suppress the region's primary fuels tool.	Prescribed fire is infrequently used in Duval County; air-quality complaints from residents who mistake smoke for wildfire have led to burns being shut down. Camp Blanding faces the same challenge at installation scale in adjacent Clay County neighborhoods.	Develop a regional prescribed burn notification protocol (defined advance-notice window, shared public-facing smoke forecast tool, coordination with FDEP's Air Resources Management Program, leveraging AlertJax/Alert Clay); and launch a joint community education campaign on prescribed fire's role in forest and watershed health, timed to Duval's August 2026 CWPP outreach round.	FDACS Prescribed Fire Councils of Florida: https://www.fdacs.gov/Forest-Wildfire/Wildland-Fire/Prescribed-Fire/Prescribed-Fire-Councils-of-Florida
WF-3: Embed Installation Operations into the Duval County Community Wildfire Protection Plan (CWPP)	Wildfire Readiness Planning	Clay County City of Jacksonville Installations	Ensure NAS Jacksonville, NOLF Whitehouse, MCSF Blount Island, and NS Mayport operations are reflected in the Duval County CWPP risk assessment.	Duval County recently launched its CWPP process; installation operations are not yet reflected in the county's wildfire risk planning.	Reflect installation operations - flight paths, communications equipment, access, utility services, and critical infrastructure - in the CWPP's risk assessment to minimize disruptions to installation operations.	
WF-4: Develop Prioritized Fuels Treatment Areas through the Duval County CWPP	Wildfire Fuels Treatment Funding Eligibility	City of Jacksonville Installations FFS	Produce a prioritized treatment map through the CWPP identifying specific landscape units for prescribed fire and mechanical thinning.	Community Wildfire Defense Grant (CWDG) implementation requires funded work to be tied to treatment areas identified in an adopted plan, with named implementation leads and preferred treatment methods.	Produce a prioritized treatment map covering installation-adjacent buffer parcels eligible for REPI and Sikes Act-funded acquisition, high-priority WUI neighborhoods identified in the risk assessment, and roadside fuel loads along primary evacuation corridors.	



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Strategy	Issue(s)	Relevant Parties	Description	Current Policies	Policy Change	Notes/Links
WF-5: Integrate Wildfire Risk into Comprehensive Plan Policy	Wildfire Land Use WUI	Clay County City of Jacksonville	Anchor CWPP risk frameworks in adopted comprehensive plan land use policy to give them regulatory force.	A CWPP without a link to adopted land use policy has limited regulatory force. Clay County's Conservation Element commits to prescribed fire on public conservation lands but includes no WUI development standards.	Duval County should integrate wildfire as a named natural hazard in its Comprehensive Plan and Emergency Management All Hazards plan, tying new WUI development approvals to risk tiers; Clay County should update its Conservation Element to restrict new development in high-risk WUI zones.	Clay County Conservation Element: https://www.claycountygov.com/home/showpublisheddocument/9044/638828292966570000
WF-6: Adopt Wildfire-Resilient Construction Standards for New Development in High-Risk Zones	Wildfire WUI Building Standards	Clay County City of Jacksonville	Adopt a WUI overlay district in the development code, modeled on the Colorado Wildfire Resiliency Code, for new construction in mapped high-risk WUI zones.	The Colorado Wildfire Resiliency Code (effective July 1, 2025; statewide adoption required by April 1, 2026) is the first statewide minimum WUI building code, with three fire-intensity tiers and escalating requirements for roof class, ember-resistant venting, tempered glass, and ignition-resistant siding; it applies to new construction and change-of-use.	Require Class A minimum roofing, ember-resistant venting, tempered glass windows, and non-combustible or ignition-resistant siding for new construction in mapped high-risk WUI zones (City of Jacksonville and Clay County planning departments to spearhead). Clay County should also adopt wildfire disclosure requirements for new residential development within a defined buffer of Camp Blanding's training perimeter.	Colorado Wildfire Resiliency Code - Colorado DFPC, 2025: https://dfpc.colorado.gov/colorado-wildfire-resiliency-code
Camp Blanding						
CB-1: Update and Expand Clay County's Camp Blanding Overlay Impact Area	Encroachment Incompatible Use	Clay County Camp Blanding JTC	Comprehensively update Clay County's Camp Blanding Overlay Impact Area in coordination with the installation.	Clay County's comprehensive plan calls for cooperation with Camp Blanding to encourage compatible uses, implemented through the Camp Blanding Overlay Impact Area Map, within which development applications are referred to the installation for review. Current policies rely on dated information (a 2009 noise consultation, a 2009 peak noise memo, and a 2000 base Corridor and Routing System map).	Update the overlay footprint to reflect current and anticipated encroachment risk from the First Coast Expressway growth corridor; add explicit use restrictions tied to the modern DoD encroachment definition (residential density caps, lighting standards, incompatible uses, required disclosure); establish a minimum buffer width standard tied to current Army training noise levels; and require automatic Camp Blanding review and comment for rezonings to higher-intensity uses before Planning Commission action.	Clay County 2040 Comprehensive Plan, FLUE: https://www.claycountygov.com/home/showpublisheddocument/9020/638932761280900000
CB-2: Formally Coordinate Clay County FFCLP with NFLT/REPI Priority Parcel Lists	Encroachment Conservation	Clay County NFLT REPI/DoD Camp Blanding JTC	Align the county's Forests and Farms Conservation Lands Program (FFCLP) with NFLT's REPI/ACUB acquisition pipeline through formal data-sharing and joint prioritization.	FFCLP (established 2024) operates on separate nomination and evaluation tracks from NFLT's REPI/ACUB pipeline. REPI can pursue willing-seller parcels only. Prior acquisitions include a 2022 157-acre Putnam County acquisition funded jointly through REPI, the Florida Defense Support Task Force, and the Clay County Development Authority.	Establish a formal data-sharing and joint prioritization protocol between the Clay County Land Conservation Committee and NFLT; give weighted scoring priority to parcels within/adjacent to the REPI three-mile buffer; coordinate FFCLP timing with REPI funding cycles so county funds serve as match; and annually report combined FFCLP/REPI/ ACUB progress as a standing agenda item for the Clay County-Camp Blanding Joint Planning Table.	Clay County FFCLP: https://www.claycountygov.com/government/planning-and-zoning/forests-and-farms-conservation-lands-program/ffclp-background REPI FL Fact Sheet - U.S. DoD, 2023: https://www.repi.mil/Portals/44/Florida_StateFacts_111623.pdf



