

Florida Air Force Pilot Project:

Developing the *Florida Strategic Plan for Sustaining Military Readiness through Conservation Partnerships*



Partners in Plan Development

- Core Team includes:
 - Air Force
 - University of Florida
 - U.S. Fish and Wildlife Service
 - Florida Fish and Wildlife Conservation Commission
 - Florida Natural Areas Inventory
 - The Nature Conservancy
 - National Wildlife Refuge Association
 - PFLCC

Prepared in Partnership with:



Background

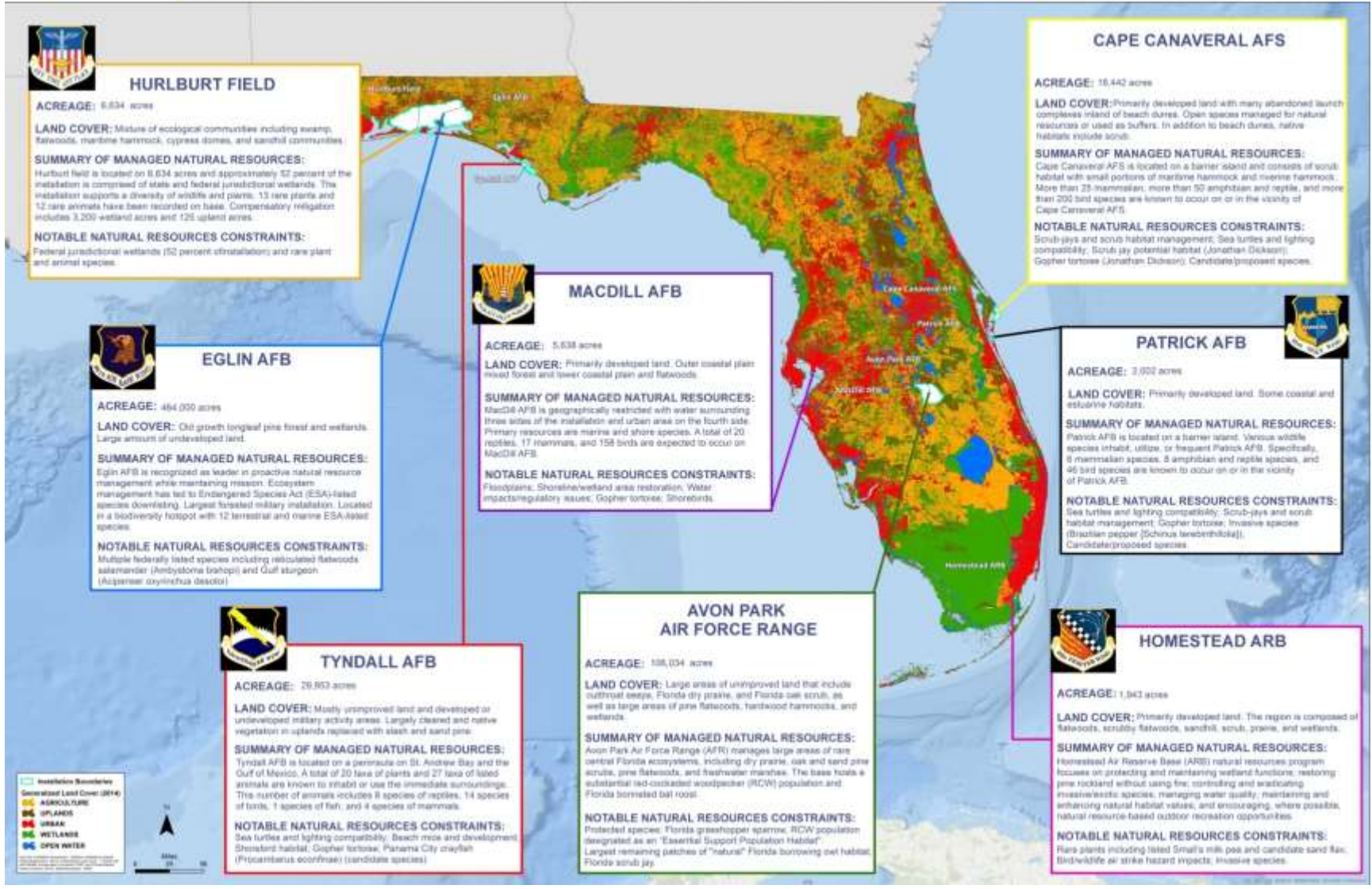
- Problem:
 - Air Force installations must effectively balance managing natural resources with meeting their military missions.
 - Challenges come from external and internal encroachment pressures, increased regulatory requirements, and climate change.
- Response:
 - Examine all resources and challenges at the landscape level to find workable solutions at the installation level.

Goals

- *Overall goal:* To establish a regional approach to natural resources management that minimizes multiple encroachment threats and alleviates on-installation constraints to provide a landscape to support military mission.



FLORIDA STRATEGIC PLAN *for Sustaining Military Readiness through Conservation Partnerships*



HURLBURT FIELD

ACREAGE: 6,634 acres

LAND COVER: Mixture of ecological communities including swamp, flatwoods, maritime hammock, cypress domes, and sandhill communities.

SUMMARY OF MANAGED NATURAL RESOURCES:
Hurlburt field is located on 6,634 acres and approximately 57 percent of the installation is comprised of state and federal jurisdictional wetlands. The installation supports a diversity of wildlife and plants. 13 rare plants and 12 rare animals have been recorded on base. Compensatory mitigation includes 3,200 wetland acres and 126 upland acres.

NOTABLE NATURAL RESOURCES CONSTRAINTS:
Federal jurisdictional wetlands (52 percent of installation) and rare plant and animal species.

CAPE CANAVERAL AFS

ACREAGE: 16,442 acres

LAND COVER: Primarily developed land with many abandoned launch complexes island of beach dunes. Open spaces managed for natural resources or used as buffers. In addition to beach dunes, native habitats include scrub.

