

Climate Security Challenges in East Central Florida

FACT SHEET

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Florida is home to three Combatant Commands and over 20 bases that represent all branches of the U.S. military. The state also provides more than 180,000 square miles of <u>irreplaceable training grounds</u>¹ for U.S. pilots over the Eastern Gulf of Mexico.

Climate change, however, poses clear risks to these security assets. Scientists and the Pentagon agree: climate change threatens Florida's military installations, and these risks are expected to worsen in coming decades. Florida's bases must prepare their infrastructure and personnel to maintain force readiness as these critical installations are increasingly threatened by climate change.

The military <u>ranks</u>² eight Florida bases as among the most threatened in the U.S. by climate change: <u>Air Force bases</u>³ Eglin, Hurlburt Field, Homestead, MacDill, and Tyndall, Patrick Space Force Base, Naval Air Station Key West, and the Marine Corps' Support Facility at Blount Island.

Climate-Related Threats to Florida Military Bases

Florida faces the following climate threats, according to a DoD report⁴ that analyzed military bases across the U.S.

- Rising sea levels⁵
- Recurrent flooding⁶
- Extreme weather⁷
- Extreme heat⁸
- <u>Drought</u>⁹
- Wildfires¹⁰



A Florida National Guard Soldier conducts a search and rescue mission amidst irregular flooding in Flagler Estates, Florida. Florida National Guard photo.

Environmental issues have historically garnered bipartisan support. Congress must take the climate threats to U.S. military installations in Florida seriously. Inaction, or action taken too slowly, will be costly in terms of dollars and compromise national security. Initial measures¹¹ taken by the Department of Defense must be expanded.

East Central Florida

East Central Florida and the Treasure Coast are home to key assets to U.S. national security, such as Patrick Space Force Base, NASA, and the Navy's Air Warfare Center, Ordnance Test Unit, and AUTEC complex. Acute shocks¹² from threats like flooding, heat waves, and rising seas can detrimentally impede U.S. military readiness and operations at these key locations. Additionally, a regional vulnerability¹³ assessment showed that designated evacuation routes and major roadways are at risk.

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Military installations in the region receive around 18.4¹⁴ billion dollars, significantly stimulating the local economy. This interdependence extends to resilience to climate threats; neither the bases nor the city can be resilient unless both are. Coordinated partnerships between the public and private sectors are critical to the resilience of the region. Below are several federal programs available to offset the cost of resilience projects to local communities:

- <u>Defense Community Infrastructure Program</u>¹⁵ \$50 mil/FY is available to empower communities that surround military installations to strengthen operational readiness by building or strengthening vital community infrastructure (roads, schools, etc.)
- <u>Military Installation Sustainability</u>¹⁶ \$12 mil/FY for community vulnerability studies that are used to enhance or fortify infrastructure outside a military base.
- <u>Sentinel Landscape Program</u>¹⁷ \$60 mil/FY to advance sustainable land practices around bases and to strengthen military readiness, conserve natural resources, bolster agricultural and forestry economies, and increase climate change resilience.
- <u>Defense Access Road Program</u>¹⁸ \$20 mil/FY for public highway improvements. DAR empowers communities to mitigate risks to infrastructure posed by recurrent flooding and sea level fluctuation when continued access to a military installation has been impacted.
- <u>Building Resilient Infrastructure and Communities</u>¹⁹ \$500 mil/FY for hazard prone areas. Supports communities through capability- and capacity-building to encourage and enable innovation, promote partnerships, and enable large projects.
- <u>Flood Mitigation Assistance</u>²⁰ \$200 mil/FY for flood prone areas. Provides funding to states, local communities, federally recognized tribes and territories. It can also be used for projects that reduce or eliminate the risk of repetitive flood damage to buildings insured by the National Flood Insurance Program.
- National Coastal Resilience Fund²¹ \$34 mil/FY for flood protection for coastal communities through green infrastructure. Restored coastal ecosystems provide valuable habitat for fish and wildlife. These same wetlands, dunes, and coral reefs also offer flood protection for coastal communities by lessening wave energy and absorbing excess waters.