Table A-1. Policy Recommendations

Strategy	Issue(s)	Relevant Parties	Description	Current Policies	Policy Change	Notes/Links
CB-3: Establish a Transfer of Development Rights (TDR) Program in the Overlay Impact Area	Encroachment Incompatible Use	Clay County Camp Blanding JTC	Explore a TDR program to shift development away from parcels near the installation, as a direct complement to REPI where fee-simple acquisition or easements are not feasible.	REPI fee and conservation easement acquisitions cannot address every parcel, and there are insufficient public or philanthropic resources to meet all conservation needs.	Establish sending zones (parcels within the Land Use Planning Zone and CARS map overlay where development would conflict with training) and receiving zones (designated growth nodes in Middleburg, the Orange Park corridor, and near First Coast Expressway interchanges with existing or planned utility infrastructure and service capacity), preserving land in low-intensity use without public purchase.	
CB-4: Add Mandatory Disclosure Requirements for Properties in the Overlay Impact Area	Encroachment Incompatible Use Disclosure	Clay County Camp Blanding JTC	Adopt a disclosure ordinance for property transactions and development approvals within the Camp Blanding Overlay Impact Area.	Duval County requires disclosure to prospective owners/lessees within Military and Civilian Influence Zones (Duval FLUE Policy 2.6.14); Clay County has no equivalent requirement.	Require any sale, lease, or development approval within the overlay to include formal notice of proximity to active military training (noise, vibration, airspace), CARS lighting restrictions, use and building-height limitations, and the installation's priority review rights - establishing informed consent without restricting use.	
CB-5: Develop a Smart Growth Strategy for the First Coast Expressway Corridor	Encroachment Growth/Sprawl	Clay County Camp Blanding JTC NEFRC	Proactively plan for First Coast Expressway-driven growth to route density away from the installation.	The First Coast Expressway and the Keystone Heights water line expansion are expected to drive growth near Middleburg and along transportation corridors, pressuring compatible buffer land toward higher-intensity conversion.	Promote growth nodes at expressway interchanges with sufficient water/sewer infrastructure and incentivize compact development; establish conservation subdivision standards (clustering, open-space minimums) within the overlay; and incorporate WUI resilience standards (defensible space, fire-resistant materials, vegetation management) into corridor design.	
NOLF Whitehouse						
NW-1: Consider Updating and Expanding Duval County Zoning	Encroachment Dark Sky/Light Pollution Incompatible Use	City of Jacksonville NAS Jax NOLF Whitehouse	Comprehensively update Duval County zoning near NOLF Whitehouse in coordination with NASJAX.	Current county zoning policies restrict density and uses in coordination with U.S. Navy OPNAV Instruction 11010.36.B relative to county by-right development standards from 2007.	Strengthen zoning restrictions to reflect current and anticipated encroachment risk from the I-10 corridor; add explicit use restrictions tied to the modern DoD encroachment definition (density caps, lighting standards, incompatible uses, required disclosure); and require automatic NASJAX review and comment for rezonings to higher-intensity uses before Planning Commission action.	U.S. Navy Air Installation Compatible Use Zone (AICUZ): https://cnrse.cnmc.navy.mil/Operations-and-Management/Air-Installation-Compatible-Use-Zone-AICUZ/
NW-2: Continue Advancing Sentinel Landscape Designation and Building a Coordinated Priority Parcel Pipeline	Encroachment Conservation Dark Sky	Installations State of Florida City of Jacksonville NFLT Sentinel Landscape Program	Advance a Sentinel Landscape designation for the NOLF Whitehouse buffer and build a coordinated priority parcel pipeline.	Efforts to advance a Sentinel Landscape designation for the NOLF Whitehouse buffer are underway; the 2022 Encroachment Protection Agreement among Jacksonville, DoD, and NFLT and the City's dark-sky lighting requirements aim to limit encroachment.	Increase support for a formal Sentinel Landscape designation; use O2O Wildlife Corridor mapping to justify a REPI Sentinel Landscape designation; coordinate local, state, nonprofit, and federal resources so local/state funds can match REPI; prioritize parcels that protect dark-sky conditions, prevent incompatible residential growth, preserve operational flexibility, and maintain ecological corridor value; and report annually on progress.	NFLT-Navy-Jacksonville agreement, 2022: https://nflt.org/2022/04/28/north-florida-land-trust-the-u-s-navy-and-the-city-of-jacksonville-to-work-together-for-conservation/ O2O - NFLT: https://nflt.org/ocala-to-osceola-wildlife-corridor/