SUMMARY OF MANAGED NATURAL RESOURCES:
Cape Canaveral AFS is located on a barrier island and consists of scrub habitat with small portions of maritime hammock and riverine hammock. More than 25 mammalian, more than 90 amphibian and reptile, and more than 200 bird species are known to occur on or in the vicinity of Cape Canaveral AFS.

NOTABLE NATURAL RESOURCES CONSTRAINTS:
Scrub-jays and scrub habitat management; Sea turtles and lighting compatibility; Scrub-jay potential habitat (Jonathan Dickson); Gopher tortoise (Jonathan Dickson); Candidate/proposed species.



MACDILL AFB

ACREAGE: 5,638 acres

LAND COVER: Primarily developed land. Outer coastal plain mixed forest and lower coastal plain and flatwoods.

SUMMARY OF MANAGED NATURAL RESOURCES:
MacDill AFB is geographically restricted with water surrounding three sides of the installation and urban area on the fourth side. Primary resources are marine and shore species. A total of 20 reptiles, 17 mammals, and 158 birds are expected to occur on MacDill AFB.

NOTABLE NATURAL RESOURCES CONSTRAINTS:
Flats/plains; Shoreline/wetland area restoration; Water impacts/regulatory issues; Gopher tortoise; Shorebirds.



EGLIN AFB

ACREAGE: 484,000 acres

LAND COVER: Old growth longleaf pine forest and wetlands. Large amount of undeveloped land.

SUMMARY OF MANAGED NATURAL RESOURCES:
Eglin AFB is recognized as leader in proactive natural resource management while maintaining mission. Ecosystem management has led to Endangered Species Act (ESA)-listed species downlisting. Largest forested military installation. Located in a biodiversity hotspot with 12 terrestrial and marine ESA-listed species.

NOTABLE NATURAL RESOURCES CONSTRAINTS:
Multiple federally listed species including relictulated flatwoods salamander (*Ambystoma talpoian*) and Gulf sturgeon (*Acipenser oxyrinchus desotoi*)



PATRICK AFB

ACREAGE: 2,902 acres

LAND COVER: Primarily developed land. Some coastal and estuarine habitats.

SUMMARY OF MANAGED NATURAL RESOURCES:
Patrick AFB is located on a barrier island. Various wildlife species inhabit, utilize, or frequent Patrick AFB. Specifically, 8 mammalian species, 2 amphibian and reptile species, and 46 bird species are known to occur on or in the vicinity of Patrick AFB.

NOTABLE NATURAL RESOURCES CONSTRAINTS:
Sea turtles and lighting compatibility; Scrub-jays and scrub habitat management; Gopher tortoise; Invasive species (Brazilian pepper [*Schinus molle*]); Candidate/proposed species.



TYNDALL AFB

ACREAGE: 26,867 acres

LAND COVER: Mostly unimproved land and developed or undeveloped military activity areas. Largely cleared and native vegetation in uplands replaced with slash and sand pine.

SUMMARY OF MANAGED NATURAL RESOURCES:
Tyndall AFB is located on a peninsula on St. Andrew Bay and the Gulf of Mexico. A total of 20 taxa of plants and 27 taxa of listed animals are known to inhabit or use the immediate surroundings. The number of animals includes 8 species of reptiles, 14 species of birds, 1 species of fish, and 4 species of mammals.

NOTABLE NATURAL RESOURCES CONSTRAINTS:
Sea turtles and lighting compatibility; Beach mice and development; Shorebird habitat; Gopher tortoise; Panama City crayfish (*Procambarus oregonus*) (candidate species).

AVON PARK AIR FORCE RANGE

ACREAGE: 188,034 acres

LAND COVER: Large areas of unimproved land that include oakthroat sways, Florida dry prairie, and Florida oak scrub, as well as large areas of pine flatwoods, hardwood hammocks, and wetlands.

SUMMARY OF MANAGED NATURAL RESOURCES:
Avon Park Air Force Range (AFR) manages large areas of rare central Florida ecosystems, including dry prairie, oak and sand pine scrubs, pine flatwoods, and freshwater marshes. The base hosts a substantial red-cockaded woodpecker (RCW) population and Florida borated bat roost.

NOTABLE NATURAL RESOURCES CONSTRAINTS:
Protected species: Florida grasshopper sparrow, RCW population designated as an "Essential Support Population Habitat"; Largest remaining patches of "natural" Florida borrowing owl habitat; Florida scrub-jay.



HOMESTEAD ARB

ACREAGE: 1,943 acres

LAND COVER: Primarily developed land. The region is composed of flatwoods, scrubby flatwoods, sandhill, scrub, prairie, and wetlands.

SUMMARY OF MANAGED NATURAL RESOURCES:
Homestead Air Reserve Base (ARB) natural resources program focuses on protecting and maintaining wetland functions; restoring pine rockland without using fire; controlling and eradicating invasive/exotic species; managing water quality; maintaining and enhancing natural habitat values; and encouraging, where possible, natural resource-based outdoor recreation opportunities.

NOTABLE NATURAL RESOURCES CONSTRAINTS:
Rare plants including listed Small's milk-pee and candidate sand flag; Bird/wildlife air strike hazard insects; Invasive species.