Endnotes

- Department of Defense. "Preserving Military Readiness in the Eastern Gulf of Mexico." 05/18. https://media.defense.gov/2019/Jan/29/2002084200/-1/-1/1/CLIMATE-CHANGE-REPORT-2019.PDF p.1. 09/29/2021.
- Watson, Ben; Tucker, Patrick. "These Are the US Military Bases Most Threatened by Climate Change." Defense One. 06/12/19. https://www.defenseone.com/threats/2019/06/these-are-us-military-bases-most-threatened-climate-change/157689/. 09/29/2021.
- 3 U.S. Air Force. "Background Paper on Top 10 Air Force Bases at Risk of Weather Impacts." 06/2019. https://climateandsecurity.files.wordpress.com/2019/06/air-force-input-10-installations-most-impacted-by-climate-change-1.pdf. 09/29/2021.
- Department of Defense. "Report on Effects of a Changing Climate to the Department of Defense." 01/10/19. https://media.defense.gov/2019/Jan/29/2002084200/-1/-1/1/CLIMATE-CHANGE-REPORT-2019.PDF pp. 4-10. 03/11/21. 09/29/2021.

- 5 Union of Concerned Scientists. "The US Military on the Front Lines of Rising Seas." 07/2016. https://www.ucsusa.org/sites/default/files/attach/2016/07/us-military-on-front-lines-of-rising-seas-all-materials.pdf. 09/29/2021.
- 6 Staff Sgt. Holochwost, Melanie. 1st Special Operations Wing Public Affairs, U.S. Air Force. "Hurlburt, FDOT, Superior Construction repair pedestrian bridge." 05/02/14. https://www.afsoc.af.mil/News/Article-Display/Article/495076/hurlburt-fdot-superior-construction-repair-pedestrian-bridge/. 09/29/2021.
- 7 Li, Lin; Chakraborty, Pinaki. "Slower decay of landfalling hurricanes in a warming world." *Nature*. 11/11/20. https://www.nature.com/articles/s41586-020-2867-7. 09/29/2021.
- 8 "Military Bases at Risk from Extreme Heat". https://ucsusa.maps.arcgis.com/apps/MapSeries/index.html?appid=e4e9082a1ec343c794d27f3e12dd006d&entry=6. 09/29/2021.
- 9 Hagen, Rachel. "Desperation and Drought: Why Thousands Flee". *American Security Project*. 11/08/18. https://www.americansecurityproject.org/desperation-and-drought-why-thousands-flee/. 09/29/2021.
- 10 Chinchar, Allison. "Record temperatures and dry weather have sparked more than a dozen wildfires in Florida." 05/10/2020. CNN. https://www.cnn.com/2020/05/10/weather/record-temperatures-florida-wildfires/index. html. 09/29/2021.
- Foley, Katie. "U.S. Army Releases Climate Resilience Handbook for Army Planners". *American Security Project.* 09/21/20. https://www.americansecurityproject.org/u-s-army-releases-climate-resilience-handbook-for-army-planners/. 09/29/2021.
- East Central Florida Regional Planning Council. "Regional Resiliency Action Plan." https://a37a849c-d81f-4fdf-8d3e-9fcd452fd4a1.filesusr.com/ugd/4c4fbd_43c6d65b995c4089a572b9a3dfad0efe.pdf. 09/29/2021.
- 13 East Central Florida Regional Planning Council. "Sea Level Rise Vulnerability Assessment." http://ftp.ecfrpc.org/Projects/River%20to%20Sea%20TPO%20Sea%20Level%20Rise%20Vulnerability%20Analysis.pdf. 09/29/2021.
- 14 Enterprise Florida. "Florida Defense Industry Economic Analysis. https://www.enterpriseflorida.com/wp-content/uploads/Florida-Defense-Industry-Economic-Impact-Assessment 2020-FINAL.pdf. 09/29/2021.
- 15 U.S. Department of Defense. "DEFENSE COMMUNITY INFRASTRUCTURE PROGRAM." https://oldcc.gov/defense-community-infrastructure-program-dcip. 09/29/2021.
- 16 U.S. Department of Defense. "Military Installation Sustainability." https://oldcc.gov/our-programs/military-installation-sustainability. 09/29/2021.
- 17 U.S. Department of Agriculture. "The Sentinel Landscapes Partnership." https://sentinellandscapes.org/. 09/29/2021.
- 18 U.S. Department of Transportation. "Defense Access Road Program." https://highways.dot.gov/federal-lands/programs/defense. 09/29/2021.
- 19 Federal Emergency Management Agency. "Building Resilient Infrastructure and Communities (BRIC)." https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities. 09/29/2021.
- 20 Federal Emergency Management Agency. "Flood Mitigation Assistance (FMA) Grant." https://www.fema.gov/grants/mitigation/floods. 09/29/2021.
- 21 National Oceanic and Atmospheric Administration. "National Coastal Resilience Fund." https://coast.noaa.gov/resilience-grant/. 09/29/2021.