Table A-1. Policy Recommendations

Strategy	Issue(s)	Relevant Parties	Description	Current Policies	Policy Change	Notes/Links
NW-3: Establish a Transfer of Development Rights (TDR) Program for the NOLF Whitehouse Buffer Area	Encroachment Dark Sky Incompatible Use	City of Jacksonville NAS Jax NOLF Whitehouse	Explore a TDR program tied to the NOLF Whitehouse buffer area as a direct complement to REPI.	For parcels where fee-simple acquisition or easements are not feasible, TDR preserves land in low-intensity use without public purchase.	Establish sending zones (parcels within the Military Influence Zone, Lighting Regulation Zone, APZs, high-noise areas, airport height/hazard areas, and O2O/REPI-priority buffer lands where development would conflict with operations) and receiving zones (designated I-10 corridor growth nodes with existing or planned infrastructure and service capacity where added density would not increase encroachment risk).	City of Jacksonville Ordinance Code Ch. 656, Part 10 (airport/adjacent lands): https://library.municode.com/fl/jacksonville/codes/code_of_ordinances?nodeId=TITXVIII_AUS_CH656_ZOCO_PT10REREAAILAADTH
NW-4: Strengthen NOLF Whitehouse-Specific Disclosure Requirements	Encroachment Dark Sky Disclosure	City of Jacksonville NAS Jax NOLF Whitehouse	Strengthen existing Duval County disclosure requirements for transactions and approvals within the broader NOLF Whitehouse buffer area.	Duval County has existing disclosure requirements (within Military and Civilian Influence Zones), but they do not fully capture NOLF Whitehouse-specific operational impacts, including nighttime aviation operations and dark-sky needs.	Require any sale, lease, rezoning, subdivision, or development approval within the buffer to include formal notice of proximity to NASJAX/NOLF Whitehouse aviation operations (including nighttime operations), dark-sky requirements and lighting restrictions, and noise, overflight, and safety considerations - establishing informed consent without restricting use.	
NW-5: Develop a Smart Growth Strategy for the I-10 Corridor to Direct Growth Away from NOLF Whitehouse	Encroachment Growth/Sprawl Dark Sky	City of Jacksonville NAS Jax NOLF Whitehouse NEFRC	Proactively plan for I-10 corridor growth to route density away from the installation rather than reacting parcel by parcel.	Jacksonville's expansion along US 90, I-10, and Chaffee Road promotes development of lands that currently help preserve the low-light, low-intensity conditions NOLF Whitehouse operations require.	Promote growth nodes along I-10 with sufficient water/sewer capacity and incentivize compact development; establish conservation subdivision or clustering standards where development is permitted; apply enhanced lighting standards to prevent cumulative light pollution that could degrade FCLP operations; and coordinate housing, transportation, and utility planning to avoid long-term infrastructure dependencies in areas where operational flexibility and dark-sky conditions must be preserved.	
Timucuan Preserve						
TP-1: Duval County Comp Plan Amendment - Marsh Migration Overlay	Conservation Coastal Hazards Sea Level Rise	City of Jacksonville NS Mayport NPS	Amend the Duval County Comprehensive Plan Conservation/Coastal Management Element (CCME) to establish a Marsh Migration Overlay Zone within and immediately adjacent to the Timucuan Preserve boundary.	The City's 2045 Comprehensive Plan CCME contains policies to protect wetlands and limit St. Johns River land use impacts, plus tools like a Conservation Zoning District and clustered development provisions; but the marsh buffer's most important lands may be upland transition areas that are not marsh today. CCME Policy 13.5.2 requires a five-year AAA review.	