Installation Sectors

Generalized Land Cover (GLC)

- AGRICULTURE
- UPLANDS
- URBAN
- WETLANDS
- OPEN WATER



Plan Content

- Background
 - Identifying a Need
 - The Purpose of the Plan
 - The Role of the Landscape Conservation Cooperative
 - The Role of Geospatial Planning
 - Integration with Other Planning Efforts
 - The Air Force in Florida (Lands, Mission, Organization)
- Mutual Constraints and the Impacts of Encroachment
 - What is a Constraint?
 - Effects of Encroachment, Habitat Loss, and Climate Change
 - Focal Species
- Finding Solutions
 - Collaborative Efforts and Partnerships
 - Pooling Resources
 - Conservation and Wetland Mitigation Banking
 - Recent Air Force Successes
- Air Force Landscape-Level Conservation Priorities
- Strategic Opportunities Across Florida



Strategic Focus Areas

- Under each focus area, the Plan identifies Strategies with groups of Objectives/Actions to help achieve the Plan goals
- Objectives/Actions may be implemented by Air Force and/or partner staff



Strengthening Partnerships



Buffering Programs



Incentive Programs



Regulatory Processes

Technical Analysis: Focal Species

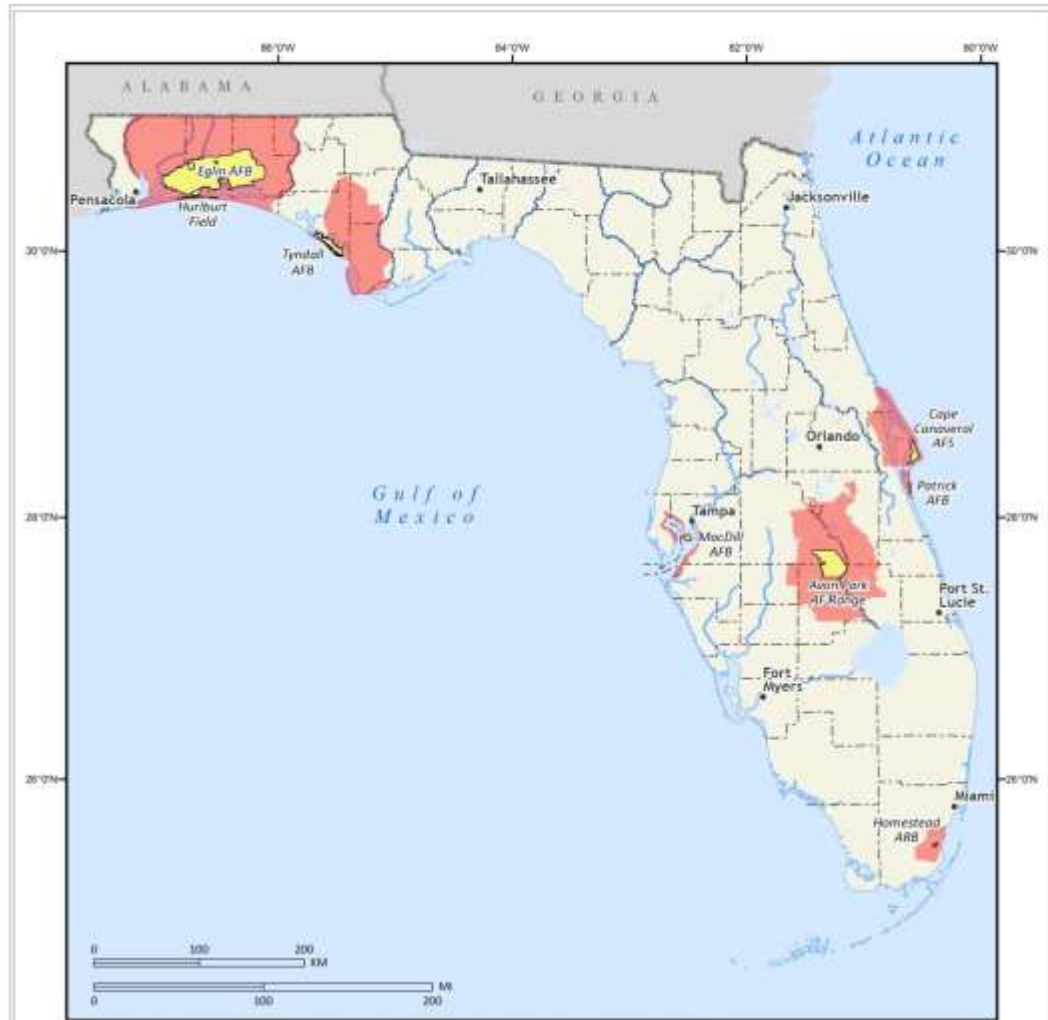
- AF priority species based on June 2015 meetings and a list of T/E species maintained by the AF for Florida installations.
- Assessment by FNAI to add other potentially relevant federally listed, candidate, petitioned, or other tracked species for each AF installation
- Potential focal species lists currently being reviewed by AF personnel.



Draft Study Area Selection Process





- Not standardized, each base is unique
- Factors considered so far include:
 - Potential focal species habitat
 - Important wildlife corridors/intact landscapes
 - Natural community/management priorities for specific bases
 - Watersheds
- Factors not included yet: Potential mission priorities
- Draft study areas currently being reviewed by AF personnel.