Establish an overlay that restricts new impervious surface and hardened shoreline structures within identified inland migration corridors (defined by the future anticipated marsh footprint); adopt a transfer of residential density program allowing clustering while requiring perpetual conservation easements on undeveloped land; and reference sea level rise projections and the USGS Nassau-Duval wetland migration analysis (Enwright et al., 2024) as the technical basis, updated on a five-year cycle aligned with CCME Policy 13.5.2.	Enwright et al., 2024 (USGS wetland migration analysis): https://doi.org/10.5066/P9K56TBC City of Jacksonville 2045 CCME, 2025: https://www.jacksonville.gov/departments/planning-department/community-planning-division/comprehensive-plan-elements



Table A-1. Policy Recommendations

Strategy	Issue(s)	Relevant Parties	Description	Current Policies	Policy Change	Notes/Links
TP-2: Formalize an MOU among NS Mayport, NPS, the City of Jacksonville, and NEFRC for Marsh Buffer Coordination	Conservation Regional Coordination Coastal Hazards	City of Jacksonville NS Mayport NPS NEFRC USACE FDEP Regional (NEFRC) (USACE, FDEP)	Execute a coordination MOU committing NS Mayport, NPS, the City of Jacksonville, and NEFRC to sustained joint management of the Timucuan Preserve marsh buffer, carried out by a standing working group.	Expanding the marsh buffer involves multiple jurisdictions and agencies (NS Mayport, NPS, City of Jacksonville/Duval County, USACE, FDEP) with different interests and authorities; without a durable coordination structure, projects may proceed on different timelines, compete for funding, or fail to support a shared marsh-buffer strategy.	Commit parties to shared data protocols (shoreline change, sediment budgets, marsh elevation surveys), coordinated capital improvement and grant application schedules, and adaptive management with measurable monitoring triggers (e.g., shoreline retreat beyond a set rate escalates to thin-layer placement; marsh elevation below threshold triggers sediment enhancement; vegetation health below a value triggers an expanded migration study). NEFRC serves as convener; core members are NPS, NS Mayport, and the City of Jacksonville, with USACE and/or FDEP as additional parties.	
TP-3: Establish a Partner-Led Landowner Education and Outreach Program for Marsh Migration and Buffer Protection	Conservation Landowner Engagement Sea Level Rise	NEFRC City of Jacksonville NFLT, SASME	Jointly establish a landowner education and outreach program focused on marsh migration, upland transition-zone protection, and voluntary participation in the Timucuan Preserve marsh buffer strategy.	Landowners - particularly those not immediately adjacent to the coastline - may not understand how sea level rise will affect the Timucuan marsh system, what upland transition zones are, or what voluntary options exist; introducing conservation only through regulation risks losing trust-building opportunities. The Nature Conservancy/Thowe Environmental Resilient Protection Frameworks (2023) offer a planning, financing, and incentive model built around Coastal Resilience Easements and Coastal Resilience Management Plans.	Build a coordinated outreach partnership leveraging each entity's strengths (County/City connect to planning, permitting, parks, and resilience; NEFRC supports regional coordination and technical translation; NFLT and other NGOs build landowner trust and support parcel-level easements, stewardship, and acquisition); develop plain-language materials and maps of future migration areas, host voluntary-options workshops, and conduct outreach to real estate professionals, developers, HOAs, and large landowners.	



Appendix B. Metrics Scorecard



Evaluation Metrics Scorecard

Mission Criticality - 40 possible points	Exceptional	Well	Meets Minimum	No Impact
Installation system redundancy & robustness to support readiness <i>The strategy adds system redundancy and capabilities to support mission readiness.</i>	30	20	10	0
	Direct benefit to primary mission	Indirect benefit to primary mission and/or direct impact to secondary mission	Indirect benefit on secondary mission or mission supportive	
Connectivity and Access	10	5	2	0
The strategy enhances connectivity and compatibility between installations and surrounding communities, provides additional capacity of transportation routes and improves mobility.	res. strategy improves access to and through the installation, multiplies the transportation routes with alternative methods, and fully connects point-to-point mobility.	Yes. Strategy improves access to and through the installation, and enhances the transportation routes with an alternative method.	Yes. Strategy improves access to and through the installation and improves connectivity between the installation and surrounding communities.	No. Strategy does not address installation or community connectivity or access.
Implementation Feasibility - 30 possible points	Exceptional	Good	Meets Minimum	No Impact
Aligns With Regional Resilience Policies & Priorities	6	3	1	0
The strategy aligns with or advances relevant and applicable local, state, or federal policies and priorities. The strategy benefits long-term planning efforts and supports regional resilience.	res. strategy works toward meeting relevant and applicable state, or federal policies, and priorities outlined in military installation reports and development codes, and/or ordinances. It directly enables multiple Actions of the RRAP.	res. strategy works toward meeting relevant and applicable state, or federal policies, and priorities outlined in military installation reports and development codes, and/or ordinances. It directly enables an Action of the RRAP.	res. strategy works toward meeting relevant and applicable state, or federal policies, and priorities outlined in military installation reports and development codes, and/or ordinances. It aligns with the goals of the RRAP.	No. Strategy does not directly address relevant and applicable local, state, or federal policies and priorities or strategy's alignment with existing policies and priorities is unknown.
Adaptability (Incremental Adaptation)	6	3	1	0
The strategy can adapt over time for changing conditions.	Strategy incorporates adaptation over time for anticipated future climate conditions.	Strategy can easily be adapted over time with minimal realignment.	with reconstruction, strategy can adapt over time, or strategy will need future adaptation	Strategy's adaptive capacity is unknown.
Project Execution Complexity	6	3	1	0
Number of agencies required to execute strategy, Authority to complete strategy, Technical complexity, Governance capacity, Legal feasibility, Design/construction acceleration by elevating existing projects.	execution has already begun on an existing project and authoritative and public entities already support. The required technology to implement the strategy currently exists. Ownership has authority and capacity to take finish execution.	Strategy is straightforward to begin execution. The required technology to implement the strategy currently exists. Entity has authority and capacity to take ownership. Policies and ordinances currently exist to support the strategy.	Strategy is doable, with anticipated hurdles. Requires a large number of permits, public engagement, new partnerships, etc.	Complexity is not clear.
Financial Feasibility: Funding	6	3	1	0
1. Relevant funding programs are accessible (state resilience grants, DCIP, MIRR, etc.) 2. Up-front costs are attainable	Funding/financing is secured/budgeted. Up-front costs are known and attainable.	Relevant funding/financing programs have been identified and project costs can be attained.	Relevant funding programs have not been identified or project costs can be attained.	Relevant funding programs have not been identified and/ or project costs are unknown.
Financial Feasibility: Cost Benefit and Avoided Loss	6	3	1	0