Draft Study Areas for all Air Force Installations



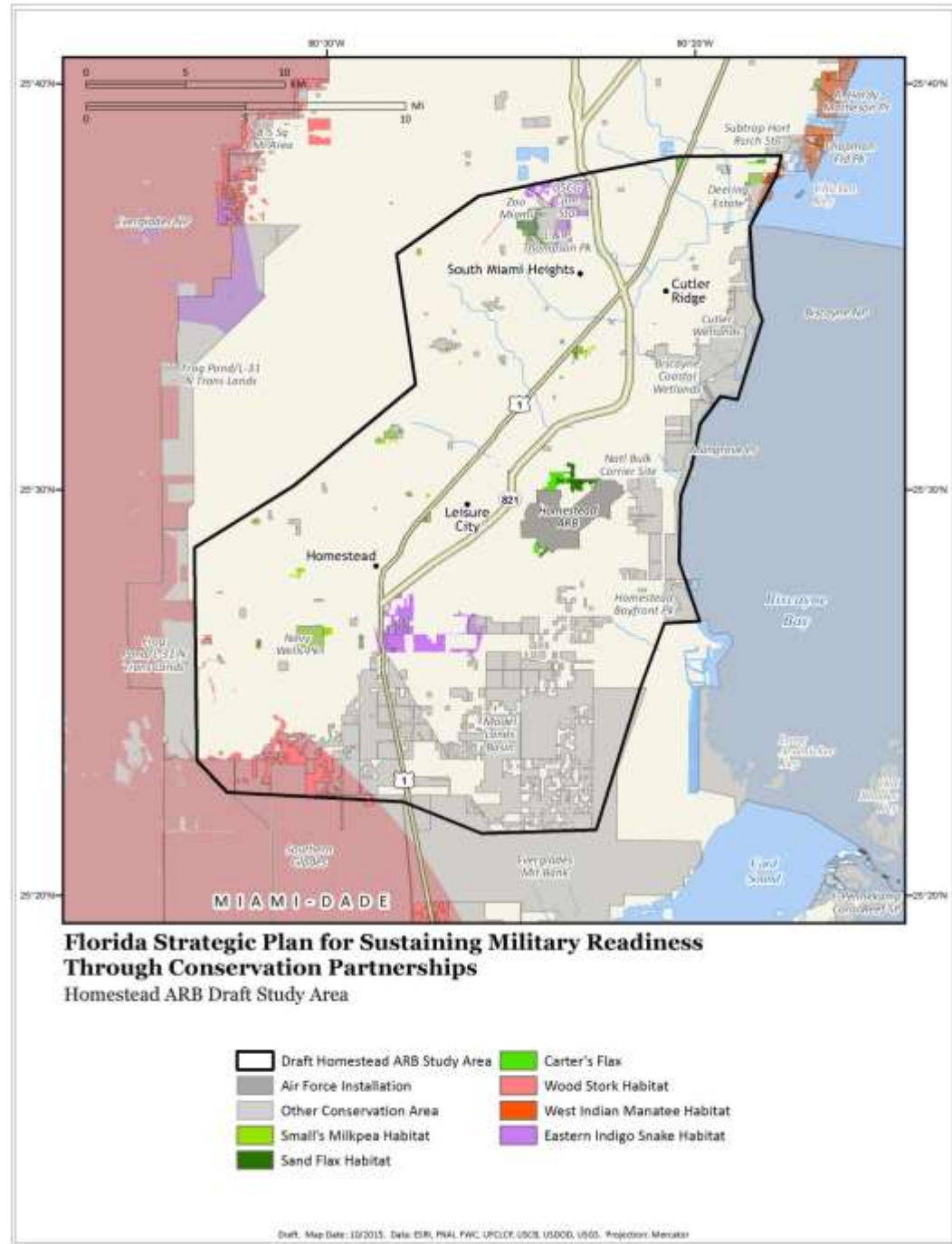
Florida Strategic Plan for Sustaining Military Readiness Through Conservation Partnerships

Focal Installations and Draft Study Areas

-  Focal Air Force Installation
-  Draft Study Area
-  Open Water
-  County Boundary