1. Long-term project costs are attainable and representative of benefits provided 3. Avoided loss is captured	strategy robustly prevents substantial financial losses by eliminating risks associated with climate hazards; delivers comprehensive actions for critical assets, operations, and infrastructure. Long-term maintenance costs are manageable.	Strategy reduces the likelihood of financial losses from climate hazards by mitigating moderate risks to property, infrastructure, and operations. Long-term maintenance costs are manageable.	Strategy may avoid future financial losses such as from property and infrastructure damage or economic loss from disruptions in operations. Long-term maintenance costs are anticipated to be high.	Strategy does not impact anticipated future losses from climate hazards, or strategy's impact on anticipated economic damages from climate hazards is unknown.
Supports a Thriving Regional Economy, Vibrant Quality of Life, and Healthy Natural Environment - 30 possible points	Exceptional	Good	Meets Minimum	No Impact
Development of Durable and Adaptive Built Environment	5	3	1	0
1. Minimize magnitude and cost of damage to infrastructure 2. Improve development practices and policies 3. Decrease utility service disruptions and recovery time 4. Improve transportation and mobility	Optimizes the durability and adaptability of development using locally-accepted and sourced practices and materials, while infusing additional innovative models for implementation pathways. Improvements in the natural environment to positively benefit the built environment are incorporated.	Encourages the durability and adaptability of development using locally-accepted and sourced practices and materials and is eligible for existing implementation pathways.	Contributes to development management by elevating an existing unfunded development project	Business as usual
Supports Regional Economic Resilience	5	3	1	0
1. Improves access to education and employment opportunities 2. Increases housing stability 3. Enhances tourism and historic preservation 4. Increases smart growth and development	positively benefits two or more areas of economic resilience	positively benefits two or three areas of economic resilience	positively benefits one area of economic resilience	does not affect economic resilience
Increases or Improves Quality of Life	5	3	1	0
1. Improves public health and wellness 2. Enhances supply of food, and access to critical resources and/or essential services 3. Increases public participation and engagement 4. Minimizes disparity	strategy goes above and beyond to safeguard community assets.	strategy encourages growth and access to community assets.	strategy effectively safeguards community assets such as housing, job centers, public facilities, parks, etc.	strategy does not affect community assets or strategy's impact on community assets is unknown.
Life Safety	5	0	0	0
The strategy avoids/ reduces loss of life and/or injury.	Yes. Strategy increases life safety and/or enhances public health.			No. Strategy does not influence life safety and/or public health or strategy's impact on public health and safety is unknown.
Aligns with Goals for a Healthy Natural Environment	5	3	1	0
1. Reduces heat stress 2. Increases biodiversity and ecological services 3. Maximizes quality of soil, air, and water 4. Minimizes erosion, flooding, and storm impacts	strategy goes above and beyond to create habitat and biodiversity outside of strategy scope.	strategy goes above and beyond to create habitat and biodiversity.	Strategy creates habitat and biodiversity.	strategy maintains / has no impact on habitat and biodiversity or strategy's impact on habitat and biodiversity is unknown.
Reduction or Mitigation of Multiple Shocks and Stresses	5	3	1	0
The strategy addresses multiple shocks and stresses.	strategy addresses 3 or more shocks and stresses.	strategy addresses 2 shocks and stresses.	strategy addresses 1 shock or stress.	
Extra Credit				
Is there a negative or unintended consequence? Y/N	✓ No. Strategy has considered potential consequences to infrastructure, environment, community, and the economy, and no consequences have been identified.		Yes.	
Is there incorporation of modernization and innovation in the infrastructure and technology components of the strategy? Y/N	✓ Yes. Strategy utilizes forward-thinking best practices, modernization techniques, or innovative thought leadership for the benefit of long-term resilience and readiness.		No.	