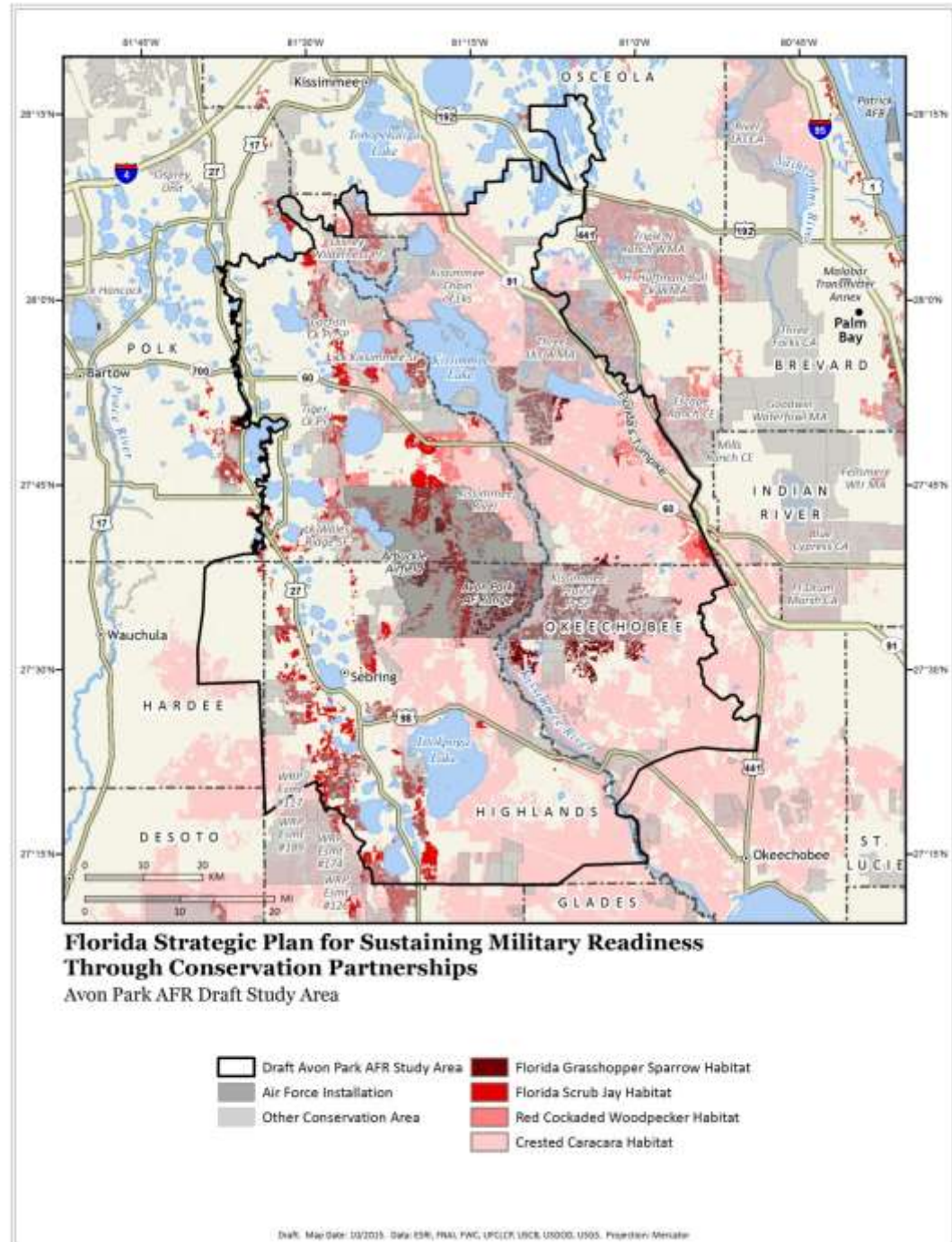
Draft Study Areas: *Homestead ARB*

- Potential habitat for relevant listed plant species on both protected and unprotected lands near the base
- Potential relevance to helping to protect and restore critical wetlands south of the base



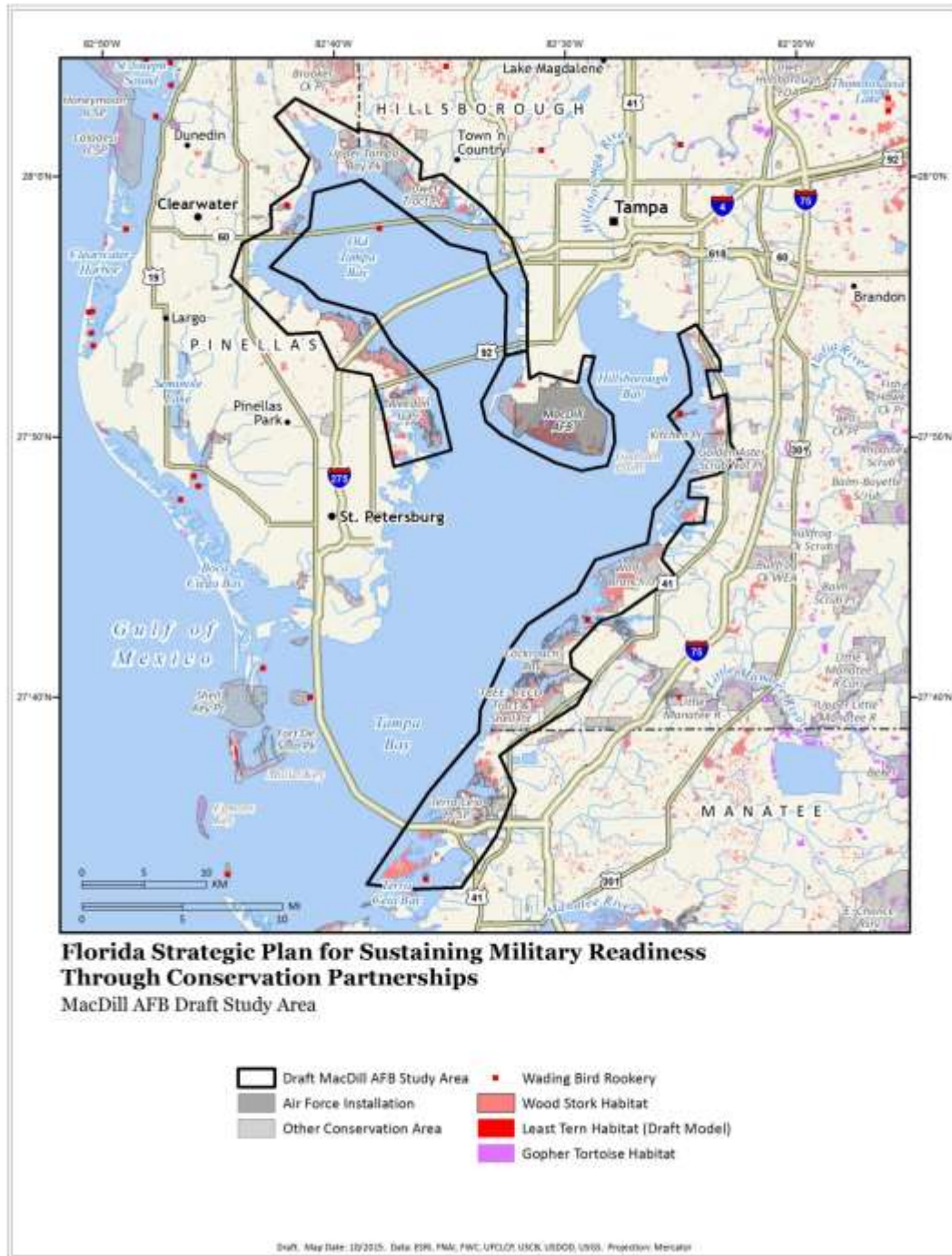
Draft Study Areas: *Avon Park AFR*

- Considered priority focal species habitat (Florida grasshopper sparrow, Florida scrub-jay, and red-cockaded woodpecker)
- EHNWR boundary
- Linkages within the Florida Ecological Greenways Network



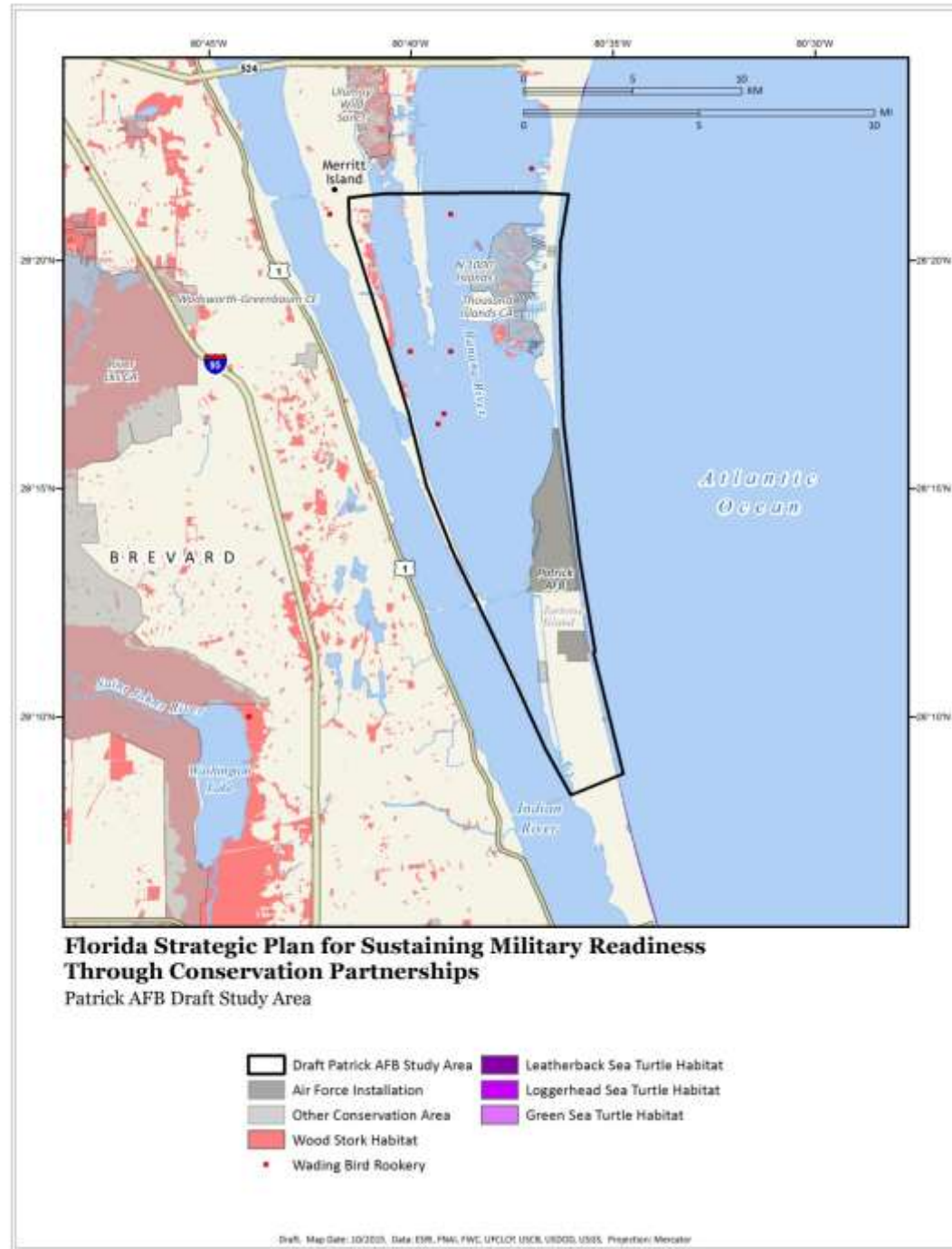
Draft Study Areas: *MacDill AFB*

- Based on wetland and seagrass related conservation/ mitigation opportunities along the shoreline of Tampa Bay
- Some consideration of wading bird colony locations and potential gopher tortoise habitat.