Appendix C. Adaptation Projects



Table C-1. Adaptation Projects

Installation	Project Package Name	Adaptable Built Infrastructure Projects within Package	Asset(s) Protected
Camp Blanding JTC	Adaptation for Land Management at Camp Blanding	Strategic Project CB 1.1. Smart Growth and Compatible Land Use Strategy for Camp Blanding JTC and the O2O Corridor Strategic Project CB 1.2. Northeast Florida Center for Natural Lands: Native Plant Nursery, Education, and Community Resource Hub Strategic Project CB 1.3. Conservation Buffer and Corridor Protection Strategy for Camp Blanding JTC	Parcels immediately surrounding the installation
Camp Blanding JTC	Adaptation for Mobility Corridor State Road 16	Strategic Project CB 2.1. Corridor Drainage and Climate Resilience Study Strategic Project CB 2.2. SR 16 Climate-resilient Drainage and Roadway Improvements Implementation Strategic Project CB 2.3. Improve Navigation with Wayfinding	SR-16
Camp Blanding JTC	Improving Electric Utility System Resilience	Strategic Project CB 3.1. Interagency Utility Coordination Advancement Strategic Project CB 3.2. Improved Resilience Through Redundant Supply Strategic Project CB 3.3. Wildfire Risk Mitigation for Electric System Assets	FPL Substation, Kingsley Lake Substation
Camp Blanding JTC	Improving Stormwater Utility System Resilience	Strategic Project CB 4.1. Establish Partnership for Developing and Implementing the Camp Blanding Rural Water Resilience Implementation Plan (RWRIP): A Rural Pilot of One Water Approach to Resilient Systems Management Strategic Project CB 4.2. Camp Blanding Rural Water Resilience Implementation Plan (RWRIP)	Stormwater Systems
Camp Blanding JTC	Improving Wastewater Utility System Resilience	Strategic Project CB 5.1. Wastewater System Resilience and Force Main Feasibility Study for Camp Blanding	Wastewater system
MCSF Blount Island	Freight Transportation Resilience (Dave Rawls Blvd and Railroad)	Strategic Project BI 1.1 Elevate and Fund Planned SIS Projects Strategic Project BI 1.2 Partnership for Training, Logistics Backup Planning, and Emergency Response Strategic Project BI 1.3. Implement Shoreline Stabilization Projects	Railway, Railroad Bridge, Dave Rawls Blvd



Table C-1. Adaptation Projects

Installation	Project Package Name	Adaptable Built Infrastructure Projects within Package	Asset(s) Protected
MCSF Blount Island	Improving Communications Delivery	Strategic Project BI 2.1. Blount Island Redundant Fiber Connectivity Installation Strategic Project BI 2.2. MCSF Blount Island Supplemental Fiber Redundancy via JAXPORT Lease	Fiber line, communication systems
MCSF Blount Island	Improving Potable Water Utility System Resilience	Strategic Project BI 3.1. Interagency Utility Coordination Advancement Strategic Project BI 3.2: Potable Water System Resilience and Redundancy Feasibility Study	Water line, potable water supply
MCSF Blount Island	Improving Electric Utility System Resilience	Strategic Project BI 4.1. Interagency Utility Coordination Advancement Strategic Project BI 4.2. Substation Hardening and Flood Resilience Enhancement Strategic Project BI 4.3. Island-Wide Energy Contingency Planning and Emergency Preparedness	Northside Generating Station Substation, MCSF Blount Island Substation
MCSF Blount Island	Adaptation for Mobility Corridor Heckscher Drive	Strategic Project BI 5.1. Heckscher Drive Multimodal Access, Trail Connectivity, and Pedestrian Resilience Improvements Strategic Project BI 5.2. Heckscher Drive Flood and Erosion Mitigation, Hydrologic Connectivity, and Marsh Resilience Improvements	Heckscher Drive
NAS Jacksonville	Adaptation for Mobility Corridor Roosevelt Boulevard	Strategic Project NSJ 1.1. Alternative Transportation, Land Use, and Heat-Resilient Corridor Development Strategic Project NSJ 1.2. Improve Current Vehicular Infrastructure Strategic Project NSJ 1.3. Modernize Operational Technologies for Demand and Emergency Responsiveness to Create a Safe, Smart Corridor	Roosevelt Blvd
NAS Jacksonville	Improving Electric Utility System Resilience	Strategic Project NSJ 2.1. Interagency Utility Coordination Advancement Strategic Project NSJ 2.2. Conduct Microgrid Feasibility Study Strategic Project NSJ 2.3. Construct Off-Base Substation	NAS Jacksonville Substation
NAS Jacksonville	Adaptation for Mobility Corridor Timuquana Road	Strategic Project NSJ 3.1. Timuquana Road Flood Resilience and Adaptive Infrastructure	Timuquana Road
NAS Jacksonville	Improving Wastewater Utility System Resilience	Strategic Project NJ 4.1. Wastewater System Resilience Feasibility Study for NAS Jacksonville	Wastewater system