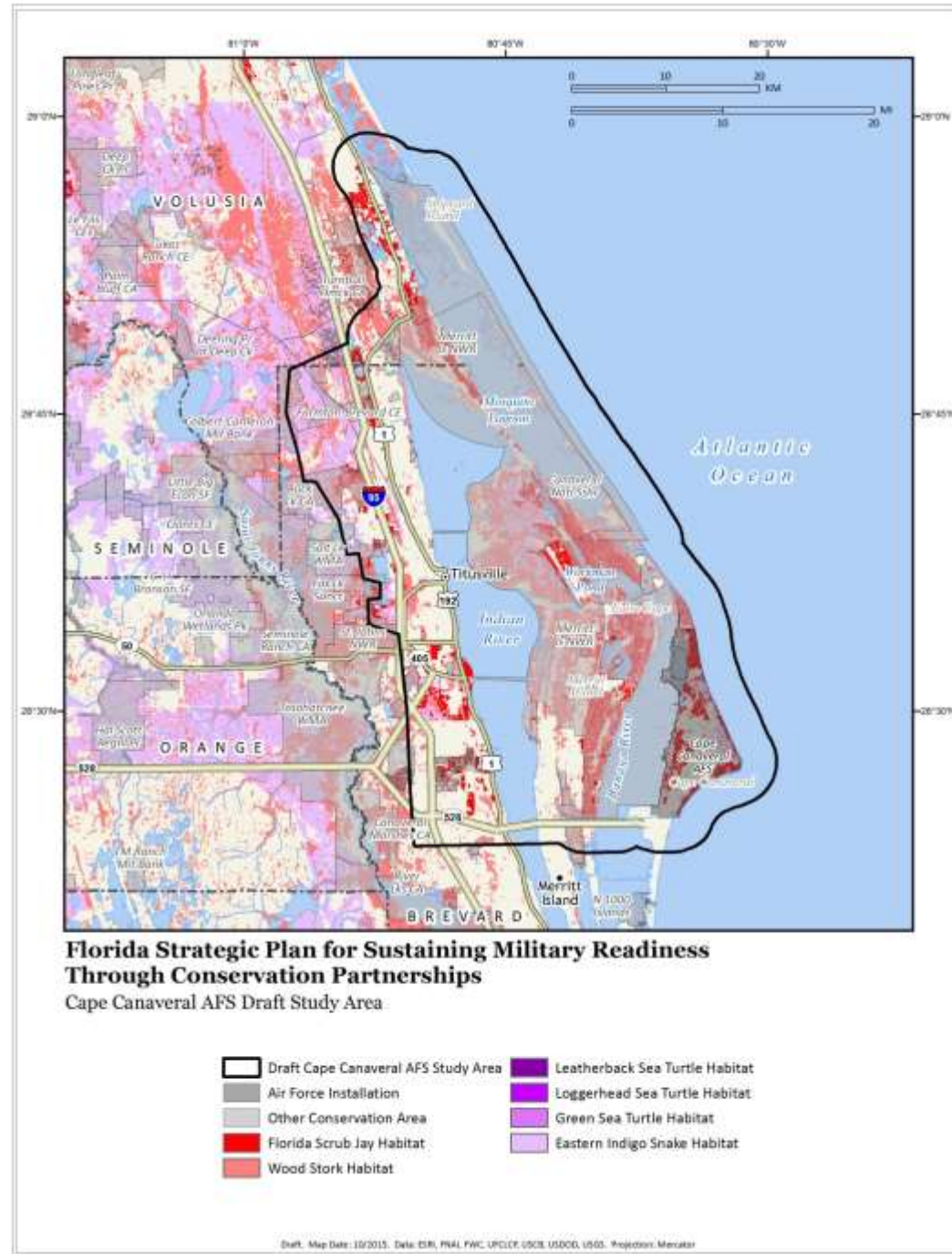
Draft Study Areas: *Patrick AFB*

- Sea turtle nesting habitat, wood stork habitat to indicate wetland conservation/management opportunities, seagrass areas, and wading bird colonies.
- The concept was to include much of the southern half of the Banana River ecosystem while also incorporating the sea turtle nesting beaches north and south of the base.



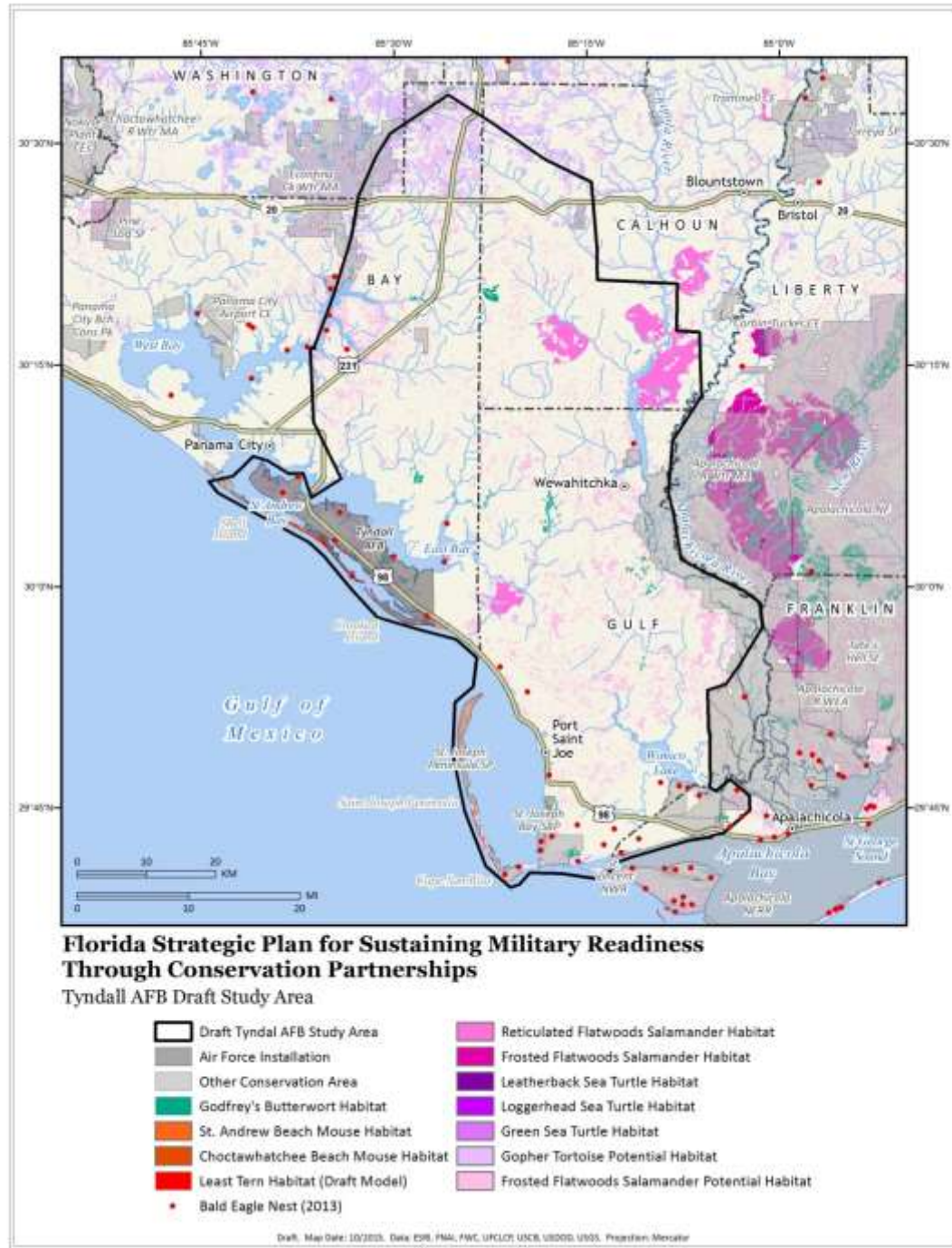
Draft Study Areas: *Cape Canaveral AFS*

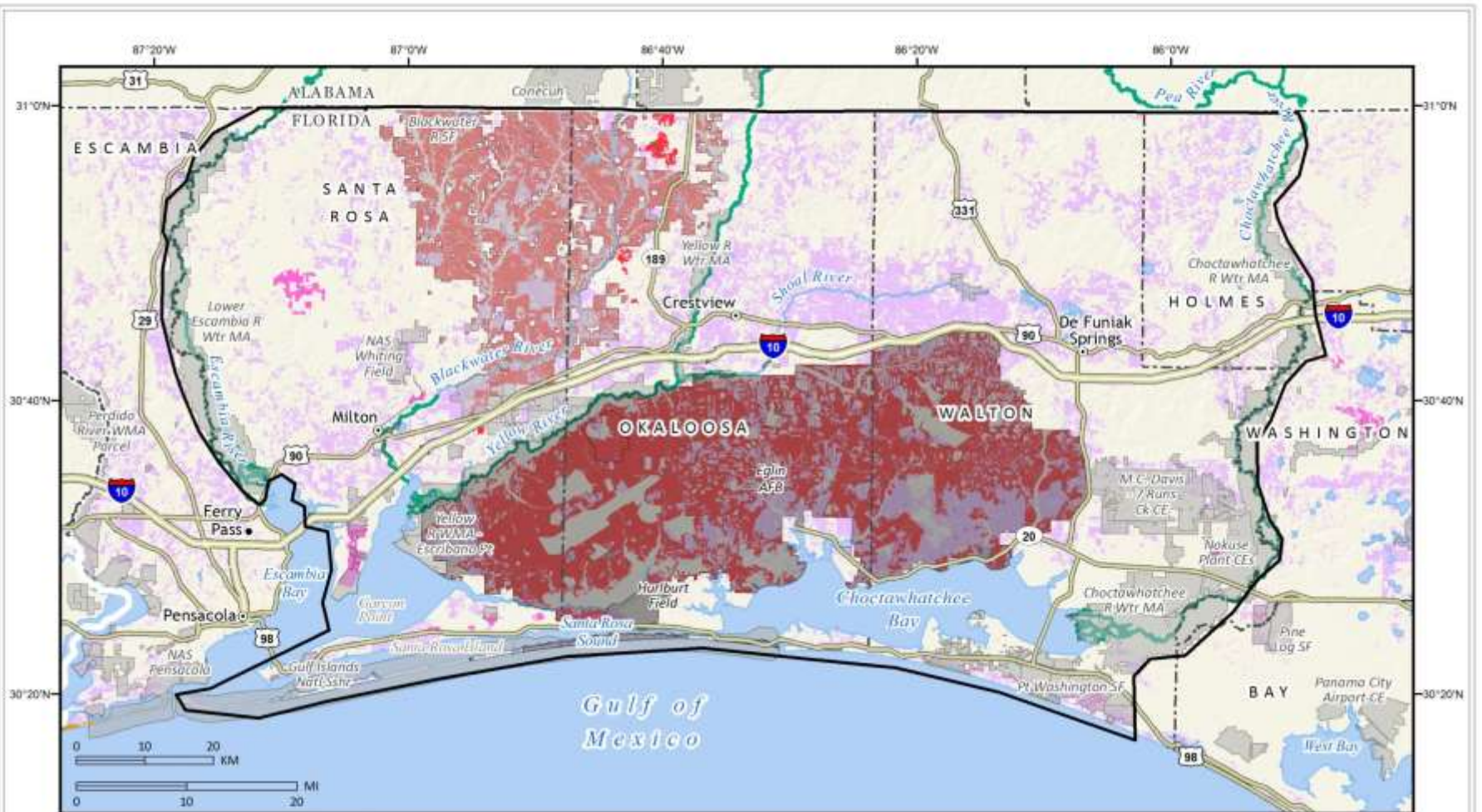
- Potential Florida scrub-jay habitat on the mainland that might provide mitigation opportunities and stepping stones to connect Canaveral jays to other subpopulations.
- Incorporation of important aquatic ecosystems including Mosquito Lagoon and Indian River.
- Protection of an ecological connection between Canaveral and adjacent conservation lands to the mainland as part of the FEGN.



Draft Study Areas: *Tyndall AFB*

- Unprotected *Pinguicula ionantha* habitat north and east of the base.
- St. Joseph Peninsula/Cape San Blas area because of very similar species habitat and management issues including shorebirds, beach mice, and sea turtles.
- Focal species including gopher tortoise, bald eagle, and flatwoods salamander.
- An ecological corridor between Tyndall and existing and potential future inland conservation areas through the FEGN.
- FEGN Critical Linkages between Apalachicola National Forest and the Econfina Conservation Area.





Florida Strategic Plan for Sustaining Military Readiness Through Conservation Partnerships

Eglin AFB-Hurlburt Field Study Area

- | | |
|---|--|
|  Draft Eglin AFB-Hurlburt Field Study Area |  Red Cockaded Woodpecker Habitat |
|  Air Force Installation |  Reticulated Flatwoods Salamander Habitat |
|  Other Conservation Area |  Gopher Tortoise Potential Habitat |
|  Combined Beach Mouse Critical Habitat |  Combined Sturgeon-Mussel Critical Habitat |

Mutual Benefits

- Expected benefits to Air Force
 - Exposure to new partners and conservation opportunities through PFLCC
 - Continued military mission flexibility by alleviating constraints on installations
 - Creation of new data and analyses which can be used to identify buffering, connectivity, and natural resource impact mitigation opportunities
 - Potential for making Florida Air Force installations more competitive for REPI funds
- Expected benefits to PFLCC
 - Better understanding of Air Force conservation programs and resources
 - Common language/foundation of priorities with Air Force for decision-making

QUESTIONS?

